

# 2023 Cover note

## Updated Impact Statement: Reform of industrial allocation policy in the NZ ETS to address current over-allocation

### Why is this Impact Summary being updated a second time?

This Impact Summary was originally prepared to support a suite of policy decisions taken by Cabinet in mid-2022 updating industrial allocation policy in the New Zealand Emissions Trading Scheme (NZ ETS) [DEV-22-MIN-0159 refers].

It was updated at the end of 2022 to consider the use of forecast data when new activities seek eligibility.

The Climate Change Response (Late Payment Penalties and Industrial Allocation) Amendment Bill (the Bill) is currently before Select Committee. Based on submissions on the Bill, and reconsideration of certain aspects of the policy, this Impact Summary is being amended for a second time to reflect the Ministry for the Environment's updated advice for the reforms of industrial allocation policy.

### Industrial allocation eligibility decisions

The preferred option for eligibility described in the previous version of this RIS was to perform a one-off reassessment of eligibility for existing activities using new data and allow new activities to be tested for eligibility against emissions intensity thresholds recalibrated using a recent emissions price.

The reasons behind this preferred option was:

- to ensure eligibility decisions are updated with recent emissions and revenue data to remove any potential over-allocation
- to ensure that eligibility decisions are updated to account for the movement in the emissions price and the impact this has had on the materiality of emissions costs to an industry's viability, and therefore the risk of emissions leakage
- phase-out provisions and long-term solutions for leakage risk will be able to address any limitations in the industrial allocation framework.

This policy was agreed to by Cabinet and was included in the Bill at its First Reading. Many submissions on the Bill were critical of the government's solution to retesting eligibility, and the new process for new activities to seek eligibility. It was considered the criteria used to assess the options weren't weighed appropriately and that there were fundamental flaws in the policy thinking. Specifically, it was generally thought not enough weight was given to meeting New Zealand's climate goals, and too much was given to reducing emissions leakage risk. Additionally, it was thought the analysis on emissions leakage wasn't comprehensive enough and the impacts of the proposed changes were unknown.

There is considerable difficulty in striking the right balance between the many considerations. In particular:

- industrial allocation policy and its framework in the Act was designed prior to the introduction of New Zealand's legislated climate targets
- the long-term and increasingly wider provision of free units to EITE's conflicts with the long-term goals of the NZ ETS and New Zealand's climate response
- the industrial allocation framework has a level of subjectivity to it which makes it difficult for it to provide objective outcomes
- there is limited information on which to form a comprehensive picture of actual leakage risk which could be used to create an improved system
- it is difficult to untangle leakage risk from other market and competitiveness issues
- despite the framework's limited consideration of climate policy in other jurisdictions, or the trade flows of high emissions products, there still is a reasonable risk of emissions leakage to some activities and this risk has increased due to the increase in the emissions price<sup>1</sup>
- submitters have different views on the Bill. Many submitters are concerned industrial allocation is inconsistent with the objectives of the NZ ETS. Others highlighted the role industrial allocation can have for encouraging decarbonisation rather than its primary purpose, which is to mitigate the risk of emissions leakage.

The Ministry for the Environment has reconsidered the balance between the various considerations.

### **Proposed solution to clarify eligibility for activities**

To address the issues raised in submissions, we are proposing the following changes:

- the current emissions intensity thresholds should remain in legislation and eligibility for existing activities should not be reassessed at this stage (section 2.2 – decision 1)
- new activities should continue to be able to seek eligibility but only using the current criteria in the Act (section 2.4 – decision 2) and no additional criteria)

### **New section considering emissions sources eligible for allocations**

A new issue has arisen that does not currently form part of the Bill. There are two emissions sources that have a material cost to some activities that currently cannot be included in allocation settings. The addition of these is considered in section 2.4 – decision 4.

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[https://environment.govt.nz/assets/publications/potential\\_for\\_emissions\\_leakage\\_from\\_selected\\_industries\\_in\\_the\\_ets.pdf](https://environment.govt.nz/assets/publications/potential_for_emissions_leakage_from_selected_industries_in_the_ets.pdf)

# 2023 Updated Regulatory Impact Statement: Reform of industrial allocation policy in the NZ ETS to address current over-allocation

## Coversheet

Purpose of Document	
Decision sought:	Cabinet approval for changes to settings for industrial allocation in the New Zealand Emissions Trading Scheme to address existing over-allocation, and improving the implementation of industrial allocation.
Advising agencies:	Ministry for the Environment
Proposing Ministers:	Hon James Shaw, Minister of Climate Change
Date finalised:	First edition: 15 June 2022 Updated edition v1: 9 November 2022 Updated edition v2: 11 May 2023
Problem Definition	
<p>Some emissions-intensive, trade exposed (EITE) industries are receiving industrial allocation at levels greater than intended to address the risk of losing economic activity overseas, for no environmental benefit, because of emission pricing (this is known as emissions leakage).</p> <p>This undermines the effectiveness of the New Zealand Emissions Trading Scheme (NZ ETS) and creates ongoing and substantial fiscal costs to the Crown.</p> <p>There are also several technical changes available to improve industrial allocation policy.</p>	
Executive Summary	
<p>The purpose of industrial allocation is to mitigate the risk of emissions leakage by supporting firms in eligible activities to meet some of their emissions costs. Emissions leakage (also known as carbon leakage) is the risk of unbalanced climate policy between jurisdictions (such as emissions pricing) moving economic activity (and associated emissions) overseas to reduce domestic compliance costs. This has both environmental and economic implications.</p> <p>Settings determining levels of industrial allocation have not been updated in over a decade, and are no longer reflective of the level of emissions from carrying out some activities. Since 2010, most industries are assumed to have made improvements in energy and emissions intensity, including the closure of less efficient plants and some investments in fuel switching. Additionally, a data collection exercise in 2020 highlighted that this is the</p>	

case for the subset of eligible activities sampled. The level of support provided to some industries is now higher than intended or necessary to prevent emissions leakage (this is known as over-allocation).

Allocative baselines are the amount of emissions attributed to a unit of product of an eligible activity. These are used to determine the level of emissions costs faced in carrying out an eligible industrial activity, and contribute to the calculation of industrial allocation received by a firm for their year's production.

Allocative baselines were set in regulations in 2010 and based on activity data from the financial years 2006/07, 2007/08 and 2008/09. The baselines were calculated at the national level as industry averages.<sup>2</sup>

We recommend updating these allocative baselines to reflect recent activity. This will remove existing over-allocation.

Additionally, the eligibility of activities to receive industrial allocation, and the level at which their emissions costs are offset by allocation, has not been updated since 2010. This may be causing some activities to be receiving allocation at a level that is not reflective of its risk of emissions leakage.

In the previous version of this RIS, we recommended updating eligibility with emissions intensity thresholds recalibrated for a recent emissions price. Given the limitations with the existing eligibility thresholds, no suitable alternatives to these thresholds, and the risk the previous recommendation to update the thresholds would be inconsistent with the NZ ETS and New Zealand's climate goals, we have revised this recommendation to retain the current thresholds in the Act and to not reassess eligibility.

Consideration of actions beyond an immediate update to allocative baselines is in the context of existing phase-out of industrial allocation, including the ability for activity specific phase-out rates to be introduced.<sup>3</sup> This is intended to address any future risk of over-allocation.

In addition to updates to allocative baselines and eligibility assessments to reflect recent activity, this Regulatory Impact Statement (RIS) includes a number of related changes and technical adjustments to improve the operation of industrial allocation.

The key recommendations contained in this RIS are listed below:

### **Updates to industrial allocation calculations**

- Update allocative baselines as soon as possible to reflect recent activity (one-off).
- Introduce the power for the Minister to undertake activity-specific updates to allocative baselines in future, but no sooner than five years after this most recently occurred.

### **Updates to IA eligibility decisions and settings**

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<sup>2</sup> Some activities are only carried out by a single firm.

<sup>3</sup> Phase-out provisions are legislated under section 81 and 83 of the Climate Change Response Act 2002 (CCRA).

- Retain current emissions intensity thresholds in legislation and do not reassess eligibility for existing activities. Note this section has been updated following the First Reading of the Bill to take into account submitter views and additional analysis by the Ministry for the Environment.
- Reduction of the 5-year transition period where an activity's eligibility status is revoked or reduced to 2 years.

### **New base years**

- Use data from 2016/17, 2017/18, 2018/19, 2019/20, 2020/21 as base years for updating allocative baselines and reassessing eligibility.
- Provide firms the option to exclude data from either the 2019/20 or 2020/21 financial years to address any COVID-19 impacts on an activity.

### **Technical updates to IA policy**

- Simplify updates to allocative baselines.
- Retain the current method for new activities to seek eligibility, but clarify the process by allowing the use of forecast data. Note this section was updated at the end of 2022 prior to introduction of the Bill. This section has also been updated following the First Reading of the Bill to take into account submitter views.
- Retain existing reporting of data by applicants for industrial allocation and clarify that data submitted in industrial allocation applications will be shared with the Ministry for the Environment and the Climate Change Commission.
- New section (added following the First Reading of the Bill) – addition of new emissions sources eligible for an allocation.

Amendments to the Climate Change Response Act will be required to implement these recommendations. These amendments are planned for inclusion in a 2022 Climate Change Response (Emissions Trading Scheme and Other Amendments) Amendment Bill.

These recommendations are expected to remove existing over-allocation, and address the risk of over-allocation occurring in future. Additionally, recommendations will simplify the administration of industrial allocation.

Consultation on these topics occurred between July and September 2021. Submitters were broadly supportive of the recommendations made in this RIS.

### **Limitations and Constraints on Analysis**

The analysis in this RIS uses the best information available to officials. Generally, we are confident in the analysis in this RIS – however there are limitations to the conclusions made.

The data for current levels of allocation and number of participants are complete. We have carried out a data collection exercise for a representative subset of activities eligible to receive industrial allocation and are confident the allocative baselines are out-of-date.

For other activities, we have made conservative assumptions on changes in emissions intensity. While we consider our analysis to be robust, our estimates may not completely reflect changes in emissions intensity across all eligible activities.

Although we are confident about the broad impacts of changes on activities as a whole, we are unable to predict the impacts at a more granular firm level for the subset of activities carried out by a relatively large number of participants. This limits our ability to consider regional impacts.

### Responsible Manager

Kate Whitwell  
Acting Manager  
ETS Policy  
Ministry for the Environment



15 June 2022

### Updated version (2022) signed:

Scott Gulliver  
Principal Advisor  
ETS Policy  
Ministry for the Environment



9 November 2022

### Updated version (2023) signed:

Kate Whitwell  
Manager  
ETS Policy  
Ministry for the Environment



11 May 2023

Quality Assurance	
Reviewing Agency:	Ministry for the Environment
Panel Assessment & Comment:	<p>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.</p> <p>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.</p> <p><b>Statement applying to updated content (2022):</b></p> <p>The Ministry for the Environment’s Regulatory Impact Analysis Panel has reviewed the update to this Regulatory Impact Statement, which now considers an additional option for decision 2, Section 2.4. The panel’s previous assessment remains unchanged following this update.</p> <p><b>Statement applying to updated content (2023):</b></p> <p>The Ministry for the Environment’s Regulatory Impact Analysis Panel has reviewed the update to this Regulatory Impact Statement, which now changes some preferred options, and has added analysis of new options for dealing with eligible emissions sources. The previous assessment of the panel is unchanged i.e., the RIS partially meets the quality assurance criteria. The analysis does make a good case for change, and the changes to reflect consultation feedback show good evidence of adequate consultation. However, as noted in the previous QA statement the analysis is not presented in a way that is readily understood by decision-makers or the public, and the insertion of additional analysis has not eased this problem.</p>

## Section 1: Diagnosing the policy problem

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

#### Problem summary

1. Industrial allocation (IA) is the provision of free emissions units (New Zealand Units or NZUs) to industries considered emissions-intensive and trade-exposed (EITE).
2. IA reduces the cost impact of the NZ ETS for EITE industry with the purpose of reducing competitive disadvantage with offshore firms subject to weaker climate policy. International differences in climate policy risks driving EITE firms, production and the associated emissions overseas, which could increase global emissions. This risk is known as 'emissions leakage'.
3. Settings determining levels of IA have not been updated in over a decade, and are no longer reflective of the level of emissions from carrying out some activities. Since 2010, most industries are assumed to have made improvements in energy and emissions intensity, including the closure of less efficient plants and some investments in fuel switching.
4. Data gathered by sampling four eligible activities showed they are being over-allocated.
5. As a result, the level of support provided to some industries is now higher than intended or necessary to prevent emissions leakage (over-allocation). Some EITE firms are receiving assistance for over 100 per cent of their actual emissions costs.
6. An intent of the NZ ETS is to support meeting emissions targets by pricing emissions. As over-allocation reduces the impact of the NZ ETS price signal, it limits the ability of the NZ ETS to contribute to meeting these targets via emissions reductions for these over-allocated industries. Over-allocation also results in increased fiscal costs to the Crown.

#### Emissions pricing is key to meeting emissions budgets and climate change targets

7. New Zealand has adopted ambitious domestic and international emissions reduction targets.
8. The New Zealand Emissions Trading Scheme (NZ ETS) is New Zealand's main emissions pricing tool. It prices emissions from all sectors of the economy, apart from agriculture.<sup>4</sup>
9. The NZ ETS creates a trading market for New Zealand Units (NZUs), where each NZU represents one tonne of emissions. Participants are required to surrender one NZU for each tonne of emissions they produce.
10. An overall limit or 'cap' on the supply of units into the NZ ETS, excluding units transferred for removal activities, was recently introduced in the NZ ETS. This limits the level of net emissions participants can produce. The overall limit will tighten in line with domestic emissions budgets, reducing the supply of NZUs available to participants to meet their surrender obligations (other than those transferred for removal activities).
11. The NZ ETS is designed to limit net emissions in line with New Zealand's emissions budgets and climate change targets.

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<sup>4</sup> A relatively small proportion of non-agricultural emissions are not captured by NZ ETS pricing.



## Emissions pricing, emissions leakage and industrial allocation

12. The purpose of IA is to mitigate the risk of emissions leakage by supporting firms in eligible activities to meet some of their emissions costs. Emissions leakage (also known as carbon leakage) is the risk of losing economic activity overseas, for no environmental benefit, because of emission pricing.<sup>5</sup> This occurs if emissions pricing drives firms in EITE industries to reduce or cease production in New Zealand, sending production and the associated emissions overseas. Consequently, New Zealand loses economic activity, but achieves no environmental benefit if global emissions will stay the same or increase.
13. If domestic emissions were exported, leakage could undermine New Zealand's commitment to reduce global emissions.
14. We assess there is an ongoing and material risk of emissions leakage in New Zealand. Many of New Zealand's major trading partners do not have emissions pricing comparable to the NZ ETS. Furthermore, those countries with emissions pricing still provide substantial levels of support to industry.
15. A 2018 report<sup>6</sup> on competitiveness and emissions leakage found that some industries are vulnerable to leakage if there is a high emission price and competing jurisdictions do not have similar climate policies.
16. The 2020 RIS<sup>7</sup> prepared for the phase-out of IA found that a rapid reduction in allocations could result in a credible threat to the competitiveness of some eligible activities because the net cost would be high enough to offset the profit margins of firms carrying out the activity.
17. A 2020 report<sup>8</sup> found that without IA, the production of burnt lime, cement, and cartonboard in New Zealand are at risk of leakage at current NZU prices. Table 1 shows estimates of the price at which an activity's total emissions costs is greater than current estimated profits for the activities. The analysis assumes that firms face 100 per cent of their emissions costs.

**Table 1: Estimated carbon prices at which four activities are at risk of emissions leakage without industrial allocation**

Criterion	Activities subject to data collection			
	S9(2)(b)(ii)			
Carbon prices at which EBIT falls to zero: activity expected to wind down	\$265 – \$595	\$30 – \$80	\$35/t	\$20/t
Carbon prices at which EBITDA falls to zero: activity expected to stop	\$430 – \$760	\$130/t	\$50/t	\$30/t

18. Emissions leakage could also result in economic regrets for New Zealand from losing business activity that may not return, even as emissions pricing becomes more widespread.

<sup>5</sup> This could also be driven by climate policies other than emissions pricing. IA addresses the emissions leakage risk associated with pricing.

<sup>6</sup> [Countervailing forces: Climate targets and implications for competitiveness, leakage and innovation | Ministry for the Environment](#)

<sup>7</sup> [Regulatory Impact Statement - A phase-down of industrial allocation\\_12155970.pdf \(sharepoint.com\)](#)

<sup>8</sup> [Potential for emissions leakage from selected industries in the ets.pdf \(environment.govt.nz\)](#)

19. IA does not prevent production moving offshore in response to other costs and market conditions affecting business decisions. Other input costs, such as fuel and electricity, are far more material costs than those imposed by the NZ ETS, and more likely to drive business decisions. For example, some firms have recently cited high electricity prices as threatening their financial viability in New Zealand.
20. IA is not intended to ensure the competitiveness of domestic industries in response to a constellation of costs and market conditions, or to protect regional economies and employment. IA is meant to minimise emissions leakage risk caused by the NZ ETS. It is not intended to support other economic objectives.
21. Consultation feedback suggested that IA supports wider economic objectives such as a circular economy, food security, and supply chain resilience. This is an indirect consequence and benefit to New Zealand of minimising the risk of emissions leakage, rather than the purpose of IA.

### Scale of industrial allocation

22. Currently, firms in 26 industrial activities are eligible for IA. Allocation amounts are published by the Environmental Protection Authority (EPA) on an annual basis<sup>9</sup>. 70 firms carrying out one or more of these activities received an allocation for their 2020 production (Table 2). Current eligible activities are prescribed in the Climate Change (Eligible Industrial Activities) Regulations 2010.

**Table 2: Eligible industrial activities**

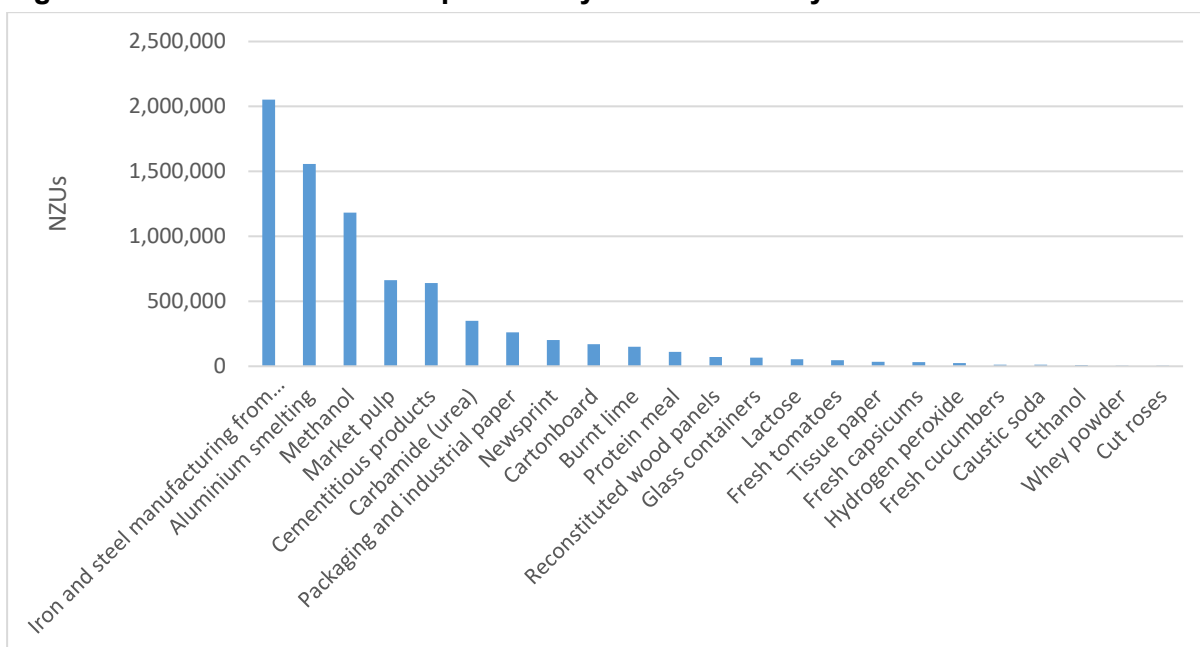
Eligible activity	Number of firms receiving allocation for the activity in 2020	Eligible activity	Number of firms receiving allocation for the activity in 2020
Aluminium smelting	1	Burnt lime	2
Carbamide (urea)	1	Cartonboard	1
Carbon steel	0	Caustic soda	1
Cementitious products	1	Clay bricks	0
Cut roses	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	Lactose	1
Market pulp	3	Methanol	1

<sup>9</sup> <https://www.epa.govt.nz/industry-areas/emissions-trading-scheme/industrial-allocations/decisions/>

Newsprint	1	Packaging and industrial paper	1
Protein meal	15	Reconstituted wood panels	5
Tissue paper	1	Whey powder	1

23. Over 7.7 million NZUs were allocated under the IA policy for 2020 activity, with an approximate market value of \$578million<sup>10</sup> at an NZU price of \$75<sup>11</sup>. Three activities receive 62 per cent of all allocations, while the largest ten activities receive 94 per cent. Figure 1 shows the breakdown of allocations per eligible activity.

**Figure 1: Industrial allocations per activity for 2020 activity**



24. IA is based on production, emissions intensity, and level of assistance. This links the allocation of NZUs to:

- a firm’s annual level of production (output basis),
- fixed allocative baselines that reflect an activity’s emissions intensity per unit of output (intensity basis), and
- level of assistance which determines the extent to which emissions costs are met by IA and is determined by the outcome of an eligibility test based on emissions per million dollars of revenue.

<sup>10</sup> All dollar figures are New Zealand dollars unless specified otherwise.

<sup>11</sup> NZ ETS secondary market price in March 2022 was \$75

## Eligibility for industrial allocation

25. There are two tests in the Act that determine which industrial activities are eligible for IA: trade exposure and emissions intensity measured in the form of emissions per million dollars of revenue. An activity must be trade exposed and emissions intensive to be eligible.

### *Trade exposure test*

26. Trade exposure tests whether products from an activity are exposed to international trade. The Act defines trade exposure broadly. An activity is considered trade-exposed, unless there is no international trade of the activity output across oceans, or it is not economically viable to import or export it. Table 2 above lists activities eligible for industrial activity, all of which have met the trade exposure test.

### *Emissions intensity test*

27. The emissions intensity test is based on the emissions generated from an activity relative to the revenue generated from the sale of the activity's output and is used as a proxy for the impact of an emissions price on an activity's profitability. The greater the emissions, and therefore emissions cost, relative to the revenue generated by an activity's output, the more a change in the emissions price affects the profitability of the firm carrying out the activity.
28. The emissions intensity test does not test whether emissions costs are faced by the activity. The level of emissions costs faced is calculated from the allocative baseline which is described further below. The outcome of the emissions intensity test determines the extent to which these emissions costs are compensated for by IA.
29. The emissions intensity test includes two thresholds that activities must meet to be eligible for an allocation (i.e. be considered emissions intensive), classifying activities as:
- a. not emissions-intensive if emissions are less than 800 t CO<sub>2</sub>-e /\$1 million revenue;
  - b. moderately emissions-intensive if emissions are greater than or equal to 800 t CO<sub>2</sub>-e /\$1 million revenue, but less than 1600 t CO<sub>2</sub>-e/ \$1 million revenue; or
  - c. highly emissions-intensive if it is equal to or greater than 1600 t CO<sub>2</sub>-e/ \$1 million revenue.
30. If the trade exposure criterion is met, the two thresholds determine a:
- a. moderately intensive activity as being eligible to receive 59 per cent of their emissions costs for 2021;
  - b. highly intensive activity as being eligible to receive 89 per cent.<sup>12</sup>
31. Table 3 shows the possible eligibility categories based on emissions intensity and trade exposure tests.

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<sup>12</sup> These levels of assistance are being reduced via the phase-out of IA, with rates and criteria for varying these rates set in legislation. This is described further below.

**Table 3: Industrial allocation eligibility – criteria combinations**

	Not trade-exposed	Trade-exposed
Emissions intensity < 800 t CO <sub>2</sub> -e/\$1 million revenue	Ineligible	Ineligible
Emissions intensity >= 800 but < 1600 t CO <sub>2</sub> -e/ \$1 million revenue	Ineligible	Moderately intensive and eligible to receive 60% of emissions costs (the phase-out cut this to 59% for production in 2021)
Emissions intensity >= 1600 t CO <sub>2</sub> -e/\$1 million revenue	Ineligible	Highly intensive and eligible to receive 90% of emissions costs (the phase-out cut this to 89% for production in 2021)

### Emissions intensity thresholds

32. The existing emissions intensity thresholds used to determine eligibility for IA were set in 2009. A variety of measures were considered as being the basis for these thresholds, and emissions per million dollar of revenue measure was selected as:
- it was considered reflective of the impact of emissions costs on profitability; and
  - it was the simplest to collect and verify.
33. These thresholds were based on a carbon cost of AU\$20 per tonne, analysis of Australian industry and political considerations, the Australian electricity allocation factor, and then adjusted for currency exchange rate to set NZ thresholds based on NZ\$25 per tonne. The intent of these thresholds is to reflect the extent to which emissions costs have an impact on firm profitability. The use of thresholds based on emissions per unit of revenue was chosen as a proxy for the impact of emissions costs on firm profitability.
34. Given the use of fixed carbon costs in setting these thresholds, they can be considered as a percentage of revenue. The highly emissions-intensive threshold of 1600 t CO<sub>2</sub>-e /\$1 million revenue is equivalent to \$40,000/\$1 million revenue, or emissions costs of 4 per cent of revenue. Similarly, the moderately emissions-intensive threshold is equivalent to emissions costs of 2 per cent of revenue.

### How industrial allocations are calculated

35. Firms carrying out an eligible activity can receive an annual allocation for their production during a calendar year. The number of NZUs they receive for 2021 production is calculated using the formula:

$$A = P \times AB \times LA$$

Where:

- A* is the firm's allocation for a single product (NZUs)
- P* is the firm's total output of the product (typically in tonnes)

- *AB* is the allocative baseline for the product of an eligible activity (t CO<sub>2</sub>-e/unit of product<sup>13</sup>)
- *LA* is the level of assistance a particular activity receives (0.59 or 0.89 as based on the emissions intensity thresholds).

### Allocative baselines

36. Allocative baselines are the amount of emissions attributed to a unit of product of an eligible activity. An allocative baseline can include two components:
  - a. direct emissions - emissions that result from the direct use of certain fossil fuels, direct use of geothermal fluids, and those that result directly from industrial processes
  - b. indirect emissions, especially those associated with the use of electricity – this is calculated by the electricity allocation factor, a standard quantity of emissions that is attached to each megawatt hour of electricity used.
37. Allocative baselines were set in regulations in 2010 and based on activity data from the financial years 2006/07, 2007/08 and 2008/09. The baselines were calculated at the national sector level as industry averages, noting that some activities are only carried out by a single firm.
38. An example calculation is shown in the table below, where a firm producing 13,000 tonnes of protein meal during 2021 is eligible to receive an IA of 7,179 NZUs.

**Table 4: Example industrial allocation calculation**

Activity	Product	Level of assistance	Allocative baseline	2021 production (tonnes)	2021 allocation (NZUs)
Protein meal	Protein meal	0.59	0.9360	13,000	7,179

### Transition period for reduction in emissions intensity classification

39. Section 161A(5) of the Climate Change Response Act 2002 (the Act) requires a minimum five year delay before coming into force for any decision to revoke eligibility, or reclassify an activity from highly to moderately emissions-intensive, for an eligible industrial activity prescribed in regulation.
40. This delay exists to allow time for firms to adjust to being exposed to a greater proportion of the emissions costs incurred by carrying out the activity. An example of the need for delay is any inability of the firm to address cost increases due to forward contracts for supply at fixed prices.

### Changes in emissions costs

41. Emissions costs have fluctuated markedly since the introduction of the NZ ETS. A major driver until 2015 was the cost of internationally originated Kyoto units that were able to be imported and used to meet NZ ETS obligations. These traded at well under \$1 per unit.
42. Since 2015, there has been an eleven-fold increase in the net emissions costs faced by eligible industrial activities in New Zealand. This increase has been driven by three factors:

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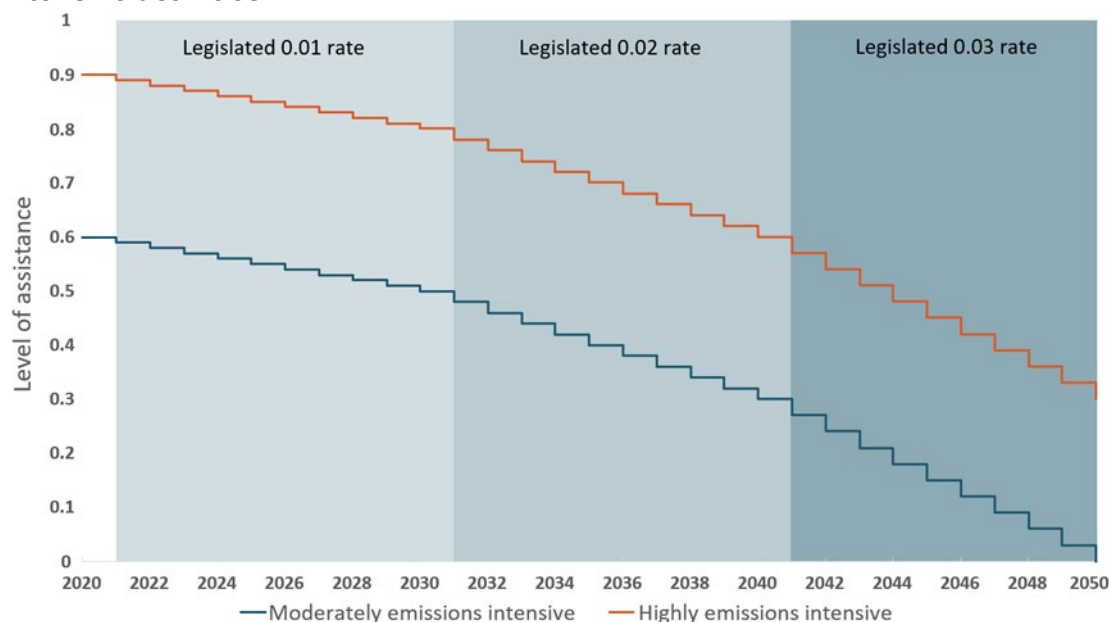
<sup>13</sup> Unit of product is tonnes for most, but not all, products eligible for IA

- a. the increase in NZU price, from \$15 in May 2015 to \$75 in April 2022
- b. the increase in NZUs required to meet obligations for one tonne of emissions, from 0.5 in 2015 to 1 unit now. This resulted from the 2018-2020 phased change from the one-for-two surrender obligation<sup>14</sup> to a one-for-one surrender obligation
- c. the beginning of the phase-out of IA, described further below.

### Recent changes to industrial allocation policy

43. In 2020, the Government made changes to IA policy through the Climate Change Response (Emissions Trading Reform) Amendment Act (the ETR Act). The ETR Act introduced a phase-out of the level of assistance (LA in the formula above). The phase-out rate has started at a default rate of one percentage point each year between 2021 and 2030 and will increase to two percentage points (0.02) in 2031–40, and then three percentage points in 2041–50 (see figure 2).

**Figure 2: Phase-out of the level of assistance for moderately and highly emissions-intensive activities**



44. The Act also enables the government to increase the phase-out rates for individual activities after 2025, and decrease them after 2030, at the recommendation of the Minister of Climate Change and based on recommendations from the Climate Change Commission.
45. Existing phase-out rates are expected to address any risk of future over-allocation arising as a result of business-as-usual improvement to emissions and energy efficiency. It would require significant mode-shift for changes to out-pace phase-out and result in allocation exceeding NZ ETS costs. The ability to adjust phase-out rates enables a response if this does occur.

<sup>14</sup> For emissions from non-forestry activity up to and including 2016, firms were required to surrender one unit for every two tonnes of emissions. This was phased out over three years, and for emissions since 1 January 2019 firms have been required to surrender one unit for every one tonne of emissions.



46. This is premised on existing allocation being at appropriate levels; phase-out is not designed to address over-allocation that has arisen since the introduction of IA, although over time this would occur.

## Identification of the policy problem

### Review of industrial allocation policy

47. The Government began a review of IA policy in late-2020 in response to emerging evidence of over-allocation.
48. The first stage of the review collected production, emissions and revenue data from firms carrying out four eligible activities: production of burnt lime, cement, cartonboard and cucumbers via a call for data through the New Zealand Gazette. Calculations used the methodology used previously to set allocative baselines and eligibility. The aim of the data collection exercise was to determine changes in the emissions intensity of a representative sample of activities and identify if material over-allocation was occurring.
49. Ministry analysis of the collected data found that all four activities are being over-allocated and that a more comprehensive review of industrial allocation policy should be carried out. A technical advisory group (TAG) was established to provide independent expertise on IA, trade, economics and climate policy to support the review. The TAG was asked to test evidence, analysis and policy options, to help draft the consultation document.

### Consultation

50. Cabinet agreed to publicly consult on a package of proposals to reform IA policy. Consultation ran from 8 July to 17 September 2021.
51. One hundred and ninety submissions were received, a large number of which repeated the same or very similar content. Thirteen submissions were from firms who are eligible to receive IA, as well as a number from groups that represent these firms. The Ministry published a summary of submissions.<sup>15</sup>

### Review of the electricity allocation factor (EAF)

52. The EAF is a key IA setting. It is a component of most allocative baselines and, as described above, is used to determine the amount of allocation activities receive for electricity use. The EAF is a fixed emissions factor and has been set in regulations since 2010. It is currently set at 0.537 tCO<sub>2</sub>e/MWh.
53. In 2021, the Government consulted on proposals to update the EAF methodology and value. Submitters were supportive of a new methodology for the EAF, and in August 2021 the Cabinet Environment, Energy and Climate Cabinet Committee invited the Minister to report back with further details on the implementation of the methodology [ENV-21-MIN-0041 refers].
54. Updates to the EAF methodology are being progressed alongside this work. Any updates to EAF methodology are dependent on amendment to sections 161A-E of the Act for implementation, these amendments are discussed in section 2.4 of this RIS.

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<sup>15</sup> [Ministry for the Environment. 2022. Reforming industrial allocation in the New Zealand Emissions Trading Scheme: Summary of submissions. Wellington: Ministry for the Environment.](#)



## Climate Change Commission (CCC) advice

55. In June 2021, the CCC provided final advice<sup>16</sup> on New Zealand's transition to a low emissions economy. This included recommendations for improving emissions pricing applied through the NZ ETS.
56. The CCC recommended the government review IA policy to ensure it was fit for purpose and explore other instruments to address the emissions leakage over the longer-term.

## What is the policy problem?

### Summary of context

57. There is an ongoing need for IA to reduce the risk of emissions leakage in New Zealand. Emissions leakage would incur significant economic costs for New Zealand and likely lead to an increase in global emissions. Emissions leakage could result in economic regrets for New Zealand as a result of losing industrial capacity and business activity that may not return, even as emissions pricing becomes more widespread.
58. Future levels of IA should align with the government's broader climate change objectives. However, under current settings, New Zealand's IA policy results in over-allocation, undermining the effectiveness of the NZ ETS to reduce emissions in line with emissions budgets and targets. Over-allocation also creates ongoing and substantial fiscal costs to the Crown.
59. Increasing emissions costs for New Zealand industry relative to those faced by competing firms in other jurisdictions increase the risk of emissions leakage. Net emissions costs per tonne of emissions faced by New Zealand industry eligible for IA have increased 11-fold since 2015, due to a combination of the removal of the one-for-two modification to surrender obligations, increase in NZU price, and the commencement of the phase-out of IA.
60. As there is an ongoing and material risk of emissions leakage, appropriate protections for EITE industries are warranted. However, there is a natural tension between providing free units to offset leakage risk, and the goals of the NZ ETS to send a clear price signal to the economy to reduce and remove emissions. Where possible, industrial allocation should not undermine this goal – particularly within the context of New Zealand's recently legislated emissions targets.

### Over-allocation is a policy problem

61. The government has collected evidence that some activities are being over-allocated and are receiving more NZUs than intended to minimise the risk of leakage. An example of over-allocation would be a highly emission-intensive activity receiving an allocation equal to 105 per cent of its actual NZ ETS costs – when the policy intent is for an 89 per cent allocation so that EITE firms are meeting some of their emissions costs.
62. There are two identified causes of over-allocation:
  - a. allocative baselines are out-of-date due to changes in industries since allocative baselines were first set; and

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<sup>16</sup> [Ināia tonu nei: a low emissions future for Aotearoa » Climate Change Commission \(climatecommission.govt.nz\)](https://www.climatecommission.govt.nz/ināia-tonu-nei-a-low-emissions-future-for-aotearoa)

- b. eligibility decisions are out-of-date, resulting in levels of assistance higher than intended. Note – the thinking on this cause of over-allocation has changed from previous versions of this RIS. The thresholds have a significant level of arbitrariness to them. Given the changes to climate policy, and markets over the last decade, the eligibility tests do not accurately assess the extent of leakage risk. We are therefore not confident of the level of over-allocation resulting from out-of-date eligibility decisions.

**Current settings are out-of-date**

- 63. Current baselines and eligibility decisions were set in 2010 and based on activity data from 2007 to 2009. The Act anchors eligibility and baselines to revenue, emissions and production data from the financial years 2006/07, 2007/08 and 2008/09.
- 64. Since 2010, most industries are assumed to have made improvements in energy and emissions intensity, including the closure of less efficient plants. Based on this, baselines and, possibly, eligibility decisions no longer reflect the actual emissions intensity of eligible activities.
- 65. While EITE firms continue to receive relatively fixed levels of support tied to historic allocative baselines and outcomes of eligibility tests, in some cases the actual emissions have decreased.
- 66. Out-of-date allocative baselines mean that allocations no longer reflect the emissions from carrying out some activities resulting in over-allocation. Out-of-date eligibility decisions could also be contributing to over-allocation; however, the extent of this is uncertain.

**Evidence of over-allocation**

- 67. Data collected for the review of IA shows evidence of over-allocation. Table 5 shows the change in emissions intensity, the actual level of assistance, and intended level of assistance for production of burnt lime, cement, cartonboard, and cucumbers.

**Table 5: Change in emissions intensity and estimated actual proportion of emissions costs met by industrial allocation for production of burnt lime, fresh cucumbers, cartonboard, and cement**

Activity	Intensity decrease since 2010 (%)	Intended level of assistance – emissions costs met by industrial allocation (%)	Actual emissions costs met by industrial allocation (%)
s9(2)(b)(ii)	79.9 <sup>17</sup>	s9(2)	305
s9(2)(b)(ii)	35.8	s9(2)	124
s9(2)(b)(ii)	15.0	s9(2)	105
s9(2)(b)(ii)	8.3	s9(2)	98

- 68. Extrapolating the findings from the 2020 data collection, over-allocation caused by out-of-date allocative baselines could be up to 800,000 units, worth \$60million at the March

<sup>17</sup> Note that this does not mean that emissions associated with this activity have reduced by this amount, as it does not include emissions that fall below the thresholds to face NZ ETS costs.

2022 carbon price of \$75 per unit. For the 22 activities where data was not collected, this estimate is based on an assumption that allocation drops by 10 per cent, due to a reduction in their allocative baseline. This assumption is conservative, and based on the activity s9(2)(b)(ii) with the lowest drop in allocative baseline from the 2020 data collection.

69. Extrapolating the findings from the 2020 data collection and retesting eligibility using existing thresholds would decrease allocation. This does not indicate over-allocation due to out-of-date eligibility test outcomes though, as the eligibility thresholds are themselves also out-of-date.

#### **Over-allocation is a problem**

70. Over-allocation is a problem as it:
- a. is inconsistent with the policy intent of IA;
  - b. reduces NZ ETS incentives to reduce emissions;
  - c. is a direct and indirect fiscal cost to the Crown;
  - d. affects the efficiency of the NZ ETS market;
  - e. could make it harder to link with overseas carbon markets.

#### **Over-allocation is inconsistent with the policy intent of IA**

71. An intention of IA policy is to reduce the risk of leakage while ensuring that EITE firms meet some of their emissions costs. EITE firms carrying out some activities are receiving a level of assistance greater than intended under the Act to reduce the risk of leakage, which for 2021 activity is deemed to be 0.59 and 0.89 for moderately and highly intensive activities respectively. Some EITE firms are receiving assistance for over 100 per cent of their actual emissions costs.

#### **Over-allocation and NZ ETS incentives to reduce emissions**

72. IA was designed in a way to retain a 'net' emission cost on EITE industries when making choices about their activity. For example, a highly intensive activity should face an 11 per cent emissions cost in 2021, after receiving IA to meet 89 per cent of emissions costs.
73. Allocation above 100 per cent of an activity's NZ ETS costs could, in theory, motivate EITE firms to increase production and overall emissions, as they would profit from receiving more NZUs above their NZ ETS costs. This is only relevant to the point where the market can absorb additional production though, as IA is not the major source of revenue for these production activities.
74. An intent of the NZ ETS is to support meeting emissions targets by pricing emissions. As over-allocation reduces the impact of the NZ ETS price signal, it limits the ability of the NZ ETS to contribute to meeting these targets via emissions reductions for these over-allocated industries.

#### **Over-allocation is a direct and indirect fiscal cost**

75. When the Crown allocates free units to industry, it is recorded as an expense in the government's financial statements. The direct fiscal cost of IA is the number of units

allocated multiplied by the NZU cost recorded on the government books. At a price of \$75, the direct fiscal cost to the Crown of IA is in the order of \$600million per annum<sup>18</sup>.

76. Over-allocation means that the direct fiscal cost of IA is higher than it would be if allocation was at the level intended. At a price of \$75, the cost of over-allocation is \$7.5million for every 100,000 units of over-allocation. If, as is expected, over-allocation due to out-of-date allocative baselines is around 800,000 units, then this source of over-allocation has a direct fiscal cost of \$60million per annum.
77. There is also an indirect fiscal cost, as over-allocation reduces the number of NZUs the government can auction every year. Annual auction volumes are the unallocated portion of the NZ ETS cap<sup>19</sup>. IA is removed from the cap to calculate the auction volume as NZUs that are freely allocated by the government cannot also be sold through auctioning. Over-allocation increases the relative IA portion of the cap, decreasing the auction volume.

### **Over-allocation affects the efficiency of the NZ ETS market**

78. Over-allocation reduces the amount of units that could be sold at auction, however it theoretically does not affect the total volume of NZUs supplied into the NZ ETS market. The lower auction volume is balanced by firms receiving more units via allocation. If the carbon market is liquid, it does not matter if unit supply comes from auctioning or over-allocation.
79. It is possible that over-allocated NZUs are more likely to be 'banked' for future compliance, and auction units are more likely to be traded. Firms retaining over-allocated NZUs would be a rational choice as an effective form of hedging against future NZ ETS costs, including direct NZ ETS liabilities. This would mean over-allocations reduce market liquidity (and therefore efficiency of price discovery), compared to auctioning, which undermines the effectiveness of the NZ ETS.

### **Over-allocation could make it harder to link with overseas carbon markets**

80. Over-allocation could become an impediment to linking with overseas carbon markets, because it is seen as a fundamental problem of environmental integrity. Other jurisdictions may be reluctant to link if they perceive the NZ ETS market to lack integrity because of widespread and substantial over-allocation.
81. This could make it harder for New Zealand to procure offshore mitigation to cost-effectively meet emissions reduction targets or back units from the cost containment reserve.<sup>20</sup>

### **Over-allocation could promote lower emissions intensity in industries**

82. An alternative view is that allocations above 100 per cent of a firm's NZ ETS costs could provide additional incentive to EITE firms to improve emissions intensity and reduce emissions. The financial incentive to reduce emissions does not remain

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<sup>18</sup> Based on annual IA of approximately 8 million units. For context, the total number of units in the market is approximately 160 million, although this fluctuates annually and a large portion of these are held for future surrender obligations.

<sup>19</sup> The volume of gross emissions covered by the scheme over an emissions budget period

<sup>20</sup> The cost containment reserve (CCR) is a volume of units available for release in NZ ETS auctions if a trigger clearing price is exceeded. To the extent that sale of CCR volume causes the emissions budget for a period to be exceeded, this volume must be backed by either domestic means or offshore mitigation.

unchanged if allocation is reduced in response to firms reducing their emissions over time due to prospective financial returns from trading surplus IA. Some industry submitters stated that decisions on future investments in emissions reduction technology are in part dependent on receiving future over-allocation to be able to realise returns on these investments.

- 83. “Over-allocation” in these circumstances could support New Zealand’s emissions reduction and economic goals.
- 84. To date, there is no evidence that reductions in emissions intensity have been driven by the financial returns from the sale of over-allocated units. As emissions costs increase, and the financial value of IA increases, this is expected to change.
- 85. Additionally, a financial incentive to improve emissions intensity and reduce emissions remains, regardless of how much IA a firm receives.

**Over-allocation risks outweigh the benefits**

- 86. A summary of risks and benefits associated with over-allocation is presented in the table below.
- 87. There is a tension in IA policy between reducing the risk of emissions leakage and broader climate objectives. Ensuring the integrity of IA means balancing these intentions. Although IA should continue to reduce emissions leakage, it should not be at the expense of our commitments to reducing emissions.
- 88. We have limited evidence of IA leading to investment in lower emissions. It would also be difficult to separate business-as-usual improvements and those that depend on allocation. This is because investments that reduce intensity often have financial drivers, other than IA. It is difficult to justify maintaining over-allocation, given that the benefits may be marginal.
- 89. For these reasons, we assess the risks outweigh any benefits.

**Table 6: Over-allocation risks and benefits**

Over-allocation benefits	Over-allocation risks
Rewards/encourages IA recipients for reducing/to reduce their emissions	Mutes NZ ETS incentives to reduce emissions
	Direct and indirect fiscal cost to Crown/public
	Decreases efficiency of the NZ ETS market
	Could make it harder to link with overseas carbon markets
	Inconsistent with the policy intent of IA

**Will the phase-out of industrial allocation address over-allocation?**

- 90. The legislated phase-out of IA described above is not intended to address current over-allocation. The phase-out is premised on existing allocations accurately reflecting the emissions costs faced by industry. Any changes made to IA settings to address over-allocation would also support the phase-out of IA to work as intended.
- 91. However, with allocative baselines updated, the cumulative effect of the phase-out of IA on allocation would reduce the risk of over-allocation occurring in future.

## Secondary problems with IA

92. The review of IA identified several technical problems with the policy, which could make it difficult to enable a broader package of reforms to IA settings now or in the future.
  - a. The process prescribed in the Act to update allocative baselines is cumbersome and a barrier to updating baselines to account for new emissions factors, changes to the EAF, or updates to the NZ ETS exemption thresholds. Streamlining this process would allow baselines to be easily adjusted whenever required, ensuring they are accurate and reflect the actual emissions intensity of activities.
  - b. The Act allows for new industrial activities to seek eligibility for IA. However, the process for new activities to seek eligibility is unclear and difficult to meet, as eligibility is tied to historical base years. The Act is unclear about how eligibility would be assessed for new activities not carried out in the current base years.
  - c. There is limited data available to monitor IA policy. Currently, firms with direct surrender obligations must submit an emissions return, and production data is collected for allocation applications. However, most of it is protected under confidentiality provisions. Indirect data for emissions and revenue is not gathered at all for allocation purposes. The Act allows for data to be collected for the purposes of a review, but this is not suitable for regular monitoring of IA. This means the government cannot easily assess the risk of over-allocation.

## What objectives are sought in relation to the policy problem?

93. The objective of the IA reforms is to address over-allocation while ensuring the outcomes of IA remain aligned with its policy objectives of minimising the risk of emissions leakage while supporting achieving New Zealand's domestic and international emissions reduction targets.
94. IA comes at a cost to the taxpayer and government, and is designed to reduce leakage risk while still ensuring that emissions intensive activities face a net NZ ETS cost across the firms carrying out the activity.
95. There is tension between addressing over-allocation and minimising leakage. Removing over-allocation increases the cost impact of the NZ ETS on industry, however EITE firms that receive an allocation of 100 per cent or more of their NZ ETS costs are not at risk of leakage as they do not face a net NZ ETS cost.
96. Exposing industry to a marginal emissions cost opens them to leakage. The intent is to address current over-allocation to reduce IA to levels deemed appropriate to mitigate the risk of emissions leakage.
97. Reforms that emphasise the prevention of leakage and minimising economic impacts on industry may be insufficient to support strong NZ ETS incentives for gross emissions reductions.
98. Where possible, the continued provision of IA should not come at the expense of the integrity of the NZ ETS, nor achievement of the government's climate change mitigation goals. We therefore consider addressing over-allocation, addressing emissions leakage, and supporting the consistency of IA and the NZ ETS should take precedence when assessing reform options.
99. Consultation feedback suggested alternative purposes of IA, specifically that a purpose of IA is to incentivise improvements in emissions intensity. Note that while this is an

implicit purpose of an output and intensity-based method of allocation, the government does not consider this to be the purpose of New Zealand's IA policy and there are other policies to achieve this more effectively. For this reason, we have not included an objective specifically related to incentivising improvements in emissions intensity.



# Section 2: Deciding upon options to address the policy problem

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

- 100. Options to reform IA policy are assessed against three primary criteria set in relation to achieving the objectives described above. Two secondary criteria are used to further assess the effectiveness, workability and acceptability of different options.
- 101. In arriving at an overall assessment for each option, primary criteria will be weighted more heavily than the secondary criteria.

**Table 7: Impact analysis criteria**

Criteria	Description
<b>Primary criteria</b>	
Support consistency of IA with the purpose of the NZ ETS	IA should be consistent with the purpose of the NZ ETS to drive emissions reductions in line with emissions budgets and targets. It should: <ul style="list-style-type: none"> <li>a. ensure that a marginal incentive is maintained for EITE firms to reduce emissions</li> <li>b. support the overall integrity and efficiency of the NZ ETS secondary market</li> </ul>
Address over-allocation	Actual levels of IA should align, as much as possible, with prescribed levels of assistance, removing existing over-allocation and mitigating the risk of future over-allocation.  IA reforms should remove over-allocation for activities where the risk of emissions leakage has changed. Eligibility decisions should reflect the existing risk of emissions leakage.
Minimise risk of emissions leakage	IA should continue to minimise the risk of emissions leakage. It should mitigate the loss of competitiveness for EITE firms that face higher costs because of the NZ ETS and reduce the risk of them moving production overseas and increasing global emissions.
<b>Secondary criteria</b>	
Improve regulatory certainty and predictability	Changes to IA should give EITE firms certainty with respect to their future allocation levels and eligibility status over typical investment horizons where return on investment is expected over a period of ten to fifteen years.
Minimise compliance costs, administrative burden and complexity	IA should support an efficient NZ ETS, which minimises administrative costs, as well as compliance costs and burden for EITE firms.



102. Qualitative judgements against each of these criteria will be provided in line with the key below, with further description of analysis against each criterion provided for each option.

### Key for criteria assessment

- ++ much better than doing nothing/the status quo/counterfactual
- + better than doing nothing/the status quo/counterfactual
- 0 about the same as doing nothing/the status quo/counterfactual
- worse than doing nothing/the status quo/counterfactual
- much worse than doing nothing/the status quo/counterfactual

### What scope will options be considered within?

103. In early 2021, Cabinet agreed to a terms of reference<sup>21</sup> for the IA review, setting the scope of options that were consulted on. The primary scope of the review focussed on current IA settings, including the legislated IA eligibility tests and allocation calculation settings.
104. The secondary scope considered longer-term changes to IA policy, including the introduction of alternative policies to address emissions leakage. However, the terms of reference explicitly noted that no immediate legislative changes were intended from the secondary scope considerations.
105. The IA review terms of reference informed the package of proposals included in the IA reform consultation document. These proposals were tested by the IA technical advisory group, which agreed that a broad suite of options to reform IA should be consulted on.

### Out of scope matters and options

106. Cabinet agreed that the following matters and options would be out of scope of the IA review:
- a. the phase-out of IA introduced in 2020 through the ETR Amendment Act;
  - b. updating the Electricity Allocation Factor (EAF) value and modelling methodology;
  - c. agricultural free allocation policy;
  - d. how the methodology for NZ ETS unit supply settings accounts for IA.
107. The IA levels of assistance and phase-out rates were considered in 2020. The prescribed levels were determined to be appropriate to mitigate current leakage risk. The 2019 IA phase-out RIS assessed the activities most at risk of leakage and determined the ongoing (and descending) level of assistance prescribed in the Act would reduce NZ ETS costs to the Crown, maintain the competitiveness of domestic EITE firms, and prevent them moving offshore as a direct result of NZ ETS costs.
108. The CCC will have an ongoing role on advising the government about setting levels of assistance, including whether specific rates should be applied to activities from 2025.

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<sup>21</sup> [Terms of Reference for the Industrial Allocation Policy Review](#)

## Overview of options

### Approach to options in the analysis

109. This RIS considers complementary options that directly address the policy problem and achieve the objectives described in Section 1.
110. Over-allocation is caused by out-of-date IA allocation settings. The RIS, therefore, considers options to update those specific settings, as doing so will directly address the policy problem and support achieving the objectives of the IA reforms.
111. The RIS also considers various options to address the secondary, technical issues associated with IA policy. These options are necessary to support and enable the reforms to IA, but alone would not have an impact on levels of allocation.

### Summary of options to reform IA to address over-allocation

112. The RIS considers the following sets of decisions/options to reform IA policy:
  - a. *updates to IA calculations*: we assess whether to immediately update allocative baselines with activity data from new base years;
  - b. *updates to IA eligibility decisions and settings*: this includes whether to immediately reapply the emissions intensity test with activity data from new base years, and reassess and update eligibility decisions. The RIS also considers provisions in the Act that delay changes to eligibility decisions for five years where they result in a change in classification from highly- to moderately emissions-intensive, or from moderately emissions-intensive to ineligible for IA;
  - c. *frequency of updates*: we assess whether any decision to make updates to allocative baselines and eligibility decisions should apply as a one-off or to embed periodic reviews and updates;
  - d. *new base years*: if allocative baselines are updated and eligibility is reassessed, new base years will need to be selected. The RIS considers different options for appropriate base years for the IA reforms;
  - e. *technical updates to IA policy*: this includes options to streamline updates to allocative baselines, improve the eligibility process for new industries seeking IA, and collect more activity data from IA recipients.

### Māori and Te Tiriti o Waitangi implications of options being considered

113. Māori have a significant stake in climate policy. Climate change threatens the loss of culturally significant land, taonga species, and resources affecting the perpetuity of mātauranga and tikanga Māori. Over-allocation is detrimental to the impact of the NZ ETS in driving emissions reductions, and addressing this problem strengthens New Zealand's response to climate change.
114. There is a strong Tiriti and Māori interest in 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.
115. Assessing the Māori interest in IA policy is complex. IA is mainly of interest to EITE firms receiving an allocation – many of which are owned or majority-owned by overseas entities. As Māori-owned businesses largely do not receive IA, they would not be directly affected by changes to allocation or eligibility settings.
116. However, the Māori economy may be more exposed to the impacts of emissions leakage than the broader New Zealand economy.

117. Changes in IA would affect the profitability of industries that employ a high proportion of Māori compared to other ethnic groups (in manufacturing, agriculture and forestry). Also, Māori employment could be disproportionately affected in regions with a large Māori population, and where one or two EITE facilities dominate the local economy. This risk could be acute in rural areas with wood-processing plants. Still, the proposals set out here are unlikely to affect employment, as they retain enough assistance to reduce the risk of leakage and prevent the closure of industrial facilities.

#### **Regional economies implications of options being considered**

118. Emissions leakage could impact regional economies and employment if a large EITE firm or firms close and shift production overseas. This would reduce economic activity and employment.
119. For most activities eligible for IA, there are only one or two firms carrying out the activity. For these activities, we assess that the proposals recommended in this RIS would minimally impact regional economies given none would materially increase the risk of emissions leakage compared to the status quo. Large EITE firms carrying out these activities would retain enough support to maintain international and domestic competitiveness. Accordingly, higher marginal NZ ETS costs alone would be insufficient to drive production overseas.
120. For activities where there are a number of firms carrying out the activity, there could be some impacts on regional economies. This is because the net NZ ETS costs vary between firms carrying out the activity, as their emissions intensities vary. Updates could result in some relatively emissions inefficient firms closing, and their production occurring elsewhere within New Zealand or offshore. We do not hold recent data on the relative emissions efficiency among firms carrying out the same activity in these situations; and it is difficult to predict what, if any, impacts on regional economies would occur as a result of the recommended changes.

## Section 2.1 Updates to industrial allocation calculations

121. This section considers options to update the allocative baselines used in IA calculations.
122. We assess two sets of decisions to update allocative baselines:
  - a. Decision 1: whether to update allocative baselines to reflect emissions intensity from recent years;
  - b. Decision 2: whether to update allocative baselines as a one-off or periodically.

### Industrial allocation calculations decision 1 updating allocative baselines

123. This section considers updating of allocative baselines using new reference years to reflect recent levels of emissions intensity. There are no other accurate approaches to update allocative baselines.
124. Out-of-date allocative baselines result in levels of IA that do not reflect current emissions. It is expected that allocative baselines are set higher than would reflect current levels of emissions for most, if not all, activities. Updating allocative baselines to reflect recent emissions would reduce over-allocation, while retaining support at a level considered appropriate to address risk of emissions leakage.

#### What options are being considered?

##### Option One – Status quo, no changes to allocative baselines

125. Allocative baselines would not be reassessed and would remain unchanged. Allocations would continue to be based on an activity's emissions intensity from over 10 years ago.

##### Option Two – Update allocative baselines

126. Allocative baselines would be reassessed using recent reference years and updated as soon as possible.

How does the option compare to the status quo?

**Table 8: Impact analysis of option to update allocative baselines**

	Option One – Status quo, no changes to allocative baselines	Option Two – Update allocative baselines
<b>Primary criteria</b>		
Supports the purpose of the NZ ETS	0	+
Addresses over-allocation	0	++
Minimises risk of emissions leakage	0	-
<b>Secondary criteria</b>		
Regulatory certainty and predictability	0	-
Minimise compliance costs, administrative burden, and complexity	0	-
<b>Overall assessment<sup>22</sup></b>		
	0	+

*Supports purpose of the NZ ETS*

- 127. As the status quo perpetuates over-allocation, net emissions costs are lower than intended by NZ ETS settings. Over-allocation undermines the objective of the NZ ETS to encourage industry to reduce emissions.
- 128. Option 2 would strengthen NZ ETS incentives for eligible activities to reduce emissions by removing over-allocations. For over-allocated industries, realigning allocations with the level of assistance prescribed in the Act would increase the net costs of emissions for EITE firms and incentivise some emissions reductions.
- 129. Reducing over-allocation will improve the efficiency of the NZ ETS market if it results in the decreased banking of units and increased market liquidity. Reduced allocation will increase demand in the primary and secondary markets; likely resulting in higher market prices which would increase abatement incentives across the economy.

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<sup>22</sup> Primary criteria are weighted more strongly than secondary criteria in arriving at an overall assessment

*Address over-allocation*

130. Option 2 would remove existing over-allocation caused by out-of-date allocative baselines.
131. Updating baselines with activity data from new base years would realign allocations to reflect the current emissions intensities of industrial activities. This would reduce over-allocation.
132. The 2020 data collection exercise indicated that updating allocative baselines for these four activities would reduce IA by around 180,000 units per annum. Extrapolating the findings, the impact of updating baselines with recent data could reduce allocations to industry (7.7 million units in 2020) by about 800,000 units.
133. This estimate is derived from applying broad assumptions of how representative these four activities are, so needs to be treated with caution. For the 22 activities where data was not collected, it is assumed their allocation drops by 10 per cent, due to a reduction in their primary allocative baseline. This drop in allocation is reflective of the activity with the lowest drop in allocative baseline from the 2020 data collection, which has a very limited ability to mitigate emissions compared to other activities.

*Minimises risk of emissions leakage*

134. Over-allocation removes most, or all, of the net NZ ETS costs that EITE firms face. Accordingly, there is no risk of emissions leakage under the status quo.
135. Updating allocative baselines would increase net NZ ETS costs faced by EITE firms carrying out activities that are currently over-allocated. Exposure to greater marginal NZ ETS incentives would increase the risk of leakage.
136. However, we assess the actual risk of leakage would not change significantly compared to the status quo. Option 2 would realign allocations with the level of assistance the Ministry has previously deemed sufficient to mitigate the risk of emissions leakage.<sup>23</sup>

*Improve regulatory certainty and predictability*

137. Updating allocative baselines would reduce regulatory certainty compared to the status quo. EITE firms would have less certainty of their allocation levels before the implementation of new baselines. For some activities, there could be an abrupt and substantial change in the level of support once new baselines are adopted.

*Minimise compliance costs, administrative burden and complexity*

138. Option 2 would increase administrative costs compared to the status quo. The process for updating baselines would require the collection of activity data (through a gazettal process), calculation of new baselines (which will have to be independently reviewed and quality assured), and amendments to the IA regulations. This would be time consuming and resource intensive for the Ministry.
139. Data and analysis would need to go through an independent quality assurance process. This quality assurance is expected to cost upwards of \$1 million. This estimate is based on the costs involved when these baselines were set in 2010, while

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<sup>23</sup> The 2020 IA phase out RIS determined that a level of assistance of 0.89 for highly emissions intensive activities and 0.59 for moderately emissions intensive activities would be sufficient to mitigate the risk of leakage for the most at-risk activities in 2021. The level assistance decreases over time at a rate commensurate with the ongoing risk of leakage and the required level of support.

noting that these costs also included assessment of the eligibility tests that were carried out at the same time.

140. EITE firms would face higher compliance costs from having to provide recent activity data through the gazettal process. The monetary and time costs associated with proving new data could be high, and material relative to firm size. For firms that produce a number of products, gas, coal and electricity emissions have to be attributed to specific products as part of this exercise. For small firms, without dedicated accounting and finance staff, this process will be complicated, as was observed in the call for data for four activities that informed this review. In the past, some firms have engaged consultants to carry out the data provision process on their behalf

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

141. The preferred option is to update allocative baselines as it addresses over-allocation and supports the purpose of the NZ ETS. Maintaining current baselines would not address over-allocation and would be inconsistent with these objectives and the policy intent of IA.
142. Both options would effectively mitigate the risk of emissions leakage. Although the status quo reduces leakage risk, we assess that more support is currently provided than is needed to achieve this objective. Updating baselines removes over-allocation and retains enough support to maintain the competitiveness of the most at-risk EITE firms.
143. While updating baselines achieves the objectives of the IA reforms, it would reduce regulatory certainty and increase administrative and compliance costs. However, achieving the objectives outweighs the costs of updating the baselines.

**What are the marginal costs and benefits of the option?**

144. We consider the marginal costs and benefits for EITE firms and the government below.

**Table 9: Marginal costs/benefits for updating allocative baselines**

Affected groups	Comment	Impact	Evidence Certainty
<b>Additional costs of the preferred option compared to taking no action</b>			
<b>Regulated groups – EITE firms</b>	We expect this option would reduce IA by around 800,000 NZUs per annum - split across 26 activities (see Table 10 for further detail)	\$60 million per annum	Medium – based on extrapolating from the 2020 data collection for four EITE activities
	Costs incurred complying with the requirements of the data collection exercise	Will vary from firm to firm, under \$1 million	Medium
Regulators	Implementing updated allocative baselines	Low	High – based on previous updates to emissions

			factors input data used in calculating emissions + feedback from the EPA
Government	Costs incurred carrying out the data collection exercise and subsequent analysis – including independent quality assurance	Ca. \$1-\$2million	Medium – based on costs during previous data collection exercises
<b>Total monetised costs</b>		\$60 million per annum	
<b>Non-monetised costs</b>	NA	NA	
<b>Additional benefits of the preferred option compared to taking no action</b>			
Regulated groups	N/A	N/A	
Regulators	N/A	N/A	
Government	This option would result in a direct cost reduction for the Crown and a corresponding indirect revenue increase if these NZUs were auctioned	\$60 million per annum	Medium – based on extrapolating from the 2020 data collection for four EITE activities
<b>Total monetised benefits</b>		\$60 million per annum	
<b>Non-monetised benefits</b>		Low	

## EITE Firms

145. Updating allocative baselines would reduce allocations for firms carrying out activities that are over-allocated and reduce the profitability of these firms. EITE firms would receive fewer units and face higher marginal net NZ ETS costs. A reduction in allocations could increase the number of units a firm needs to source from NZ ETS auctions or the secondary market to meet any surrender obligations. A reduction in allocations would also mean EITE firms have fewer units to sell and offset indirect NZ ETS costs such as higher electricity costs.
146. The financial impact of updating allocative baseline is the resulting reduction in allocation multiplied by the value of allocated NZUs. Estimates of financial impacts are provided in Table 10 below.
147. These estimates of financial impacts are reliable for the activities covered by the 2020 data collection. For other activities, the estimate is based on a conservative ten percent reduction in allocative baseline which reflects expected business as usual improvements in energy and process efficiency. Estimates of financial impacts for these activities not covered by the 2020 data collection should be treated with caution, however the cumulative impact across industries is expected to be more reliable. IA for





s9(2)(b)(ii)						

**Government**

- 150. Addressing over-allocation by updating baselines would reduce the fiscal costs to the government. This reduction in costs is equivalent to the reduction in profitability for firms carrying out eligible activities, estimated at \$60million.
- 151. It could also reduce the indirect fiscal costs by making more NZUs available for auction. This could support an increase in auction revenue over the emissions budgets.

**Consultation feedback**

- 152. There was support for updating allocative baselines using new base years. Of the 12 EITE industries that receive IA and submitted, six of them agreed that allocative baselines should be updated with new base years – including NZ Steel and Methanex, which account for over 40 per cent of allocations.
- 153. Those who did not support an update to allocative baselines were primarily concerned that this would undermine return on prior investments to reduce emissions and disincentivise future investments.
- 154. Some industry submitters claimed that future investments in emissions reduction technology are dependent on receiving over-allocation to be able to realise these returns. However, reducing emissions reduces the emissions costs faced in carrying out an activity, whether this results in units available to sell (revenue) or an equivalent reduction in emissions costs the net effect on profitability is the same.

**Recommendation**

- 155. We recommend the government update all allocative baselines to reflect recent activity. Analysis on how to reflect recent activity is provided in section 2.3 New Base Years.

## Industrial allocation calculations decision 2 - frequency of updates to allocative baselines

156. This section considers whether updating of allocative baselines should be one-off or repeated periodically.

### What options are being considered?

#### Option one – Counterfactual – a one off update to allocative baselines

157. Allocative baselines would be updated as soon as possible; however, they would not be subsequently updated in the future. IA amounts would be calculated using the new baselines.

#### Option two – periodic: annual or biennial updates to allocative baselines

158. Allocative baselines would be updated annually or every two years. The government would collect data, calculate new baselines, and amend the IA regulations every one or two years. Annual allocations would be based on the baseline prescribed in regulations for that particular year.

#### Option three – periodic: 5-yearly updates to allocative baselines

159. Allocative baselines would be updated immediately and then again, every five years. The government would carry out the process of amending regulations and prescribing new baselines in the year prior to the fifth year. For example, if baselines were updated in 2024, they would be updated again in 2029, with the update process beginning in 2027.

#### Option four – periodic: updates to allocative baselines occurring every 10 years, or a longer period

160. Allocative baselines would be updated every 10 years, or at a longer period. The government would immediately update baselines and then again in 10 years (or a longer period).

#### Option five – mixture: a one-off update to allocative baselines, with provision for updates in future

161. Allocative baselines would be updated as soon as possible. This would be complemented by introducing the power to update an activity's allocative baseline based on the conditions that:
- a. it is no sooner than **five** years after the most recent update using new base years; and
  - b. can only occur based on evidence that the activity is receiving allocation at a level that it no longer faces a net-ETS cost.

How do the options compare to the status quo/counterfactual?

Table 11: Impact analysis of options to periodically update baselines

	Option one: Counter-factual – a one-off update to allocative baselines	Option two: update allocative baselines annually	Option three: update allocative baselines every 5 years	Option four: update allocative baselines every 10 years or more	Option five: mixture – one-off update plus ability to recalculate with new base years after five years
<b>Primary criteria</b>					
Supports the purpose of the NZ ETS	0	-	-	0	+
Address over-allocation	0	+	+	+	+
Minimise emissions leakage	0	-	-	-	0
<b>Secondary criteria</b>					
Improve regulatory certainty and predictability	0	--	--	-	-
Minimise compliance costs, administrative burden and complexity	0	--	-	-	0
<b>Overall assessment<sup>27</sup></b>					
	0	-	-	-	+

*Supports purpose of the NZ ETS*

- 162. All options result in IA continuing to be provided at a level sufficient to reduce emissions leakage risk, while maintaining an appropriate marginal incentive for gross emissions reductions.
- 163. Periodic updates introduce the perverse incentive for firms to delay improvements in emissions efficiency until after any update has occurred as this will ‘lock-in’ higher

<sup>27</sup> Primary criteria are weighted more strongly than secondary criteria in arriving at an overall assessment.

allocation for longer after the improvements are made. For example, if we were to update baselines every ten years, eight years after a baseline update, a firm may be considering investing in emissions reducing technology but decide to postpone investment for another two years to avoid reducing their emissions prior to calculation of allocative baselines, and therefore avoid reducing their baselines and their allocation.

164. Some submitters were concerned that more regular updates would undermine future investment in emissions reductions. This is due to insufficient return on investment to justify the change. Any disincentive to investment in emissions reductions is in conflict with the purpose of the NZ ETS.
165. This concern is supported by research investigating how investments in clean technology relate to regulator response to these investments found that if firms expect allocation to be reduced in response, then their incentive to invest is moderated. This effect can be stronger than the incentive to reduce emissions.<sup>28</sup>
166. The impact of phase-out of IA by reducing the level of assistance over time has a more significant impact than any subsequent marginal changes in emissions efficiency from an accurate baseline. Since allocative baselines were set, emissions efficiency has approximated the predicted 1% annual improvement for two of the four industries for which data collection occurred. Phase-out will be at 1% then 2% during the ten years following updates to allocative baselines, resulting in allocation reductions that exceed any expected business-as-usual improvements in emissions efficiency.
167. Regular updates to allocative baselines would further support alignment between IA volumes and emissions budgets, however any mis-alignment over the next decade is expected to be slight. Conversely, a one-off or infrequent update would increase the return on investment to industry for improving emissions efficiency.

#### *Address over-allocation*

168. Incorrect allocative baselines result in incorrect levels of IA. It is expected that allocative baselines are set higher than would reflect current levels of emissions for most, if not all, activities.
169. As described in Decision 1 above, all options remove current over-allocation by updating allocative baselines to reflect actual emissions from recent years – thereby removing current over-allocation. However, over the long-term new baselines could become out-of-date as BAU improvements in emissions intensity occurred.
170. An intent of the existing phase-out of IA is to address this risk, without the need for updates to allocative baselines. Phase-out will be at 1% then 2% during the ten years following updates to allocative baselines, resulting in allocation reductions that exceed any expected business-as-usual improvements in emissions efficiency.
171. If large technological breakthroughs improving emissions intensity occur in an industry, such as entire sectors moving to clean energy sources, New Zealand firms are likely to consider picking up that technology to reduce their exposure to emissions costs. Frequent updates to allocative baselines would diminish return on investment and disincentivise investment in this technology.
172. Having the ability to make adjustments to allocation to reflect this type of improvement is important. One approach to this already exists, the ability provided in the Act to increase phase-out rates for one or more eligible industrial activities. All alternatives

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<sup>28</sup> Rosendahl and Storrøsten (2015), [ALLOCATION OF EMISSION ALLOWANCES: IMPACTS ON TECHNOLOGY INVESTMENTS](https://www.worldscientific.com/doi/10.1142/9789814614444_0005) | Climate Change Economics (worldscientific.com).

(Options 2-5 above) introduce the ability to recalculate allocative baselines using new base years, meaning that any resulting over-allocation can be time-limited.

*Address risk of emissions leakage*

173. Over-allocation removes most or all of the NZ ETS costs that EITE firms face. All options described above update allocative baselines to reflect actual emissions, meaning that net NZ ETS costs will increase. Any increase in net NZ ETS costs increases the risk of emissions leakage.

*Improve regulatory certainty and predictability*

174. The status quo provides for high levels of regulatory certainty, as baselines are only updated once and EITE firms would receive IA at a rate calculated on the same allocative baseline into the future, and using known phase-out rate impacts on the level of assistance provided.
175. Frequent updates to allocative baselines would significantly reduce regulatory certainty compared to the status quo. EITE firms would have less certainty regarding annual allocations, particularly if baselines change within the shorter update period were significant. Large increases or decreases in baseline values could see substantial and abrupt shifts in allocations occur with little advance warning. This impact would be particularly acute under an annual update option, but much less of a risk if updates occurred at a lower frequency. In contrast though, infrequent updates would mean that an update based on outlier year data would remain in place longer.
176. Infrequent baseline updates would provide greater certainty to IA recipients than regular updates. Baselines fixed for 10 years or more, would provide certainty to EITE firms regarding their level of allocation over the longer period consistent with typical business investment horizons.
177. A one-off update would provide significant certainty compared to periodic updates given that baselines would not be changed again in the future. Some submissions suggested that a longer legislated period would provide a greater level of certainty than having no scheduled updates.
178. Annual updates would mean baselines reflect what occurred within the year. This makes them highly accurate but risks them reflecting unusual and aberrant factors. For example, if we updated baselines in 2020 or 2021, they would reflect the impact of Covid lockdowns (reduced output, less emissions, less revenue). If a baseline were updated in an unusual year, this could lead to a materially lower or higher allocation, although this would be mitigated by the smoothing effect of updates being calculated using data from multiple years.

*Minimise compliance costs, administrative burden and complexity*

179. All the options impose higher compliance and administrative costs relative to a one off update. Updates would require the government to regularly set new baselines, incurring additional administrative costs. This process would require the collection of new activity data, calculation of new baselines (which would have to be independently reviewed and quality assured), and amendments to the IA regulations to prescribe new baselines. These costs would be greater under options 2 and 3, which would see frequent updates.
180. Collecting new activity data and calculating new baselines is time consuming and expensive. Furthermore, new baselines need to be independently quality assured. In 2010, MfE incurred an external cost of over \$1 million for this independent quality assurance work, in addition to internal costs. The additional process of updating regulations, including consultation requirements, are an additional cost.

181. There would also be additional compliance costs for IA recipients that would have to provide activity data to the government to calculate new baselines. EITE firms intending to receive would be required under the Act to provide accurate activity data in accordance with the Gazette notice.

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

182. When comparing the options there are clear trade-offs between implementing frequent or infrequent periodic updates of allocative baselines.
183. Frequent updates (Options 2 and 3) would most reduce the risk of over-allocation in the future, however the legislated phase-out and the ability to set activity specific phase-out rates mean this risk is low. Frequent updates have a chilling effect on abatement investment as an element of the return on investment is removed; the ratcheting down of allocations following investment will disincentivise investment. This is negative against the purpose of the NZ ETS and achievement of emission budgets. Additionally, frequent updates would reduce regulatory certainty and increase administrative and compliance cost.
184. Conversely, a one-off or infrequent updates (Options 1 and 4) would improve regulatory certainty and impose only minimal, additional administrative and compliance costs, but by itself would be less effective at reducing over-allocation over the long-term.
185. The relative weighting of these factors in this decision is informed by the impact of the phase-out of IA, and that the impact of any inaccuracies in allocative baselines will be reduced every year as the level of assistance decreases. The level of assistance for IA is reducing by 0.01 per year until 2030, and then by 0.02 from 2030. For a moderately emissions intensive activity, this means that phase-out will reduce the level of assistance from 0.56 in 2024 to 0.42 in 2034, meaning a 25% decrease in IA for these activities over this period. We expect this to exceed any improvements in energy efficiency over this period, and that this will increase the risk of leakage for these activities.
186. A one-off update to allocative baselines is considered the most appropriate option to meet the policy objectives. Introducing the ability to recalculate allocative baselines for specific activities in future if they no longer face a net emissions cost best addresses the problem while providing an additional tool to address over-allocation arising in future.

**What are the marginal costs and benefits of the option?**

187. The option of a one-off update to allocative baselines and the introduction of an ability to recalculate using new base years (but not within five years of the last AB update involving a call for data based on new base years, and only with evidence that allocation for the activity is exceeding NZ ETS costs) has no material marginal costs and benefits beyond those described for the one-off update described in the previous section recommending updating allocative baselines as soon as possible.

**Consultation feedback**

188. Feedback was varied from support for a one-off update to more frequent (for example yearly, five-yearly and ten-yearly) updates to allocative baselines. One submitter suggested updates every two years. Those preferring a one-off update cited business certainty as a major factor.

## Recommendation

189. We recommend option 5 – allocative baselines would be updated as soon as possible. This would be complemented by introducing the power to update an activity’s allocative baseline based on the conditions that:
- a. it is no sooner than **five** years after the most recent update using new base years; and
  - b. can only occur based on evidence that the activity is receiving allocation at a level that it no longer faces a **net-ETS cost**.



## Updated Section 2.2 Updates to industrial allocation eligibility decisions and settings

190. There are several decisions relating to whether and how to reassess eligibility for IA. Should:
- a. eligibility for IA be reassessed;
  - b. the five-year transition period for changes in eligibility remain or be changed;
  - c. additional emissions intensity eligibility thresholds or sliding scales be introduced;
  - d. the trade exposure test be updated.
191. All decisions have been considered and consulted on. Detail on the last two decisions has been included as an appendix to this RIS for completeness.

### Updated – Industrial allocation eligibility decision 1 - reassessing eligibility

192. This section considers whether and how to reassess eligibility for IA.
193. This section has been updated after the consideration of submissions on the Bill. Many submissions raised concerns about the recommendation to reassess eligibility using eligibility thresholds recalibrated for a recent emissions price.
194. There was particular concern that doing so would result in most moderately emissions intensive activities shifting into the highly emissions intensive category and that the resulting increase in allocations would be at odds with the purpose of the NZ ETS, and legislated emissions targets.
195. It is unclear the extent to which the risk emissions leakage has increased in response to recent higher carbon prices. There have been no recent, comprehensive analysis of 'actual' emissions leakage risk. However, it is reasonable to conclude the risk has increased and that any changes in the international climate policy for New Zealand's key EITE trading partners would be insufficient to mitigate this risk.
196. However, officials agree that given industrial allocation policy is now operating in a broader landscape with legislated emissions targets that did not exist prior to 2010, there is a need to ensure mitigating leakage risk does not undermine the tools we use to meet those targets.
197. Additionally, we are aware that the original thresholds were made for the Australian Climate Pollution Reduction Scheme (adjusted for exchange rate) and not for New Zealand's specific circumstances. There was also a level of arbitrariness to them – meaning they likely were never able to accurately assess leakage risk, but rather broadly categorise activities that are most likely at risk.
198. Officials have updated this section of the RIS with the intent of ensuring the various considerations have been given appropriate weighting and the limitations and context we are working with are appropriately recognised.
199. The framework in the Act to assess eligibility uses trade exposure and emissions intensity tests. The original assessment of trade exposure for each activity as defined in legislation remains the same for the purpose of this RIS. Reassessment of eligibility is being considered solely with respect to reassessing emissions intensity.
200. Officials acknowledge the limitations of the emissions intensity test. The original test is a proxy for the materiality of an emissions price on business viability (and therefore, in

part, emissions leakage risk). This simplified metric was applied owing to the difficulty in determining 'actual' leakage risk and the level of support that should be provided.<sup>29</sup>

201. The thresholds were set using a methodology that required extensive assumptions and modelling, and was largely based on the model proposed for the Australian Carbon Pollution Reduction Scheme. They were calculated based on an emissions price of NZ\$25 a tonne and other aged data, such as revenue and commodity prices.
202. Selection of a fixed emissions cost renders calculated thresholds insensitive to subsequent movement in emissions prices. NZU prices have varied between between \$15 in 2015 to \$86 in March 2022, and are currently sitting at around \$54 (10 May 2023).

### **What options are being considered?**

#### *Periodic updating of eligibility decisions is not being considered*

203. Out-of-date eligibility decisions can only contribute to over-allocation if the risk of emissions leakage decreases, and this is unlikely over the short- to medium- term given the lack of carbon pricing in regions to which eligible industrial activities are most trade-exposed.
204. The phase-out of IA further contributes to risk of emissions leakage only increasing, not decreasing, over time.
205. Additionally, the significant regulatory and investment uncertainty that would result from such a periodic reassessment is not worth the limited benefits.
206. We are not considering updating eligibility decisions periodically.

#### **Option One – Status quo, do not reassess and update eligibility decisions**

207. Eligibility decisions (and the emissions intensity thresholds) would not be reassessed or updated, and the eligibility status of industrial activities would not change if the bounds of the activity definition remain unchanged.<sup>30</sup>

#### **Option Two – Reassess eligibility decisions using current thresholds**

208. Eligibility of all activities receiving IA would be reassessed, using existing emissions intensity thresholds.

#### **Option Three – Reassess eligibility decisions using thresholds recalibrated to reflect changes in carbon price**

209. Eligibility of all activities receiving IA would be reassessed, using updated emissions intensity thresholds. Thresholds would be updated to reflect changes in carbon price to more accurately reflect carbon leakage risk.

#### **Option Four – Reassess eligibility decisions using new thresholds developed to more accurately reflect current risk of emissions leakage**

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<sup>29</sup> It should also be acknowledged that the emissions intensity test is only one component of determining emissions leakage risk. The ability for a firm to pass on emissions costs to the consumer is also a key consideration to determine leakage risk. For the New Zealand's industrial allocation framework, a basic trade-exposure test is used.

<sup>30</sup> The extent to which an existing activity definition is amended in future (if at all), will determine if it's reassessed against the eligibility criteria. This is discussed in the new activity section.

- 210. Eligibility of all activities receiving IA would be reassessed, using updated emissions intensity thresholds. Thresholds would be updated to accurately reflect current risk of emissions leakage.
- 211. It is possible that this would require thresholds to be set against a metric other than emissions per revenue, such as NZ ETS costs per unit of firm profitability. Current thresholds use emissions per revenue as a proxy for the impact of NZ ETS costs on profitability, whether this remains an appropriate proxy would need to be investigated.

**How do the options compare to the status quo/counterfactual?**

**Table 12: Impact analysis of options to reassess eligibility**

	<b>Option One – Status Quo, no reassessment of eligibility decisions</b>	<b>Option Two – Reassess eligibility decisions using current thresholds</b>	<b>Option Three – Reassess eligibility decisions using existing thresholds recalibrated to reflect changes in carbon price</b>	<b>Option four – Reassess eligibility decisions using new thresholds to more accurately assess emissions leakage risk</b>
<b>Primary criteria</b>				
Supports the purpose of the NZ ETS	0	+	-	-
Addresses over-allocation	0	-	+	+
Addresses the risk of emissions leakage	0	--	+	++
<b>Secondary criteria</b>				
Regulatory certainty and predictability	0	-	-	--
Minimise compliance costs, administrative burden, and complexity	0	-	-	--
<b>Overall assessment<sup>31</sup></b>				
	0	-	-	-

<sup>31</sup> Primary criteria are weighted more strongly than secondary criteria in arriving at an overall assessment

### *Supports purpose of the NZ ETS*

212. All options will not remove the fundamental financial incentive on firms to reduce emissions. This is because all firms receiving IA face 100 per cent of their emissions costs (either through direct surrender obligations, or through indirect costs added onto energy consumption), regardless of the approach to eligibility testing.<sup>32</sup> However the options do have differing impacts on the net NZ ETS price these activities face.
213. If eligibility is retested against current thresholds (Option Two), there is a risk that firms will face sudden increases in net costs. This could result from the combination of reduced (or removed) eligibility, the shortened stand down period for those changes, and the immediately updated allocative baselines.
214. The impact of reassessing eligibility with recalibrated thresholds (Option Three) will likely lead to most moderately emissions intensity activities shifting to the highly emissions intensive category. This would increase allocations and reduce the net NZ ETS price signal these activities face. We assess this would prove inconsistent with the purpose of the NZ ETS.
215. Developing and applying new thresholds (Option Four) would require extensive research and consultation and subsequent legislative change. This would take significant time and effort, and consequently extend the issue of over-allocation due to out-of-date allocative baselines further into the future.
216. If eligibility is retested against current thresholds (Option Two), it is likely many existing activities would either become ineligible or shift down from highly emissions intensive, to moderately emissions intensive. Of all four options, this is arguably the most in line with supporting the purpose of the NZ ETS to send a strong price signal to the economy.
217. The impact of reassessing eligibility with recalibrated thresholds (Option Three) would likely lead to activities shifting from the moderately emissions intensive category to the highly emissions intensive category. The corresponding increase in the level of assistance to these activities would increase allocations and reduce the net NZ ETS price signal these activities face. This is inconsistent with the purpose of the NZ ETS.
218. Without further data, analysis, and redefined thresholds – it is difficult to gauge the alignment of Option Four with the purpose of the NZ ETS. If we assume that a new metric would recognise the increase in leakage risk due to the increase in the carbon price – it is likely this would have similar outcomes to Option Three.

### *Address over-allocation*

219. The Ministry's position, as highlighted above, is that the impact of increasing emissions prices has had a more substantial impact on the risk of emissions leakage than other changes over the last decade. However, we know the thresholds are out-dated and not specific to the New Zealand context. More importantly, because the thresholds do not assess emissions leakage risk to the accuracy that would be required to determine any

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<sup>32</sup> Firms see the benefit of reducing emissions costs by investing in new technologies or process efficiency measures – and this incentive is not removed by the provision of free units. Industrial allocation offsets some of those emissions costs to reduce the risk of emissions leakage. This does weaken the full impact of the emissions price signal to EITEs, but it does not remove it. While it is true that firms could choose not to decarbonise and lean on industrial allocation to continue business-as-usual operations, it is expected a rising carbon price and increasing net NZ ETS cost exposure (due to the phase-out of industrial allocation) means this option will not be tenable for industry in the coming years.

- over-allocation attributed to outdated eligibility decisions, assessing these options is difficult without making broad and potentially inaccurate assumptions.
220. It should also be noted that any 'point-in-time' assessment with a fixed emissions cost is insensitive to shifts in emissions prices and changes in leakage risk.
221. Option Two performs best against this criteria and would address over-allocation relative to the historical thresholds. However, coming from the general and broad assumption that emissions leakage risk has increased due to the increase in the emissions price, it is likely that reassessing eligibility relative to these would introduce a risk of under-allocation (where EITE firms don't receive enough free allocation to mitigate the risk of leakage).
222. The existing thresholds for eligibility are not great measures of current leakage risk because emission unit prices have increased since they were devised. Option Three goes some way to addressing this and could remove any over-allocation.
223. Option Four goes slightly further in addressing over-allocation by reflecting the risk of emissions leakage more accurately. But, as noted above, development of precise measures of leakage risk would prolong existing over-allocation by several years until those measures could be developed and implemented.

#### *Address risk of emissions leakage*

224. Option Two would still does mitigate leakage risk but only for very high emitters who are above the historical thresholds. Given these are outdated and almost certainly do not accurately assess leakage risk for activities at the margin (either because of the increase in the emissions price, or fundamental limitations in the original framework) – this option cannot provide an accurate method of assessing leakage risk and it has only limited potential to reduce the risk or it occurring.
225. The two options (Options Three and Four) of re-testing eligibility against updated thresholds are less exposed to this risk. Updating the historical thresholds for only an increase in carbon price (Option Three) will not accurately assess the extent of emissions leakage risk; however, it will reduce emissions leakage risk. Option Four may do a slightly better job of accurately assessing leakage risk; however, this would depend on the new tests that were chosen.
226. The status quo does not recognise the increased risk of leakage due to recent movements in the carbon price. That is, not retesting could mean some activities that should be recognised as highly emissions intensive because of increased emissions costs, will remain classed as moderately intensive. However, it better mitigates leakage risk compared to Option Two for those activities that might fall out of eligibility if retested. This is the more likely scenario given the many years of emissions pricing in New Zealand and increased environmental awareness of businesses.

#### *Improve regulatory certainty and predictability*

227. Re-testing eligibility against either the current thresholds (Option Two), or thresholds recalibrated to consider changes in an emissions price (Option Three) reduces regulatory certainty with respect to the status quo.
228. Option Four reduces regulatory certainty as there is no alternative test proposed, and it is unclear how activities would be classified.
229. The status quo is the most favourable option with respect to maintaining regulatory certainty.

*Minimise compliance costs, administrative burden and complexity*

230. Any re-testing (Options Two, Three and Four) imposes material administrative and compliance costs due to data collection, analysis, and quality assurance required to carry out this test.
231. Option Four imposes additional and significant complexity and administrative burden, including requirement of resourcing from other agencies.
232. The status quo is the most favourable option with respect to compliance and administrative burden.

*Other considerations*

233. Options three and four would require additional work. Recalibrating thresholds for carbon price would require selecting an appropriate carbon price. There is an obvious tension in using a carbon price above or below current market price to test for current emissions leakage risk. We identify four approaches for selecting carbon price, the first two are consistent with modelling work by MfE and other agencies, the fourth is to use with the methodology for setting the price of carbon used in calculating synthetic greenhouse gas levy rates and penalties for NZ ETS non-compliance:
- \$62 - the mean of year-on-year mid-points of auction reserve and cost containment reserve trigger price over the years that these are prescribed in regulation
  - \$89 - the mid-point of cost containment reserve trigger price over the years that are prescribed in regulation
  - \$75 - current market price
  - the price of carbon prescribed in regulations at the time that the first re-assessments of eligibility using new base years occurs.
234. Updated Ministry analysis shows that using the current carbon price of \$67.63 in regulations (option d above), retesting eligibility would result in s9(2)(b)(ii) activities reclassified as highly emissions intensive. This would result in approximately <sup>Section 9(2)(b)(ii)</sup> additional units allocated annually.<sup>33</sup> This increase would be dampened by expected decreases in allocative baselines.
235. In a separate work programme, government is exploring alternative options to replace industrial allocation and to mitigate emissions leakage risk. Outcomes are still years away, but it is likely there will be an alternative in the next decade.
236. Additionally, a more comprehensive analysis could be undertaken by the Commission if changes to phase-out rates are sought in the future.

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

237. Emissions leakage is different now to the original settings and the landscape in which they were constructed. This is due to the increase in New Zealand's emissions price, and the changes to climate policy covering many of New Zealand's trading partners.
238. Option Three only accounts for the movement of the emissions price. This is a limited analysis and is inconsistent with the purpose of the NZ ETS (under this option it is likely Section 9(2)(b)(ii) will move to the highly emissions intensive category, increasing their allocations).

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<sup>33</sup> Note this accounts for inflationary changes to firm revenue and assumes a conservative reduction in emissions across all activities of 10 per cent. It does not include updates to allocative baselines, and it assumes constant production based on 2021 levels.



239. Option Two is most consistent with the purpose of the NZ ETS. However, it rates poorly with all other criteria.
240. Creating all new thresholds reflective of current emissions leakage risk (Option Four) faced by activities would require significant resourcing, data from industries, and input from other government agencies. Given the inability to perform a comprehensive emissions leakage test with new thresholds in time for the data collection planned later this year, not retesting eligibility at all could be an appropriate middle ground (Option One – status quo). Existing activities will remain in their current eligibility category and receive some level of allocation to mitigate leakage risk but the potential for increases in allocations above the status quo is removed.

#### **What are the marginal costs and benefits of the option?**

241. Retaining the status quo has no marginal costs and benefits. It differs in costs in benefits against other options as described above. However, the over-allocation resulting from out-of-date eligibility decisions would continue. This can be addressed using existing tools. The Minister can change phase out rates and reduce allocations faster if the Climate Change Commissions advises him to do so, industry by industry.

#### **Consultation feedback**

242. There was support for reassessing eligibility using new base years, including from large IA recipients (Methanex, Graymont, and NZ Steel) who would remain at their current level of assistance if eligibility is reassessed against existing thresholds. Methanex wanted to see emissions intensity based on an average over multiple years. Horticulture NZ stated it was not opposed to an update of eligibility using new base years, but only if the benefit of doing so outweighed the costs of implementing such a change. Some other submitters in support of a reassessment wanted to see as many IA recipients as possible become ineligible.
243. Those who did not support a reassessment of eligibility thought this would penalise investments made to reduce emissions or create uncertainty. These submitters were mostly in the wood and pulp sector.
244. Submissions highlighted that any reassessment would need to also consider changes in context. Some submitters (predominantly industry - Pan Pac, WPI, WPMA, Evonik Peroxide, and Ballance Agri-Nutrients) wanted to see any new emissions intensity thresholds updated to consider increases in the cost of carbon.
245. Feedback on the Bill's update to eligibility was sharply divided.
246. There was concern from many submitters about reassessing eligibility using the emissions intensity thresholds only recalibrated for the emissions price and not other factors that contribute to leakage risk. The concern was largely due to the potential for allocations to increase and the potential for this to undermine the NZ ETS.

#### **Recommendation**

247. Our revised recommendation is to not reassess eligibility for existing activities (status quo).
248. Existing activities will remain eligible and receive an allocation mitigating leakage risk based on historical decisions.

## **Industrial allocation eligibility decision 2 – Should the five-year transition period for changes in eligibility remain or be changed?**

249. Section 161A(5) of the Act requires a minimum five year delay before coming into force for any decision to revoke eligibility, or reclassify an activity from highly to moderately emissions-intensive, for an eligible industrial activity prescribed in regulation. In that time, an activity would continue to be eligible at its prior level of assistance. This delay does not apply to any reclassification from moderately to highly emissions-intensive.
250. The decision on whether to make changes to this fundamentally affects the benefit analysis on reassessing eligibility. If this transition period is retained, then any reassessment will not result in any reduction of allocation until 2029.
251. This delay exists to allow time for firms to adjust to being exposed to a greater proportion of the emissions costs incurred by carrying out the activity. This delay is legislated to prevent a material and immediate step-change in net emissions costs faced by a firm, and addresses the inability of the firm to address cost increases due to factors such as forward contracts for supply at fixed prices.

### **Option One – Status quo – retain the five-year delay before any reduction in level of assistance due to reassessment of emissions intensity**

252. Retain the five-year delay before any reduction in level of assistance due to reassessment of emissions intensity.

### **Option Two –Remove the five-year transition**

253. Remove the five-year delay before any reduction in level of assistance due to reassessment of emissions intensity eligibility.

### **Option Three – Reduce the transition period to one year**

254. Reduce the five-year delay before any reduction in level of assistance due to reassessment of emissions intensity eligibility to one or two years.

### **Option Four – Reduce the transition period to two years**

255. Reduce the five-year delay before any reduction in level of assistance due to reassessment of emissions intensity eligibility to one or two years.

### **Option Five – increase the transition period to ten years**

256. Increase the five-year delay before any reduction in level of assistance due to reassessment of emissions intensity to a delay of ten years.



How do the options compare to the status quo/counterfactual?

**Table 13: Impact analysis of options on five-year transition period**

	<b>Option one: status quo – retain the five year delay</b>	<b>Option two: remove the five year transition</b>	<b>Option three: reduce the transition period to one year</b>	<b>Option four: reduce the transition period to two years</b>	<b>Option five: increase the transition period to ten years</b>
<b>Primary criteria</b>					
Supports the purpose of the NZ ETS	0	+	+	+	-
Address over-allocation	0	+	+	+	-
Minimise emissions leakage	0	--	--	0	+
<b>Secondary criteria</b>					
Improve regulatory certainty and predictability	0	--		0	+
Minimise compliance costs, administrative burden and complexity	0	0	0	0	0
<b>Overall assessment<sup>34</sup></b>	0	-	0	+	-

*Supports purpose of the NZ ETS*

- 257. The existing delay to any reduction in over-allocation that is occurring due to an out-of-date eligibility test will theoretically make it more difficult to meet targets and send intended emissions pricing signals. The expected magnitude (discussed in IA eligibility decision 1 below) of any such changes in terms of allocation volume is slight, so the impact on meeting targets is negligible.
- 258. However removing or reducing this delay will send appropriate emissions pricing signals early for any activities that are being over-allocated due to an out-of-date eligibility test outcome.

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<sup>34</sup> Primary criteria are weighted more strongly than secondary criteria in arriving at an overall assessment

*Address over-allocation*

259. Removal or reduction of the five-year delay will result in any over-allocation attributable to incorrect emissions intensity classification being removed quickly, rather than continuing for five or more years.

*Address risk of emissions leakage*

260. Rapid increase in the net exposure to NZ ETS costs risks firms being unable to adjust to the cost impact, resulting in their closure and domestic production being substituted with production offshore. This is emissions leakage, as it is the movement of production offshore due to an emissions pricing impact. A transition period during which adjustments can be made reduces this risk.
261. Existing level of assistance is expected to be 'priced-in' to forward contracts, and the way in which provisional allocation is managed. This is understandable, as the legislative five-year notice period of any reduction of level of assistance provides a form of guarantee. Such pre-existing arrangements mean that firms are unlikely to be able to adjust to rapid, and likely unanticipated, reduction in level of assistance.
262. The regulatory impact analysis for the phase-down in IA concluded that rapid reduction in allocations could result in a credible threat to the competitiveness of some eligible activities simply as the net cost would be high enough to offset the margins of firms carrying out the activity.

*Improve regulatory certainty and predictability*

263. The five-year transition clause has been present since the introduction of IA. Removing this reduces regulatory certainty more broadly than simply in relation to the level of allocation that can be expected. A mitigation is that this legislative change could be delayed to not take effect until one or two years in the future, as any re-testing of eligibility will not be ready for implementation until then.

*Minimise compliance costs, administrative burden and complexity*

264. All options are similar with respect to compliance costs, administrative burden and complexity, noting that delays would mean that the minor administration costs to the government in processing IA applications would continue longer for any activities re-assessed as ineligible to receive IA.

*Additional factors*

265. Firms are eligible to apply for IA provisionally, on the basis of level of production in the previous year. A "wash-up" takes place once actual production for the year is known, resulting in either a repayment or additional allocation.
266. Removing the delay entirely introduces the risk that firms will incur an unexpected cost of having to acquire units to make a repayment. In some instances, this could have a material and sudden impact on a firm's balance sheet and ability to meet current operating expenses. A delay of one year retains elements of this risk. A delay of two years removes this risk entirely.

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

267. A reduction of the transition period to fewer than two years addresses over-allocation as early as possible, however it imposes emissions leakage and regulatory certainty risks. If this policy decision is signalled in 2022, and amendment to legislation to achieve this enters into force in 2024, and will mean that firms will have four years

advance warning that their eligibility status for IA may reduce in 2026. Retaining the five-year transition period delays addressing over-allocation, however it addresses emissions leakage and regulatory certainty risks.

**What are the marginal costs and benefits of the option?**

268. There may only be minor marginal costs and benefits relating to this option beyond those already described above; it is difficult to be certain as the outcomes of new eligibility tests are hard to predict.

**Consultation feedback**

269. There were mixed views on whether the existing five-year transition period for changes in eligibility status resulting in reduced allocation should remain.

270. Feedback received fell into two categories:

- a. remove or reduce to one year to allow any related over-allocation to be removed as soon as possible; and
- b. retain, or increase to ten years to provide certainty and mitigate disruptive impacts from eligibility changes.

**Recommendation**

271. We recommend reducing the delay to two years.

## Section 2.3 New base years

272. This section considers which base years to use for reassessing eligibility and updating allocative baselines. It also considers whether the financial years 2019/20 and 2020/21 should be excluded and/or whether weighting provisions should be used to account for any production and revenue distortions within activities resulting from COVID-19 and the government's response.
273. The options and analysis in this section assume that production and revenue distortions related to COVID-19 and the government's response are anomalies, and that demand and production will return roughly to 2019 levels.
274. This decision is supported by an options analysis but has not been given full Regulatory Impact Analysis (RIA) treatment as the marginal costs and benefits of the alternatives to the status quo are slight.

### What options are being considered?

#### Option One – Counterfactual – Using 2016/17, 2017/18 and 2018/19 as base years

275. Any update to allocative baselines or reassessment of eligibility would use 2016/17, 2017/18 and 2018/19 as the base years. No weighting would be applied.

#### Option Two – Using 2018/19, 2019/20, 2020/21 as base years

276. Any update to allocative baselines or reassessment of eligibility would use 2018/19, 2019 and 2020/21 as the base years. No weighting would be applied.

#### Option Three – Using 2018/19, 2019/20, 2020/21 as base years, with weighting provisions

277. Allocative baselines would be updated, and eligibility reassessed using 2018/19, 2019 and 2020/21 as the base years. As with the approach taken when current eligibility status was calculated, firms could opt in to have the weighting applied when calculating revenue. Weightings used for the current eligibility status would likely not be fit for purpose and further analysis would be required to determine the appropriate weightings for this option.

#### Option Four – Using 2016/17, 2017/18, 2018/19, 2019/20, 2020/21 as base years, with provisions to account for COVID effects.

278. Allocative baselines would be updated, and eligibility reassessed using the financial years 2016/17, 2017/18, 2018/19, 2019/20 and 2020/21 as the new base years. Firms would submit data from all five years but could choose to have data from either 2019/20 or 2020/21 excluded.

How do the options compare to the status quo?

**Table 14: Impact analysis of options for new base years**

	Option One – Using 2016/17 to 2018/19 as base years	Option Two – Using 2018/19 to 2020/21 as base years	Option Three – Using 2018/19 to 2020/21 as base years, with weighting	Option Four – Using 2016/17 to 2020/21 as base years, with ability to exclude one year
<b>Primary criteria</b>				
Supports the purpose of the NZ ETS	0	0	+	+
Addresses over-allocation	0	+	+	++
Addresses the risk of emissions leakage	0	0	0	0
<b>Secondary criteria</b>				
Regulatory certainty and predictability	0	--	-	-
Minimise compliance costs, administrative burden, and complexity	0	-	--	-
<b>Overall assessment<sup>35</sup></b>				
	0	0	0	+

*Supports purpose of the NZ ETS*

279. By the time IA reforms come into effect from 2024, data from 2016/17 will be almost a decade old. Using most recent financial years available as base years would most accurately reflect an activity’s revenue, and emissions and associated costs. We consider distortions in production and revenue during 2019/20 and 2020/21 to be anomalies and expect production to mostly return to 2019 levels.
280. Using most recent year data means that IA most closely aligns to emissions budgets and targets. The approaches described in options three and four achieve this, while addressing any COVID-19 impacts on production and emissions efficiency.

<sup>35</sup> Primary criteria are weighted more strongly than secondary criteria in arriving at an overall assessment

281. We expect IA would be sufficient to maintain marginal incentive for gross emissions reductions under all options, because each option will continue to impose financial incentives on firms to reduce emissions. This is because all firms receiving IA face emissions costs, regardless of the approach to financial years and any weighting.

*Address over-allocation*

282. It is difficult to predict the impact of including data from the 2019/20 and 2020/21 financial years without allocation data for 2021 calendar year activity and because COVID-19 and the government's response has impacted industries and regions differently. Firms could have experienced increases, decreases or no change to their emissions efficiency and revenue. Many EITE activities were considered essential services during lockdowns.
283. The impacts of COVID-19 and the government's response were particularly acute for some industries and regions. For example, activities that reduced production at times during the 2020 and 2021 calendar years could also have reduced their emissions efficiency if production reduced but emissions did not reduce proportionately. This would have the effect of increasing the activity's allocative baseline and therefore a firm's allocation.
284. Using production and emissions data from additional financial years (option four) would smooth out impacts due to year-on-year dips and peaks in production, emissions, and revenue.

*Address risk of emissions leakage*

285. We expect that under all options, the level of IA would be provided at a level sufficient to reduce emissions leakage risk.
286. Weighting provisions and/or the inclusion of data from additional financial years (options four and five) would help smooth out any COVID-19 related distortions with impacts for production and revenue data and therefore may better address the risk of emissions leakage.

*Improve regulatory certainty and predictability*

287. All options introduce a level of regulatory uncertainty by using new financial years to update allocative baselines and reassess eligibility. However, each option offers some predictability as they are all relatively simple for industry to apply. Some industry submitters supported including the 2019/20 and 2020/21 financial years. For example, two large allocation recipients were comfortable using these base years as they operated throughout the COVID-19 lockdowns.
288. Using a single approach across all activities to address COVID-19 impacts during the 2019/20 and 2020/21 financial years does not recognise that COVID-19 and the government's response impacted firms differently. Options three and four address these impacts, and support regulatory certainty. These options reflect that firms and activities have been impacted by COVID-19 differently and would ensure that no activity would be penalised by a weighting approach.

*Minimise compliance costs, administrative burden and complexity*

289. Options without weighting provisions are administratively simple to implement. Using data from five financial years and removing data from one of these years (option five) would also be simple to implement.
290. Determining the appropriate level for revenue weighting under option four, however, would be complicated. For the current eligibility status, the appropriate weighting was the outcome of an analysis of average commodity price spikes across the ANZ

commodities index. A regression analysis and time series projection were applied to develop an expected price in several key sectors for New Zealand. Commodities index prices were compared against the expected prices in the three historic years. This analysis was used to provide a guide of the extent to which the price spike deviated from 'normal' prices to suggest an appropriate weighting.

291. Under each option, data should be simple for the government to verify.

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

292. This is finely balanced between options 1 and 4. Option 4 has the advantage of using more recent data whereas option 1 has a minor advantage of limiting COVID-19 effects on baseline calculations.

293. We prefer option 4 because it includes data from more recent financial years whilst smoothing out any distortion by the inclusion of data from additional financial years. Option 4 also appears fairer by giving firms a choice of which data to include in their calculations.

**Recommendation**

294. We recommend using data from 2016/17, 2017/18, 2018/19, 2019/20, 2020/21 as base years for updating allocative baselines and reassessing eligibility. Firms should also be given the option to exclude data from either the 2019/20 or 2020/21 financial years.

## Section 2.4 Technical updates to industrial allocation policy

### Technical updates decision 1 – simplify updates to allocative baselines

295. This decision is not being given full RIA treatment as the marginal costs and benefits of the alternatives to the status quo are considered to be slight.

#### Option One – Status Quo

296. Retain the current process for updates to allocative baselines.

#### Option Two – Simplify updates to reflect changes to emissions factors and EAF

297. Modify the current process for updates to allocative baselines.

#### Analysis

298. Under sections 161A–161E of the Climate Change Response Act 2002, the allocative baselines for an activity cannot be updated without following a prescribed process that requires:

- a. a Gazette notice;
- b. those carrying out the activity to calculate specified emissions, revenue and production using a prescribed methodology, and submit these calculations; and
- c. using the calculated data when updating a baseline.

299. Emissions factors and the EAF are included in calculations of allocative baselines. Additionally, NZ ETS exemption thresholds determine if a participant is subject to surrender obligations or not. These two factors, and the NZ ETS exemption thresholds affect the calculation of the direct and indirect emissions costs faced in carrying out the eligible activity. However it is not currently possible to easily update allocative baselines to reflect these changes. Failure to update allocative baselines to reflect changes in these factors or exemptions thresholds risks firms being under- or over-allocated relative to these emissions cost impacts.

300. This change proposes enabling allocative baselines to be re-calculated using previously submitted data to reflect changes such as an updated EAF, emissions factors, or NZ ETS exemption thresholds so that the baselines accurately reflect NZ ETS costs. Further, as these technical changes would already be enabled, this change proposes removing the need to consult on these updates.

301. The EAF work is largely redundant if this is not progressed, as updating EAF only affects allocation if allocative baselines are able to be easily updated to reflect these EAF updates.

302. Submitters, including IA recipients, were broadly supportive of this change, although some suggested that it would create too much uncertainty for business.

303. The work on updates to the electricity allocation factor considers approaches to smooth any changes by reflecting several years rather than impacts from a single point year, this reduces the level of uncertainty faced. Similarly, any changes to emissions factors are subject to a full consultation process during which feedback is considered.

#### Recommendation

304. We recommend enabling allocative baselines to be re-calculated using previously submitted data to reflect changes to NZ ETS settings that affect emissions costs, such as NZ ETS emissions factors, the EAF, and NZ ETS exemption thresholds, and that these updates are not subject to data collection or consultation requirements.



## Updated – Technical updates decision 2 – new activity eligibility

305. This section considers whether new activities should be able to seek eligibility for IA and if so, what the process for seeking eligibility should be. This section was updated prior to the introduction of the Bill to clarify how new activities would seek eligibility, which included the option to use forecast data.
306. Similar to the section on eligibility reassessment, this section is being reconsidered due to submissions on the Bill having the overwhelming view that allowing new activities to seek eligibility with updated thresholds will lead to increases in allocations, which is inconsistent with the purpose of the NZ ETS and New Zealand’s climate targets.
307. The Act currently allows new activities to seek eligibility but the current process is tied to historical base years. This makes it unclear and difficult for new activities to meet eligibility criteria if they have developed since the current base years or have not been carried out in New Zealand before and therefore don’t have operational data.
308. New activities can be broadly grouped into three categories:
- a. an activity that exists in New Zealand but isn’t currently eligible, either because it was deemed ineligible when eligibility was first assessed in 2010, or it did not seek eligibility at that time or in the period since; or
  - b. an activity that does not currently exist in New Zealand; or
  - c. an existing activity whose activity definition requires amending following a significant change to some combination of the process, inputs and outputs.

### What options are being considered?

309. Six options are considered below.

#### Option One – Status quo, no change to process for new activities to seek eligibility for industrial allocation

310. The Act currently allows new industrial activities to seek eligibility for IA. Under this option, this would continue, using the existing eligibility test. Ambiguity regarding the appropriate base years, and how data would be attained would remain.

#### Option Two – No change to process for new activities to seek eligibility for industrial allocation but process clarified in the Act

311. New industrial activities could continue to be allowed to seek eligibility for IA, using the existing eligibility tests. The Act would be amended to improve and clarify the process for potential new IA recipients.
312. The Minister would have the flexibility to specify which base years, and how many, from which to collect data to allow the assessment of the tests. A minimum of one year would be required.
313. In cases where the new activity does not have sufficient data across the selected base years (either because they don’t currently exist in New Zealand or they have only been operating for a short time), the Minister would have the flexibility to allow a mix of forecast data and actual operational data to satisfy the base year data requirements. Eligibility would be assessed using this data mix, and if found eligible, the data would also be used to calculate a forecasted allocative baseline(s).
314. If the activity is found to be eligible based on data containing ‘any’ forecasts – regardless of whether the activity was found to be moderately or highly emissions intensive – the activity’s level of assistance would be set at the moderate level (57 per

cent in 2023) to reduce the fiscal risk associated with allocating units based on forecast data.

315. After a specified period (selected by the Minister), the new activity would be required to submit actual operational data across a defined period (selected by the Minister and a minimum of one years' worth). This data would be used to revise the first eligibility assessment based on forecast data and to determine a final level of assistance and allocative baseline(s).
316. Any allocation already provided to a firm undertaking the activity, would be compared to the allocation that should have been provided based on actual operational data. Any discrepancy would eventually be corrected through a wash-up process.

#### **Option Three – No new activities can seek eligibility**

317. New activities would not be allowed to seek eligibility for IA.

#### **Option Four – New activities can seek eligibility if they can prove environmental benefits**

318. New activities could seek eligibility, but firms would have to show that it would have an environmental benefit over current eligible activities. For example, supporting the production of biofuels would support New Zealand's climate change response goals by competing with fossil fuel production<sup>36</sup>. Proof of environmental benefit would be required in addition to meeting the existing eligibility test. More work would be required to determine how firms would demonstrate and how the government would verify environmental benefits.

#### **Option Five – Firms can ask to have new activities considered for eligibility for industrial allocations, and this is assessed against new eligibility considerations**

319. New activities would be able to seek eligibility for IA under a new test using the same criteria, outlined in the Act<sup>37</sup>, that the Minister must consider when making recommendations about phase-out rate increases, for example:
- a. any targets or budgets set for reducing emission of greenhouse gases
  - b. 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
  - c. the availability of low-emission technology related to the activity
  - d. the proper functioning of the emissions trading scheme.

#### **Option Six – Eligibility of new activities is assessed against a combination of the current eligibility test and new considerations**

320. New activities would seek eligibility through assessment against the emissions intensity (EI) and trade exposure (TE) tests (status quo), and also against the considerations set out in section 84C(3) of the Act (option five – point 297 a to d).
321. New Activities would be able to use forecast data following the same process defined under Option Two.

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<sup>36</sup> [WMPA](#) submission example

<sup>37</sup> Sections [5ZOB](#), [84C\(3\)](#) and 161A and 161C

How do the options compare to the status quo/counterfactual?

Table 15: Impact analysis of options for new activity eligibility

	Option One – Status Quo	Option Two – Current process is clarified in the Act	Option Three – No new activities can seek eligibility	Option Four – New activities can seek eligibility if they can prove environmental benefit	Option Five – New activities can seek eligibility if they are eligible under a new eligibility test	Option Six – Eligibility of new activities is assessed against a combination of the current eligibility test and new considerations
<b>Primary criteria</b>						
Supports the purpose of the NZ ETS	0	+	-	+	+	+
Addresses over-allocation	0	0	0	0	0	0
Addresses the risk of emissions leakage	0	0	-	+	+	+
<b>Secondary criteria</b>						
Regulatory certainty and predictability	0	+	+	--	--	-
Minimise compliance costs, administrative burden, and complexity	0	+	++	--	--	--
<b>Overall assessment</b> <sup>39</sup>	0	+	-	-	--	-

<sup>38</sup> This option was added on 9 November 2022 due to issues identified in the coversheet.

<sup>39</sup> Primary criteria are weighted more strongly than secondary criteria in arriving at an overall assessment

## Support the purpose of the NZ ETS

322. The addition of new activities in general is not consistent with the purpose of the Act, the NZ ETS, or New Zealand's climate change targets. New activities will lead to increased allocations over and above what is already forecast for currently eligible activities – this reduces the pool of units available for auctioning. It also exacerbates equity issues by shifting costs and emission abatement tasks onto other sectors.
323. If the new activity already exists in New Zealand but is not currently an eligible activity, allowing it to receive an allocation will reduce its net NZ ETS costs and weaken the price signal it passes to consumers. Given it may have operated in New Zealand under higher carbon prices in recent years, it is also questionable as to whether it does face leakage risk.
324. Despite these issues, there could be some merit in allowing new activities to seek eligibility. Cases where a new activity whose output competes in international markets and is less emissions intensive than alternatives (such as hydrogen energy) could have a positive benefit for New Zealand's climate goals. Allowing it to receive an allocation could ensure the activity is not disadvantaged relative to higher emitting activities that currently receive an allocation.
325. More importantly, if an existing activity is pursuing a large decarbonisation investment that alters its activity (and therefore is considered a new activity) – not allowing that activity to become eligible is likely a significant barrier to undertaking that investment.
326. Option Two would continue to allow flexibility to seek eligibility but with the high bar of the existing thresholds. It is very unlikely new activities that existed in New Zealand prior to 2010 and deemed eligible then would become eligible now.
327. Given the position that allowing new activities to become eligible for industrial allocation generally be considered at odds with the purpose of the NZ ETS, but also noting that there could be some exceptions, we consider options Two, Four, Five and Six would best support the purpose of the NZ ETS to varying degrees.
328. Option Three also aligns well with the objectives of the NZ ETS. This option would reduce the risk that IA encourages new EITE firms to move to New Zealand, increasing domestic emissions and the risk of future increases to IA volumes because of new activities. However, this risk is low, and, in the long run, this proposal could unfairly favour emissions-intensive activities currently eligible over alternative, less emission-intensive activities that could emerge in the future and potentially compete with existing eligible activities. This could result in emissions leakage.
329. Option Three would also present a barrier for current activities that are pursuing significant decarbonisation investments and would become ineligible if they fell outside the bounds of the existing activity definition currently in regulations. Therefore, on balance – this option is considered to have a negative impact compared to the status quo.

## Address over-allocation

330. Because this section is regarding 'new activities', there is no benefit from any of the options with respect to 'current' over-allocation of 'existing' activities, which is the primary consideration of this criterion. Option 3 has the best outcome with respect to future over-allocation for new activities. However, in the context of the phase out, option 3's reduced risk of future over-allocation (due to out-of-date eligibility decisions) is marginal compared to the other options. Therefore, on net, all options are considered to have similar outcomes to the status quo.

### Minimise emissions leakage

331. The status quo and Options Two, Four, Five, and Six recognise that technology changes and industry development could give rise to new activities that are at risk of emissions leakage. However, under the status quo and Options Two and Six, eligibility relies on the existing tests. As noted earlier, these tests probably no longer reflect leakage risk compared to when they were first set. This issue is mitigated, to a degree, if the thresholds are adjusted to account for a recent emissions price as proposed in section 2.2, decision 1.
332. Option Five would allow a more nuanced assessment of actual leakage risk. This option would need to minimise any risks that this process is, or is viewed as being, more subjective than the eligibility process for existing activities.
333. Similar to Option Five, Option Six allows a more nuanced assessment of leakage risk, but it also removes some of the subjectivity risks that option five has. It will also ensure that any new activities that do become eligible will have a prescribed level of assistance that is consistent with existing activities.
334. Option Three would not address the risk of emissions leakage. If the NZ ETS becomes a barrier to new industries that are less emissions-intensive than current activities from moving to New Zealand, this could increase global emissions and be a form of emissions leakage. This could mean New Zealand misses out on any associated economic gains of a new industry, and the climate benefit of a less emissions-intensive activity.
335. Options Four, Five, and Six best support emissions leakage risk considerations due to the bespoke assessment that would be required for each activity.

### Improve regulatory certainty and predictability

336. The current process for seeking eligibility is unclear and difficult for new industries to meet. Clarifying the process (Option Two), in the Act – including the use of forecast data – would provide some level of regulatory predictability over the status quo.
337. Option Three provides regulatory certainty and predictability by sending a clear signal to industry.
338. Although it retains the possibility of new activities becoming eligible, Option Four would likely involve a complex assessment, making it more difficult for recipients and potential recipients of IA to understand, creating uncertainty for applying firms.
339. Option Five would involve a more complex assessment than the status quo. With no indication of what the new eligibility test would be, regulatory uncertainty is currently significant.
340. Similar to Option Five, Option Six is also a more complex assessment than the status quo; however, it includes the benefit of a clearer path to determine the level of assistance (and subsequent baselines). This will improve regulatory certainty for relevant firms and ensure the mechanism for setting the 'level of assistance' is consistent with existing activities. Additionally, because the tests require the use of activity data – it has an additional level of both certainty and rigour. However, the subjectivity involved in ministerial consideration of criteria is expected to result in continued uncertainty, and a risk of moving goal posts as Ministers and priorities change.

### Minimise compliance costs, administrative burden and complexity

341. Under the status quo and Option Two there are some administrative costs to assessing eligibility but no more than currently. Option Two does marginally reduce complexity by clarifying how data can be obtained for the purpose of the emissions intensity and trade exposure tests, where an activity doesn't currently exist in New Zealand.

- 342. Option three would provide administrative simplicity by avoiding future administrative costs from assessing eligibility.
- 343. Option four would likely require extensive, complex analysis to quantify and then verify why and how these activities have better environmental outcomes and could create significant administrative costs to government.
- 344. Option five would be more administratively complex than the status quo and it is unclear how some key components of the allocation framework (level of assistance and baselines) would be obtained.
- 345. Option Six will also be administratively complex compared to the status quo for the same reason as Option Five. However, similar to Option Two, it clarifies how data can be obtained where an activity doesn't currently exist in New Zealand.

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

- 346. There are clear trade-offs underpinning the decision to allow new activities to seek eligibility and how to determine eligibility. In general, we do not want new activities to have access to allocations. However, there are cases where it could be problematic if new activities could not apply and receive industrial allocations – particularly where large existing industries want to pursue decarbonisation investments but would become ineligible if its new activity definition fell outside the bounds of the current definition.
- 347. Option Two is very similar to the status quo; however, it does clarify the process and allow the use of forecast data.
- 348. If no new activities can seek eligibility (Option Three), this supports regulatory certainty and predictability and reduces administrative costs and complexity. Although it would in part align with the objectives of the NZ ETS, the fact that it could create a significant barrier to current activities seeking decarbonisation investments is not an outcome we would support. It also has the potential to cause emissions leakage – particularly due to the migration of future investment.
- 349. Option Four would be complex and administratively costly due to the unprescribed method of determining eligibility, which would likely require bespoke assessments.
- 350. All options have features that would limit the number of new activities that could become eligible. Option Two retains the 2010 thresholds, which will be difficult for new activities to meet. Options Four, Five, and Six all consider the environmental benefits of a new activity alongside leakage risk, which could reduce the possibility of swathes of new activities becoming eligible.
- 351. Options Four, Five and Six minimise the risk of emissions leakage. Of those three options, Option Six is preferable given it provides more regulatory certainty and minimised administrative burden and complexity. It also addresses data limitations for new activities and provides a way to determine a level of assistance and allocative baseline.
- 352. However, Option Two prioritises NZ ETS objectives and New Zealand's broader climate goals by limiting future industrial allocation. Although it does less to mitigate the risk of emissions leakage, the government has other tools besides industrial allocation to manage this. This includes direct financial and knowledge support for decarbonising and transitional support to firms. The equitable transition strategy is likely to support regional economies to adapt to higher emissions costs and economic change. Government is also investigating alternatives to industrial allocation for mitigating the risk of emissions leakage, such as a carbon border adjustments.
- 353. Additionally, Options Four, Five, and Six contain levels of subjectivity and complexity that result in considerable costs and uncertainties.
- 354. In the absence of a more appropriate, objective eligibility test to ensure consistency with how existing eligible activities are treated, and given the various pros and cons



identified above, we consider Option Two performs the strongest compared to the status quo

### What are the marginal costs and benefits of the option?

#### EITE Firms

355. New activities being able to seek eligibility could benefit firms in EITE industries that have developed since the base years and new activities not carried out in New Zealand before. For those firms concerned about the impact of emissions costs on the viability of their production, being able to seek eligibility for IA may help to reduce the cost of emissions as a barrier.

#### Regional economies

356. New activities being able to seek eligibility for IA could have flow-on effects in some regional economies. Given the significant contribution that existing EITE firms make to regional economies, if a new activity were supported to set up in New Zealand this could result in significant employment opportunities.

#### Māori/Iwi

357. Flow-on effects of new activities being able to seek eligibility could increase employment opportunities in regions, including in regions with large Māori populations.
358. This could benefit firms, with significant Māori interests, in industries that have developed since the base years.

#### Government

359. If new activities can seek eligibility, this would increase the direct costs of IA by allocating more NZUs. It would increase the indirect costs of IA and more units being allocated as part of IA would mean fewer units are able to be auctioned in the NZ ETS market. These costs and its impact on New Zealand's emission budgets, the potential dampening of NZ ETS price signal, and the shifting of costs onto other parts of the economy are the core reasons as to why we do not want new activities to have access to allocations.

#### Consultation feedback

360. There was support from industry for the status quo with the addition of amendments to the Act to clarify the process for new activities to seek eligibility. This option is supported by Golden Bay Cement who said that eligibility should be treated consistently, i.e. between new and existing activities.
361. There was some support for option two, the majority being individual submitters and some environmental groups. Typically, these submitters did not want new activities to be eligible for IA. Energy Resources Aotearoa said that new activities should not be able to seek eligibility as they are able to factor the NZ ETS into their commercial plans.
362. Most submitters in support of new activities being allowed to seek eligibility were supportive only if there were environmental benefits to these new activities. Ngai Tahu and some environmental organisations were supportive of new activities being able to seek eligibility if this did not cause a rise in emissions and/or if these activities did not use fossil fuels. Some submitters thought new activities should only be allowed if they were replacing a higher-emitting activity. One energy submitter, however, expressed concern that the process for determining environmental benefit would be too subjective.

363. Option five and six were not included in the public consultation. However, some submitters were supportive of caveats for new activities seeking eligibility. Industry (Pan Pac, Evonik Peroxide, Balance Agri-Nutrients, Winstone Pulp International (WPI), and a group of reconstituted wood panel businesses (RWPS)) were supportive of an assessment of the benefit to global emissions. This option could also help address concerns from some stakeholders that the eligibility process would be too subjective.
364. Consultation on the Bill highlighted there was significant concern about the ability of new activities to be eligible under recalibrated thresholds. This view was held despite the Bill also proposing the use of additional considerations to increase the rigour of an eligibility assessment. .

### **Recommendation**

365. We recommend Option Two – that new activities can continue to be able to seek eligibility using the current thresholds, but that the process is clarified in the Act, including the ability to use forecast data.
366. Originally, Option Five was the recommended option. However, further analysis has determined that without the current tests, and due to uncertainty as to how data would be obtained for such purposes, it would be difficult to implement. Option Six was proposed as the alternative option at the end of 2022 as it combines the benefits of Option Five with the current tests, as well as clarifying the methodology as to how data will be obtained. This assessment has now been reconsidered. Assessing new activities using recalibrated thresholds is not consistent with the NZ ETS, or achieving New Zealand’s climate targets, and there is a high degree of subjectivity inherent in using Ministerial consideration of additional criteria.



## Technical updates decision 3 - reporting of data

367. This section considers whether to require additional reporting of data by IA recipients.
368. This decision is not being given full RIA treatment as the marginal costs and benefits of the alternatives to the status quo are considered to be slight.
369. Firms currently report their production data to EPA as an input into their application for IA. Allocation amounts are published, so for activities including only one product it is possible to derive production. Direct emissions from industrial processes are published, however not the component energy emissions, whether they be direct (e.g. coal combusted for energy) or indirect (via ETS cost component).

### What options are being considered?

#### Option One – Status Quo – Existing reporting

370. Firms continue to report only production data within IA applications, allocation amount is published at a firm and activity level.

#### Option Two – Mandatory reporting of emissions and production data

371. Requiring firms receiving IA to additionally report the emissions considered in calculating their allocative baseline.

#### Option Three – Mandatory reporting of emissions, production, and revenue data

372. As for option two above, with the addition of reporting revenue data.

#### Option Four – Voluntary reporting of some or all data described in options two and three

373. Firms are not required to report data beyond that already included in IA applications. Firms are encouraged to report additional data.

#### Option Five – Enhanced status quo

374. Firms continue to report only production data within IA applications, however the Act is clarified to easily allow these data to be shared with the Ministry and the Climate Change Commission.

### Analysis

375. Additional emissions data is only relevant if informing decisions on recalculation of settings. Providing this additional data would impose a significant overhead on IA recipients. Given the relatively small number of IA recipients, the Ministry considers that it is possible to recognise material changes to firm processes without the need for annual provision of additional data.
376. Revenue data is only required for assessment of eligibility on the basis of emissions per revenue. Revenue is not an item the Minister or the Commission must consider when recommending regulations to amend phase-out rates. Given that we are recommending either not re-testing of eligibility, or a one-off update, there is no reason to require ongoing revenue reporting. Excluding revenue from mandatory reporting also removes a concern raised by submitters around accounting standards and security of financial information provided.
377. Submitters highlighted that the incomplete information likely to result from voluntary reporting of data would render it not that useful.

378. The Act imposes obligations to keep data provided in IA applications confidential. This means that an administrative overhead on agencies occurs whenever this data is sought for policy or monitoring purposes.

### Recommendation

379. No additional data reporting requirements, but clarify that data submitted in IA applications will be shared with the Ministry for the Environment and the Climate Change Commission.

### New – Technical updates decision 4 – new emissions sources

380. This section considers whether emissions associated with combusting used tyres and consuming CO<sub>2</sub> as a feedstock should be added to the list of included emissions for IA settings. Included emissions are counted when determining eligibility and setting allocative baselines.

381. This section has been added in during the Select Committee stage of the Bill.

382. The Act (section 161E(2)(a)) prescribes which emissions sources can be included when considering eligibility and determining allocative baselines. These include the direct use of coal, natural gas, geothermal fluid, and waste or used oil. The list also includes liquid fossil fuel used in stationary equipment, fugitive coal seam methane, chemical process emissions and indirect emissions costs from electricity use. The list was last updated in 2013.

#### *Combusting use tyres*

383. We know of one IA recipient that combusts used tyres as part of its industrial activity. Golden Bay Cement combusts used tyres in its cement manufacturing to heat its cement kilns. The tyres are burned at 1400 degrees Celsius, and the remaining rubber, metal and ash are combined into the cement.

384. Replacing coal with used tyres as a fuel reduces the firm's emissions significantly.<sup>40</sup>

385. The upgrade to Golden Bay Cement's site to combust used tyres as an energy source was completed in 2021 and was partly funded by the government. The Ministry for the Environment funded \$25 million and an additional \$16 million was sourced through the Waste Minimisation Fund. Each year, this initiative will recycle around 50% of waste tyres generated in New Zealand.

386. Combusting used tyres for energy is a mandatory activity in the NZ ETS. Golden Bay Cement face emissions costs from this activity because of emission unit surrender obligations.

387. Section 161E(2)(a) of the Act currently does not allow industrial allocation settings to count emissions (and therefore costs) associated with combusting used tyres.

388. When an official data collection for existing activities occurs to inform the proposed update to allocative baselines, Golden Bay Cement will be unable to include emissions associated with combusting tyres. This means the allocative baseline for cement will be reduced relative to its actual emissions costs, resulting in under-allocation.

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<sup>40</sup> At the time of the investment (2020), Fletcher Building stated Golden Bay Cement's switch to used tyres to fuel their kiln would reduce carbon emissions by about 13,000 tonnes, reduce coal use by 15% and iron sand use by 5000 tonnes per year. [Golden Bay Cement sustainable disposal solution for waste tyres a New Zealand first | Fletcher Building](#).

### Consuming CO<sub>2</sub>

389. Mining or importing natural gas is a mandatory activity in the NZ ETS and any participants face direct surrender obligations.
390. The IA recipient, Ballance Agri-Nutrients (Ballance), currently reforms natural gas into hydrogen and CO<sub>2</sub>, which are both inputs to its urea production. The direct use of natural gas is included as an eligible emissions source for industrial allocation settings and Ballance receives an allocation for this.
391. Ballance has indicated it is exploring an investment that would reduce the need for natural gas. The investment would displace hydrogen produced from natural gas with hydrogen produced from water and electricity via electrolysis. This process would require the purchase of CO<sub>2</sub> to make up the reduction in CO<sub>2</sub> manufactured from natural gas. Based on information provided by Ballance, the new process of electrolysis would mean a significant reduction in the firm's emissions.<sup>41</sup>
392. The current source of domestically produced CO<sub>2</sub> is from the Kapuni Gas Treatment Plant and includes an emissions price. The Act, however, does not currently allow it as an included emissions source for industrial allocation settings.

### What options are being considered?

393. There are two mutually exclusive options being considered, as detailed below.
394. Adding emissions sources (and therefore costs) other than those above is not being considered. Through public consultation in 2021, a submitter suggested exploring a biomass allocation factor similar to the electricity allocation factor, to take into account an increase in biomass price caused indirectly by NZ ETS pricing of forestry and resulting from increased demand for biomass due to fuel switching incentivised by the NZ ETS. This is not being considered the supply of biomass does not result in emissions or emissions costs. Additionally
- a. determining how the NZ ETS has impacted biomass costs would be technically very difficult across different sources, uses and markets, and
  - b. there is precedent risk from starting to include business inputs without direct emissions costs.

### Option One – Status quo, no change to current list of included emissions

395. The Act currently does not allow the inclusion of emissions associated with combusting used tyres or consuming CO<sub>2</sub> as a feedstock for determining eligibility for IA and setting allocative baselines. Under this option, this would continue.

### Option Two – Adding combusting used tyres and consuming CO<sub>2</sub> to the list of included emissions

396. Amend the Act to include emissions associated with combusting used tyres and consuming CO<sub>2</sub> as a feedstock in section 161E(2) of the Act so they can be used for assessing eligibility for IA and calculating allocative baselines.

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<sup>41</sup> In its submission on the Bill, Ballance indicated it aims to reduce over 90% of ammonia-urea manufacturing emissions equal to 194,000 CO<sub>2</sub>e per annum – an abatement opportunity that materially reduces New Zealand's carbon emissions. See [1ce2f23c4d5bcac8e7810d52435c312023ad0b0a](https://www.parliament.nz/bills/52/1/1ce2f23c4d5bcac8e7810d52435c312023ad0b0a) ([www.parliament.nz](http://www.parliament.nz)).

How do the options compare to the status quo/counterfactual?

**Table 16: Impact analysis of options for new emissions sources**

	Option One – <i>Status Quo</i>	Option Two – Add combusting used tyres and consuming CO2 to the list of included emissions
<b>Primary Criteria</b>		
Supports the purpose of the NZ ETS	0	+
Addresses over-allocation	0	0
Addresses the risk of emissions leakage	0	+
<b>Secondary criteria</b>		
Regulatory certainty and predictability	0	-
Minimise compliance costs, administrative burden, and complexity	0	0
<b>Overall assessment<sup>42</sup></b>	0	+

**Support the purpose of the NZ ETS**

- 397. Option One (the status quo) could discourage EITE firms from decarbonisation pathways that, for example, involve switching to less emissions intensive inputs or fuels if there is an NZ ETS cost that is not considered in IA settings. EITE firms would benefit from reduced costs associated with reduced emissions; however, a reduction in allocation received for carrying out an activity would be an additional cost to the investment. Officials acknowledge there are a range of factors contributing to such investment decisions.
- 398. Golden Bay Cement has already made the investment (with significant direct financial support from the government). Ballance has indicated this issue is a significant barrier for consideration of its potential decarbonisation investment. Disincentives to reduce emissions are counter to the purpose of the NZ ETS.
- 399. Recognising emissions costs associated with combusting used tyres and the direct use of CO<sub>2</sub> as feedstock (Option Two) could support NZ ETS objectives to reduce emissions. This could encourage IA recipients considering such a switch that may

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<sup>42</sup> Primary criteria are weighted more strongly than secondary criteria in arriving at an overall assessment

otherwise be discouraged since they would continue to face an NZ ETS cost but its IA would not count these costs.

400. Option Two could be seen to increase industrial allocation and reduce the net NZ ETS costs faced by an activity. But on balance we expect any increases in industrial allocation under this option would be offset by the decarbonisation investment that would reduce an activity's emissions and therefore its industrial allocation following updates to industrial allocation settings.
401. Option Two could be seen to incentive IA recipients considering decarbonisation investments to switch to alternative fuels or inputs that still face an emissions cost instead of those that do not (such as biomass) so it can be counted for its industrial allocation. However, the incentive from the NZ ETS to reduce emissions costs remains, offsetting this perverse incentive. Furthermore, this signal already exists under current IA policy.

### Address over-allocation

402. Neither option would address nor contribute to over-allocation, assuming relevant data is up to date and therefore informs up-to-date allocative baselines.

### Minimise emissions leakage

403. Combusting used tyres and consuming CO<sub>2</sub> as a feedstock both have associated NZ ETS costs. Compared with Option One, Option Two would minimise the risk of emissions leakage by adding combusting used tyres and consuming CO<sub>2</sub> to the list of emissions sources considered in IA settings. This would help the relevant firms to meet these emissions costs.
404. Only emissions costs that are fundamental to the industrial activity are recognised when calculating IA settings. Both emissions sources are important energy and chemical inputs based on information officials have:
- a. Fletchers Building Limited – Golden Bay Cement's emissions return stated emissions from combusting used tyres was almost 40,000 tonnes of CO<sub>2</sub>e or NZ\$2.4 million each year, displacing coal use.<sup>43</sup>
  - b. Information that Ballance provided in its submission noted the fundamental importance of CO<sub>2</sub> in producing urea, and that up to 200,000 tonnes of CO<sub>2</sub>e could be needed (NZ\$12 million in NZ ETS costs) each year.<sup>44</sup>
405. Not counting these emissions sources in allocation settings won't necessarily result in emissions leakage (Option One). It will however increase the risk of it occurring, and undermine the consistent and equitable treatment of emissions sources that are eligible to be included.

### Improve regulatory certainty and predictability

406. Option One maintains current regulatory certainty and predictability.
407. Option Two, by virtue of amending settings, introduces regulatory uncertainty. However it will provide investment certainty to firms currently facing emissions costs associated with combusting used tyres or considering investment that would involve switching from inputs and/or fuels such as coal to used tyres.
408. Option Two could introduce uncertainty or expectations regarding whether other emissions sources that are not already considered in IA settings but face an NZ ETS

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<sup>43</sup> Based on an NZU price of \$60.

<sup>44</sup> Based on an NZU price of \$60.

cost will be included in future. For example, combusting waste faces an NZ ETS cost but is not included in the list of emissions considered for IA settings. However, this uncertainty or expectation already exists given other emissions sources were added in 2013.<sup>45</sup>

### **Minimise compliance costs, administrative burden and complexity**

409. Option Two does not introduce significant additional compliance costs, administrative burden or complexity. Option Two would mean EITE firms have to provide this data to government to inform the one-off reassessment of eligibility and updates to allocative baselines. Firms would also have to provide this information in future - to inform future reviews and updates of allocative baselines. EITE firms with surrender obligation already collect this information to inform their annual emissions reporting to government so this shouldn't impose significant additional compliance costs on relevant firms.
410. Under Option Two, this data should be simple for government to verify and shouldn't impose additional significant costs.

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

411. Option Two is better than Option One for supporting IA to mitigate the risk of emissions leakage because it counts emissions costs currently faced but not counted for IA settings.
412. Option Two supports the purpose of the NZ ETS to reduce emissions by removing a disincentive to invest in a lower emissions approach to its industrial activity. In the case of Golden Bay Cement, this switch has already been carried out, but it would remove a disincentive for Ballance's potential decarbonisation investment.
413. Neither option addresses over-allocation. Option Two supports regulatory certainty for firms that have made investments, or are considering investments, to reduce emissions by switching to combusting used tyres or consuming CO<sub>2</sub>, which have an NZ ETS emissions cost that is not currently counted for IA settings. Option Two introduces minimal additional compliance costs and administrative costs.

### **What are the marginal costs and benefits of the option?**

#### **EITE Firms**

414. Adding combusting used tyres to the list of included emissions provides firms currently facing emissions costs associated with combusting used tyres (i.e., Golden Bay Cement) or considering investment that would involve switching from inputs and/or fuels such coal to used tyres with certainty that government will count these emission sources in IA settings.
415. Adding consumption of CO<sub>2</sub> to the list of included emissions would provide firms, such as Ballance, with certainty that government will count these emissions sources in IA settings. This will help to remove a barrier for relevant investments.
416. Under the status quo some IA recipients receive IA that counts all their emissions whereas some receive IA that counts only some of their emissions costs. Adding these two emissions sources to the list of included emissions for IA setting would support consistent treatment of emissions sources and between IA recipients.

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<sup>45</sup> Section 65(2) of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012.



## Regional economies

417. Golden Bay Cement's cement plant is based in Portland, Whangarei. It is a significant employer, with just over 200 staff. Ballance has operations in regions across New Zealand and is a significant employer, with approximately 700 staff. Adding these two emissions sources to the list of included emissions to recognise emissions costs faced by the firm could help IA policy to mitigate the risk of emissions leakage.
418. These changes alone, however, are unlikely to affect employment. Other costs imposed by the NZ ETS, such as other fuels and electricity, are likely to be more material and more likely to drive types of business decisions that would have an impact for regional economies; but IA could help.

## Māori/iwi

419. The impact of these options for Māori/iwi is unclear. Māori-owned businesses largely don't receive IA so we don't expect them to be directly affected by these changes.
420. Changes to IA more generally could affect employment. Adding combusting used tyres to the list of included emissions to recognise emissions costs faced by the firm could help minimise the risk of emissions leakage; for example, from firm closure.
421. Other costs impacted by the NZ ETS such as other fuels and electricity, however, are likely to be more material and more likely to drive types of business decisions that would have an impact for Māori/iwi but IA could help.

## Government

422. Adding combusting used tyres and consumption of CO<sub>2</sub> to the Act as an emissions source would result in more NZUs being allocated to firms carrying out activities with these emissions sources. These increases would be offset by reductions in other emissions associated (reduced coal and natural gas use) with the relevant activities, and therefore have a positive impact on the government's NZU liability.
423. Initially, we expect there to be minimal financial impacts in the near term due to the timing of the upcoming baseline reset:
- a. Golden Bay Cement only started combusting used tyres at the beginning of 2021; the addition of used tyres is unlikely to have much of an impact on the proposed baseline updates using data from 2016/17 to 2020/21.
  - b. The addition of CO<sub>2</sub> will not have an immediate impact on the upcoming baseline reset for urea production because Ballance Agri-Nutrient's adoption of electrolysis is some years away.

## Consultation feedback

424. Including combusting used tyres in section 161E(2) of the Act so that emissions can be included when assessing eligibility and setting allocative baselines was not specifically raised in public consultation on the proposals in 2021. Neither Golden Bay Cement nor Fletcher Building have raised this as an issue with the Ministry.
425. During the 2021 public consultation on reforming IA, some submitters raised points about other emissions costs they face that are currently not considered when calculating the allocative baselines and levels of assistance used in IA.
426. In 2023, in submissions on the Bill, using CO<sub>2</sub> as a feedstock was raised as an emissions source with an emissions price but cannot currently be counted towards industrial allocation settings.

## Recommendation

427. We recommend Option Two.



## Section 3: Delivering an option

### How will the new arrangements be implemented?

428. Implementation of the recommendations above will be relatively straightforward, as they are technical changes to an existing policy and legislative framework.
429. Amendments to the Climate Change Response Act will be required to implement the recommendations in this RIS. These amendments are planned for inclusion in a 2022 Climate Change Response (Emissions Trading Scheme and Other Amendments) Amendment Bill.
430. After the necessary amendments have occurred, a small number of steps will be required to fully implement these recommendations.
431. A data collection process will need to occur to implement updates to allocative baselines and retest eligibility for IA. This requires a Gazette notice calling for data, describing the methodology to be used and providing tools to support submission of these data. Firms carrying out the activity are required to submit data in response to this call for data.
432. It is likely that the data collection process will be staggered, with data collection for priority activities occurring first, in 2023, followed by data collection for the rest of eligible industrial activities.
433. Analysis of submitted data will then need to take place. This will require external review and quality assurance, and is expected to involve engagement with firms that have submitted data to seek clarifications or confirm assumptions made.
434. Any proposed updates to allocative baselines or eligibility status will require amendment of the Climate Change (Eligible Industrial Activities) Regulations 2010. These updates can be implemented with retrospective effect. It is expected that the first updates will take effect from 1 January 2024, and incorporated into final allocation decisions for 2024 activity on the basis of production data reported in 2025.
435. Subsequent updates to allocative baselines to reflect changes to EAF, emissions factors, or updates to NZ ETS exemption thresholds would occur annually, and without need for consultation.

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

436. Existing monitoring, evaluation, and review of IA is light.
437. Firms make annual applications to the EPA for IA. These are reviewed, then processed and allocations transferred to applicants. Firms face compliance action if incorrect IA applications are submitted. This would not change, however the ability for the EPA to share information in IA applications with the Ministry for the Environment and the Climate Change Commission would be clarified. This will result in additional scrutiny on IA.
438. Allocations to firms for each activity will continue to be published as required under section 86B of the Act.
439. This allows allocation to be monitored, evaluated, and reviewed easily. Changes to industrial processes or industry composition that could affect accuracy of allocative baselines will continue to be monitored, and contribute to any decisions to either request advice from the Commission on changes to IA phase-out rates under section 5ZOB of the Act, or recalculation of allocative baselines in reference to new base years, as introduced by the recommendation with respect to frequency of allocative baselines.

## Appendix: Decisions for which no regulatory change is recommended

1. The following decisions in relation to IA eligibility were consulted on, however the recommendation is to retain the status quo.
2. For completeness, we include the analysis informing these recommendations below.

### Industrial allocation eligibility decision 3 – Should additional emissions intensity eligibility thresholds or sliding scales be introduced

3. This section considers including additional thresholds beyond the existing two. Using sliding scales for eligibility would be a subset of this, effectively providing infinite thresholds.
4. This section does not consider developing New Zealand-specific thresholds. This is considered as part of IA eligibility decision 1 – option 4: Reassess eligibility decisions using new thresholds that accurately assess emissions leakage risk.
5. This decision is not being given full RIA treatment as the marginal costs and benefits of the alternatives to the status quo are negligible.

#### What options are being considered?

##### Option One – Status Quo – no additional thresholds

6. This option retains the approach of two eligibility thresholds – categorising eligible activities as highly or moderately emissions-intensive.

##### Option Two – Addition of intermediate eligibility thresholds

7. This option is adding a threshold or thresholds and related levels of assistance between the two existing thresholds.

##### Option Three - Sliding scale, where level of assistance is bespoke for each eligible activity above a fixed threshold

8. This option is setting all levels of assistance between the highly and moderately emissions-intensive thresholds as bespoke, depending on their level of emissions intensity.

#### How do the options compare to the status quo/counterfactual?

**Table 1 – Impact analysis of options for additional thresholds**

	Option One – Status quo	Option Two – Additional intermediate thresholds	Option Three – sliding scale
<b>Primary criteria</b>			
Supports the purpose of the NZ ETS	0	0	0
Addresses over-allocation	0	0	0

Addresses the risk of emissions leakage	0	0	0
<b>Secondary criteria</b>			
Regulatory certainty and predictability	0	-	-
Minimise compliance costs, administrative burden, and complexity	0	-	--
<b>Overall assessment<sup>46</sup></b>	0	-	-

**Analysis**

9. Compared to the status quo, options two and three would be no better or worse for supporting the purpose of the NZ ETS, addressing over-allocation or addressing the risk of emissions leakage.
10. Option two would offer slightly better outcomes in terms of regulatory predictability and certainty but would add administrative complexity and significant work would be required to determine appropriate additional thresholds. Option three would offer similar regulatory certainty and predictability and would introduce more complexity to the IA system.
11. Additional thresholds (option two) would help to mitigate the risk that industries very close to thresholds are under-assisted relative to their actual emissions leakage risk. Additional thresholds could more effectively target assistance levels commensurate with an activity’s exposure to an emissions price. However, this is not the original intent of eligibility thresholds.
12. The intent of these eligibility thresholds is to broadly categorise activities in terms of their emissions leakage risk. Submissions in support of additional thresholds fell into two categories, those that supported additional thresholds:
  - a. if it resulted in a reduction of allocation, without explanation for how this might occur; and
  - b. to mitigate the impact of eligibility re-testing resulting in activities falling below a threshold they currently sit above.
13. The former is akin to development of thresholds calculated anew for eligibility to more accurately assess emissions leakage, and is discounted as this is not occurring as part of the reassessment of eligibility. The second concern is only relevant if eligibility is re-tested. In this case, the impact is lessened by recalibration of thresholds prior to

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<sup>46</sup> Primary criteria are weighted more strongly than secondary criteria in arriving at an overall assessment

eligibility re-testing, and retention of a delay in implementing any classification downwards.

### **Recommendation**

14. We recommend retaining the status quo of two thresholds, categorising eligible activities as highly or moderately emissions-intensive.

### **Industrial allocation eligibility decision 4 – Updates to the trade exposure test**

15. This section considers whether to change the trade exposure test used in determining eligibility for IA.
16. This decision is not being given full RIA treatment as the marginal costs and benefits of the alternatives to the status quo are considered to be slight.

### **What options are being considered?**

#### **Option One – Status quo, retain the existing trade exposure test**

17. The existing trade exposure test considers activities to be trade exposed unless:
  - a. there is no international trade of the output product across oceans; or
  - b. it is not economically viable to import or export this product.

#### **Option Two – Change the trade exposure test to consider additional criteria**

18. Additional criteria included in determining whether an activity is considered trade exposed.

### **Analysis**

19. The current test is simple, efficient and wide ranging enough to capture most industrial activities in New Zealand.
20. This test is an entry test into eligibility for IA. Being trade exposed does not result in eligibility without also passing an emissions-intensity test.
21. Submitters suggested a range of additional criteria or tests that could be applied, however changing the test to consider these would likely have little or no impact on current over-allocation. It would also be difficult to implement and costly to administer.

### **Recommendation**

22. We recommend retaining the trade exposure test in its current form.