



Report back on industrial allocation data collection

Date Submitted:	16 December 2020	Tracking #: 2020-B-06937	
Security Level	In-confidence – Commercial	MfE Priority:	Non-Urgent

	Action sought:	Response by:
To Hon James Shaw, Minister for Climate Change	Read and sign briefing	26 January 2021

Actions for Minister's Office Staff	Forward this report to Hon David Parker, Minister for the Environment Return the signed report to MfE.
Number of appendices and attachments: 2	<ol style="list-style-type: none"> 1. Tables of emissions intensities and allocative baselines 2. Technical background material

Ministry for the Environment contacts

Position	Name	Cell phone	1st contact
Principal Author	Augustus Shade		
Responsible Manager	Scott Gulliver	s 9(2)(a)	✓
Director	Lisa Daniell		

Proactively released

Report back on industrial allocation data collection

Key Messages

1. The purpose of this briefing is to report back to you on the outcomes of the industrial allocation data collection from a selection of emissions-intensive, trade-exposed (EITE) industry.
2. Industrial allocation is given annually to EITE industries to offset some of the cost of the New Zealand Emissions Trading Scheme (NZ ETS) to reduce the risk of them losing market share or moving offshore to jurisdictions with less stringent climate policy (known as emissions leakage).
3. The intent of the data collection exercise was to gather current emissions, production, and revenue data to quantify the potential mismatch between current allocations and the policy objectives of industrial allocation.
4. A selection of four EITE activities – the production of cartonboard, the production of cementitious products, the production of burnt lime, and the production of fresh cucumbers were subject to the publication of a Gazette Notice calling for data in late August 2020.
5. Engagement from firms was poor with many not supplying the required documents by the formal deadline of 3 November 2020. Sufficient data was received after an informal extension was provided – however the data received from firms producing cucumbers was disappointing with some firms who receive industrial allocation not complying with the notice.
6. The data shows all four activities have had emissions reductions resulting in combined over-allocations worth over \$8,000,000 per year. This evidence confirms that some activities are receiving allocations greater than what is required to prevent emissions leakage.
7. Over-allocation is not an officially defined term and can be interpreted in multiple ways. The definition used in this briefing is that over-allocation is an allocation of units greater than what is needed to offset the risk of emissions leakage.
8. It is important to note that the over-allocations discovered by this exercise are consistent with legislation. There is no suggestion or evidence these over-allocations result from an incorrect application of policy or poor-quality historical data.
9. The changes in emissions intensities and allocative baselines summarised below are relative to those calculated using data collected from 2006-2009 which is what current eligibility, and rates of allocation are based on. A summary of the emissions intensities and allocative baselines using the 2016-2019 data can be found in Appendix 1.

The Production of Cartonboard

10.

s 9(2)(b)(ii)

The Production of Cementitious Products

11.

s 9(2)(b)(ii)

The Production of Burnt Lime

12. s 9(2)(b)(ii)

The Production of Fresh Cucumbers

13. s 9(2)(b)(ii)

Risks

14. The poor quality of some submissions from cucumber growers meant there was some concern about interpretation of the data. Six submissions could not be used due to incompleteness. However, the removed submissions only account for approximately five per cent of cucumber production. Because emissions intensities and allocative baselines are 'production weighted', their removal will have minimal impact on conclusions.

Next steps

- 15. The outcomes of the data collection support the wider review of industrial allocation. It is clear that some EITE industries are receiving an over-allocation due to the misalignment of the support currently given and the policy intent of industrial allocation.
- 16. Advice on the Terms of Reference and proposals for governance arrangements of this review will be delivered shortly. This will at minimum include an investigation of the current eligibility criteria to receive industrial allocation and whether the time period with which data can be taken from to calculate allocative baselines should be adjusted.

Proactively Released

Recommendations

17. We recommend that you:

- a. **Note** that based on the outcomes of the data collection there are some EITE activities receiving more allocation than necessary to offset the risk of emissions leakage
- b. **Agree** to forward this briefing and its appendices onto your colleague Hon David Parker, Minister for the Environment

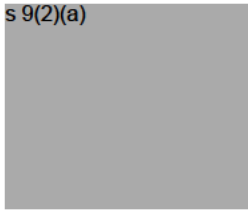
Yes/No

- c. **Agree** that this briefing and appendices will be released proactively on the Ministry for the Environment's website within the next eight weeks subject to the Official Information Act 1982.

Yes/No

Signature

s 9(2)(a)



Lisa Daniell
Director
Climate Change Directorate

Date 16/12/2020

Hon James Shaw
Minister for Climate Change

Date

Report back on industrial allocation data collection

Supporting material

Context


18. Industrial allocation is a significant fiscal cost to the Crown. Based on 2019 final allocations, each year almost \$300 million worth of New Zealand Units (NZUs) are allocated to EITE firms (assuming a \$35 NZU price).
19. Current industrial allocation settings are based on data from 2006-2009 as required by the Climate Change Response Act 2002. Increases in emissions efficiency due to business-as-usual improvements, emissions reductions incentivised by price signals from the NZ ETS, and industry changes have all led to concern that over-allocations may be occurring.
20. The Cabinet paper: *A review of industrial allocation in the New Zealand Emissions Trading Scheme* [2019-C-06039 refers] which you took to Cabinet Environment, Energy, and Climate Committee at the end of 2019 noted the risk of over-allocation and that you would consider options for realigning industrial allocation outcomes with policy objectives over 2020 [ENV-19-MIN-0062 refers]. The COVID-19 pandemic put a delay on the progress of this work.
21. As a first step to determine if over-allocation was indeed occurring, and if so, to what extent – a data collection was commissioned to gather empirical evidence.
22. Over-allocation is not an officially defined term and can be interpreted in multiple ways. The definition used in this briefing is an allocation of units greater than what is needed to offset the risk of emissions leakage, where that risk is determined using the 90 per cent and 60 per cent entitlement for highly intensive and moderately intensive activities respectively (Appendix 2 provides more technical detail on these settings).
23. It is important to note that the over-allocations discovered in this exercise are not due to error. The allocations currently given to industry are correct based on current legislation. It is the misalignment between legislation and the objective of industrial allocation that is the cause of the over-allocations noted in this paper.

2020 Data Collection Analysis

24. Four activities (production of cartonboard, production of fresh cucumbers, production of burnt lime, and the production of cementitious products) were identified as suitable candidates to collect current data on and test the hypothesis that current allocations are misaligned with the policy intent resulting in over-allocations.
25. These activities were considered to have a probable drop in emissions – either based on a change in fuel profile, market structure, or energy efficiency improvements. Combined these activities received over one million units in 2019 – approximately 13 per cent of the total allocation for that year.
26. Gazette Notices for these four activities were published on 25 August 2020 calling for emissions, revenue, and production data from the three financial years between 2016 and 2019. The activities were given a formal deadline of 50 working days to submit data.
27. We received eighteen data submissions. Four of these were from firms producing cartonboard, cement, and burnt lime – the expected number of submissions from these industries.

28. The remaining fourteen were from firms producing cucumbers, however only eight of these were considered of sufficient quality to include in this analysis. While the removal of six submissions is not ideal, we consider the data used representative of the industry and of high enough quality to draw conclusions from. The six removed submissions account for approximately five per cent of cucumber production.
29. There were three firms producing fresh cucumbers who currently receive industrial allocation who did not comply with the Gazette Notice. One did not submit at all, and two did not comply with clarification requests.
30. There are powers in the Climate Change Response Act 2002 that could compel these firms to supply data or respond to our clarification requests. We considered it was not in the public interest to pursue this non-compliance given the minimal impact this would have on the outcomes of the data collection exercise.
31. The 2016-2019 data was used to calculate weighted national average emissions intensities and allocative baselines for each activity and product. These were compared to industrial allocation's eligibility criteria for a possible shift in eligibility status, and the current prescribed allocative baselines to see if there had been changes in emissions.

s 9(2)(b)(ii)



s 9(2)(b)(ii)

s 9(2)(b)(ii)

Proactively released

s 9(2)(b)(ii)

Risks

49. The poor quality of some submissions from cucumber growers has meant there was some concern about interpretation of the data. Six submissions could not be used due to incompleteness. However, the removed submissions only account for approximately five per cent of cucumber production. Because emissions intensities and allocative baselines are 'production weighted', their removal will have minimal impact on conclusions.

s 9(2)(b)(ii)

Next steps

51. The outcomes of the data collection support the wider review of industrial allocation. It is clear that some EITE industries are receiving an over-allocation due to the misalignment of the support currently given and the policy intent of industrial allocation.
52. Advice on the Terms of Reference and proposals for governance arrangements of this review will be delivered shortly. This will at minimum include an investigation into the eligibility criteria to receive industrial allocation and whether the dates with which data can be taken from to calculate allocative baselines should be adjusted.

s 9(2)(b)(ii)

Proactively released

¹ Unit is t CO₂-e/\$ 1 million of revenue

² Unit is t CO₂-e/tonne of product

Appendix 2 – Technical background material

Industrial allocation's purpose and mechanics

53. The purpose of industrial allocation is to reduce the risk of emissions leakage. This occurs where emissions intensive activities lose market share or move offshore to jurisdictions with less stringent climate policy, resulting in increasing global emissions.
54. The policy was implemented in 2010 when industrial activities were brought into the NZ ETS – placing an emissions price on them.
55. NZUs are allocated to firms that undertake 'eligible industrial activities' to offset some of the costs of the NZ ETS. This has the intention of reducing the risk of emissions leakage.
56. The two eligibility thresholds defined in legislation are:
- moderately emissions intensive – if the activity's emissions intensity is between 800 – 1,600 tonnes of carbon dioxide equivalent per one million dollars of revenue
 - highly emissions intensive – if the activity's emissions intensity is greater than 1,600 tonnes of carbon dioxide equivalent per one million dollars of revenue.
57. Moderately emissions intensive activities receive a 'level of assistance' of 60 per cent of their emissions costs, and highly emissions intensive activities receive 90 per cent.
58. Firms can either surrender these units to meet emissions obligations (if they have any), sell them to produce cash to offset emissions costs passed on through the supply chain (increased coal, natural gas, or electricity prices), or store them in the registry as an investment.
59. A data collection conducted in 2010 collected emissions, production, and revenue data from various activities to determine if they should be eligible to receive emissions units – and if eligible – how many units should be allocated. Twenty-six activities were found to be eligible to receive an allocation.
60. Industrial allocation for a single product is calculated using:

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

where

- *A* is the amount of allocation (total amount of NZUs)
 - *P* is the amount of product used as the basis of allocation, typically in tonnes. An activity can have multiple products used as a basis
 - *AB* is the allocative baseline (the emissions produced per unit of product)
 - *LA* is the level of assistance for a particular activity (the 90 or 60 per cent coverage).
61. Firms apply for a provisional allocation by the end of April each year. This uses the total production from the previous calendar year to determine the current year's allocation. The following year an allocation adjustment calculates the 'final allocation' based on the actual production the firm recorded.

Measuring the emissions intensity of EITE activities

62. Industrial allocation uses two types of emissions intensities – one to determine if an activity should be eligible to receive an allocation, and another to quantify how many emissions units should be allocated per tonne of product.
63. Eligibility is based on a weighted national average emissions intensity measured as tonnes of carbon dioxide equivalent per one million dollars of revenue. In industrial allocation policy this is usually denoted simply as ‘emissions intensity’ and is calculated as,

$$\text{Emissions intensity} = \frac{\text{total activity emissions}}{\text{total activity revenue (millions)}}$$

64. Total activity emissions are the combined emissions across all firms who participate in the eligible activity, and across all three financial years for which emissions data is collected. Total activity revenue is combined in the same way across all firms and financial years and is in ‘millions of New Zealand dollars’.
65. The emissions intensity is then compared to the thresholds (defined above) to determine the ‘level of assistance’ that particular activity should receive.
66. The amount of emissions attributed to the manufacture of a unit of product is known as the ‘allocative baseline’. It is a weighted national average emissions intensity measured as tonnes of carbon dioxide equivalent per unit of product and is calculated as,

$$\text{Allocative baseline} = \frac{\text{total product emissions}}{\text{total quantity of product}}$$

67. Total product emissions is the total quantity of emissions attributable to the manufacture of the product, combined for all firms and all financial years. Total quantity of product is the total saleable product (usually in tonnes) combined across all firms and financial years.
68. This allocative baseline can then be used to determine the total number of emissions attributed to a firm’s total production in subsequent years.