

In Confidence

Office of the Minister for Climate Change

Chair, Cabinet Environment, Energy and Climate Committee

A review of industrial allocation in the New Zealand Emissions Trading Scheme

Proposal

1. This paper explains my concern that the government may be over-compensating firms in some industrial activities in the New Zealand Emissions Trading Scheme (NZ ETS). This is based on an indication that some NZ ETS participants may be receiving allocations of emission units greater than the number needed to achieve the objectives of industrial allocation policy.
2. As a first step to address this issue, I seek Cabinet's approval to begin consultation on a key component of the allocative baselines used to calculate the amount of allocation received by eligible firms: the electricity allocation factor (EAF). Decisions on updating other parts of industrial allocation policy are needed, but will be made after related NZ ETS reforms are implemented to ensure adequate signalling and stakeholder engagement.

Executive summary

3. The NZ ETS provides industrial allocation to protect the international competitiveness of emissions intensive and trade exposed firms affected by an emissions price. These free units allow firms to offset their exposure to emissions costs. Current rates of allocation, per unit of production, were set a decade ago.
4. Firms may now be receiving allocations of emission units greater than what is needed to protect their international competitiveness. It is also possible that some industries, if reassessed using current data, would no longer meet the eligibility tests. There are two reasons for these risks: assessments of eligibility and rates of allocation have not been updated in the last decade, and firms have made emissions improvements since then.
5. This paper outlines my intention to review industrial allocation policy and to realign industrial allocation outcomes with the policy objective of protecting the competitiveness of emissions intensive and trade exposed firms.
6. The first step of this realignment is to review the estimate of the pass-through costs of the NZ ETS on electricity consumption. This estimate, termed the electricity allocation factor (EAF), is an important component of the rates of allocations to industrial activities. Recent reviews of the EAF have demonstrated that most of the assumptions underpinning previous EAF modelling are inaccurate, and the EAF value may be too high. Under the current EAF, firms potentially receive an allocation greater than what is needed to offset the impact of the NZ ETS on the cost of their electricity use.

7. The EAF needs to be urgently reviewed because it has not been changed since 2013 and likely no longer reflects the impact of the NZ ETS on electricity prices. As the EAF is out-of-date it is likely that some participants are being over-allocated for their electricity use. This presents a significant and ongoing fiscal risk to the Crown.
8. Officials will review evidence and options for changes to the other components of industrial allocation over 2020. Given implementation of any changes is contingent on an amendment Bill and that stakeholders and decision makers already face a heavy workload on major climate change policies, I do not intend to seek decisions in 2020 on policy changes to industrial allocation other than to the EAF.
9. I seek Cabinet's approval to begin targeted consultation on updating the EAF, and to publish an issues paper to support this consultation (attachment 1).

Background

Industrial allocation

10. The NZ ETS provides for industrial allocation to protect the competitiveness of emissions intensive and trade exposed (EITE) firms affected by an emissions price. These are businesses that face increased costs as a result of the scheme (because they are emissions intensive), but are not able to pass on those costs (because they are trade-exposed). Firms may be unable to pass on costs where they face competition from foreign firms that are not subject to a comparable cost on emissions in their home countries.
11. The CCRA sets out the process for determining eligibility for industrial allocation and the calculation of allocative baselines. Allocative baselines are prescribed in the Climate Change (Eligible Industrial Activities) Regulations 2010.
12. Firms are entitled to industrial allocation if they carry out eligible industrial activities. Twenty-six activities are specified in regulations, with 84 firms currently receiving an allocation. In 2018, 6,744,229 units were allocated with a value of \$168,605,725 at a carbon price of \$25.
13. The amount of allocation a firm receives in a given year is calculated using the following formula:

$$A = LA \times AB \times Out$$

- *A* is the allocation of units provided to firms
- *LA* is the level of assistance, and is 90 percent for highly emissions intensive industries or 60 per cent moderately emissions intensive industries.
- *AB* is the allocative baseline of an eligible industrial activity, and is the amount of emissions generated to produce one unit of product. It includes the emissions from consuming electricity, natural gas, coal, and some liquid fossil fuels, as well as emissions from chemical transformation processes such as converting natural gas to methanol. Allocative baselines are therefore measures of the emissions intensity of production.
- *Out* is the amount of output of eligible product a firm produces in a year.¹

¹ For example, the production of fresh tomatoes is a moderately emissions intensive industrial activity with an allocative baseline of 2.6006 tCO₂e per tonne of tomatoes. A firm that produces 250 tonnes of tomatoes is eligible for 390 emission units (60% x 2.6006 x 250).

Analysis

The emissions intensity of some eligible activities has improved since allocative baselines were set in 2010

14. Allocative baselines reflect the emissions intensities of activities from over ten years ago. This is because Section 161E(3) of the CCRA anchors both the eligibility for industrial allocation and calculations of allocative baselines to the revenue, emissions and production data for the financial years 2006/07, 2007/08 and 2008/09.
 15. Over-allocation will result where the emissions intensity of eligible activities has improved since those years. There is evidence that this has occurred as:
 - businesses have increased the energy efficiency of their heat plants and reduced emissions by transitioning from emissions intensive fuels (such as coal) to renewable, low emissions sources
 - the EITE sector has claimed improvements in emissions intensity. A report commissioned by several EITE firms noted “... *significant improvement in the given amount of CO₂-e emissions per tonne of product produced*”.²
 16. Current levels of allocation are likely not consistent with the policy intention of industrial allocation which is to protect the competitiveness of EITE firms and minimise the risk of emissions leakage. Over-allocated NZUs would represent a windfall gain to these firms and a fiscal cost to the Crown.
 17. The objective of an intensity-based method of allocation is to reward EITE firms that are able to improve emissions intensity without reducing output. It will be important that industrial allocation settings continue to incentivise improvements in the emissions intensity of eligible activities to help reduce domestic emissions. However, adjustments to these settings are increasingly warranted to avoid excessive and unfair double benefits from emissions intensity improvements, firstly through reduced emissions costs, as is the intention of emissions pricing, but also through unchanged allocation rates.
- Phasing down industrial allocation will indirectly reduce over-allocation, but it will take too long*
18. Cabinet has decided to phase down the level of assistance by 1 per cent per annum from 2021 to 2030. The phase down rate will increase to 2 per cent from 2031 to 2040, and 3 per cent from 2041 to 2050. Activity specific phase down rates could be introduced from 2025 based on recommendations from the Climate Change Commission.
 19. Over time, phasing down the level of assistance will reduce the amount of free allocation provided to EITE firms. If allowed to continue, this phase down process will eventually halt all unit allocations to the sector.
 20. However, because the prescribed phase down rate is slower in the period 2021-2030, some firms will continue to receive allocations that are greater than their NZ ETS costs. Moreover, if improvements in emissions intensity occur at a faster rate than the phase down, the degree of over allocation will continue to increase.

² Castalia Limited (May 2019) *Emissions Intensive Trade Exposed Businesses' Contribution to New Zealand's Low Emissions Economy*; <https://bit.ly/2MtjCLa>; page 21

s 9(2)(b)(ii)

[Redacted]

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24. To address the risk of over-allocation, I have directed officials to begin work on reviewing industrial allocation policy. This work includes:

- considering the resourcing needs and timing of reviewing eligibility and updating all allocative baselines
- identifying a legislative vehicle for amending the CCRA so allocative baselines are not fixed to the 2006-2009 base period
- identifying the role of the Climate Change Commission in monitoring industrial allocation policy and implementation. The Commission will have a role advising the Government on phasing down industrial allocation. Its mandate could be expanded to include updating allocative baselines
- considering whether new industrial activities should be allowed to receive an allocation of emission units if the activity started in New Zealand after the introduction of emissions pricing. The CCRA presently allows for this to occur.

25. Policy changes are contingent on legislative amendments, therefore policy decisions and implementation are unlikely to occur for at least 24 months.

s 9(2)(b)(ii)

[Redacted]

One component of allocative baselines can be updated more quickly

27. The CCRA presently allows changes to the electricity use component of allocative baselines (the electricity allocation factor (EAF)), but not the other components.
28. The EAF is a modelled estimate of the NZ ETS costs from electricity generation in the wholesale electricity market. It allows the Government to offset the impact of the NZ ETS on electricity prices by adjusting the amount of free allocation EITE businesses receive.
29. The EAF is not an estimate of the emissions intensity of electricity generation. Average electricity sector emissions do not drive NZ ETS electricity price pass through impacts, because under the wholesale electricity market electricity prices are set by the marginal station needed to meet demand each half hour. This station is most likely to be fossil fuelled. All generators with bids below that marginal station will receive the same price for that period.
30. The NZ ETS has increased the variable (or short-run) costs of all generating stations that are greenhouse gas emitters. These stations will increase the price of their offers into the spot market to recover that cost. If one of these stations is the marginal plant called to operate in any given half hour, then that offer price will be the price for the whole market for that half hour (i.e. non-emitting stations will also receive this price).
31. The EAF is currently set at 0.537 tCO₂-e/MWh and has been in place since 2013. It is responsible for approximately a third of industrial emission unit allocations every year, with a fiscal cost of \$70m in 2018.
32. An update to the EAF is required, as most of the 2013 assumptions (such as electricity supply and demand, and fuel prices) have turned out different. Modelled estimates of the actual EAF in 2016 and 2017 were substantially lower than the current one.

Consulting on updating the EAF

33. I seek Cabinet approval to undertake targeted consultation on the technical aspects of EAF modelling over November and December this year. Consultation will be public, but focussed on electricity generators, large electricity users who are also EITE firms, and electricity market modellers. Submissions will be sought on the content of an issues paper which highlights candidate EAF modelling inputs and potential modelling methodologies. A copy of the issues paper is included as Attachment 1.
34. Following review of submissions, the Ministry for the Environment will procure electricity market modelling in early 2020. Expert officials from the Electricity Authority, the Energy Efficiency and Conservation Authority, and the Ministry for Business, Innovation and Employment will provide input to that process.
35. Stakeholder workshops in mid-February will discuss a short list of EAF values (that is, the output of the modelling exercise). Workshops provide an opportunity to engage stakeholders directly affected by changes to the EAF and draw from their expertise.
36. I will report-back to Cabinet in March 2020 on my preferred, updated EAF value and propose to update allocative baselines by regulatory amendment. That proposal will require further consultation and a regulatory impact analysis. Dependent on the results of modelling, feedback from the workshops, and Cabinet

decisions, I aim to have updated the EAF component of allocative baselines by the start of 2021.

Risks

37. Stakeholders, including decision makers and EITE firms, are already engaged in a significant shift in climate change policies. Given it is important that stakeholders fully engage in well-signalled industrial allocation proposals, I do not intend to add such proposals to the current workload. The immediate policy decisions are limited to the EAF update, where the change is technical and an update is both overdue and supported by recent independent analyses. Decisions on updating the other parts of industrial allocation will not be brought to Cabinet in 2020, although officials will collect evidence and assess options in the meantime.
38. Regarding work on the EAF; as the emissions from electricity use differ among eligible activities, the impact of updating the EAF would vary from firm to firm. Most of the impact will be felt by industries where electricity is an important component in production compared to other sources. Such industries are those producing pulp and paper, including newsprint, cartonboard, and reconstituted wood panels. The New Zealand Aluminium Smelter will also be impacted, as its unique electricity allocation factors refer to the base EAF in their calculations.
39. A review of industrial allocation policy will attract considerable attention, even if limited to the value of the EAF. It is important to note that the policy objectives will not change. My objectives are to ensure the allocations received by EITE firms are fair representations of their current emissions intensities, and that only those activities that are actually emissions intensive and trade exposed, using the existing eligibility tests, are able to receive industrial allocation. It is possible some investments made by EITE firms in improving emissions intensities are being influenced by windfall economic returns from over-allocation. Evidence will be gathered on such situations as the review progresses.

Consultation

40. The following agencies were consulted on this paper: the Treasury, Ministry of Business, Innovation and Employment, the Department of Prime Minister and Cabinet, Energy Efficiency and Conservation Authority, Te Puni Kōkiri, and the Ministry for Primary Industries.

Financial implications

41. There are no financial implications from the proposals in this Cabinet paper.

Legislative implications

42. There are no immediate legislative implications from the proposals in this paper. I will consider the need to update the relevant CCRA regulations following the conclusion of work on the EAF, and report back to Cabinet on this. This paper does not contain policy decisions on other parts of industrial allocation policy, however I note updates to other parts of allocative baselines will require amendment to the CCRA.

Regulatory impact analysis

43. A regulatory impact assessment is not required for this Cabinet paper as it does not contain regulatory proposals.

Human rights

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

Publicity

45. A full review of industrial allocation policy is likely to be of considerable interest to those firms receiving allocations and the general public. Given stakeholders and decision makers are already fully engaged in a wide-ranging and fundamental change in climate change policies, publicity relating to the policy review will be limited to technical parameters and outputs of EAF modelling and the release of this Cabinet paper. I will consider how to engage stakeholders on other review matters following implementation of our major climate change policies.

Proactive Release

46. I intend to proactively release this paper on the Ministry for the Environment's website, subject to appropriate withholdings that are consistent with the Official Information Act 1982

Recommendations

The Minister for Climate Change recommends that the Committee:

1. **note** that industrial allocation is provided in the NZ ETS to protect the competitiveness of emissions intensive and trade exposed firms (EITE) firms, and minimise the risk of emissions leakage
2. **note** the CCRA requires that allocative baselines are based on the emissions intensities of eligible activities from the financial years 2006/2007, 2007/2008 and 2008/2009
3. **note** it is likely that the emissions intensities of some eligible activities have improved since allocative baselines were set in 2010
4. **note** the risk that some EITE firms are likely to be receiving allocations that are greater than what is required to protect their competitiveness and minimise the risk of emissions leakage
5. **note** the electricity allocation factor (EAF), a component of some allocative baselines, is an estimate of the pass-through cost of the NZ ETS on electricity prices
6. **note** that two recent reviews of the EAF indicate that its current value is no longer accurate
7. **note** the EAF needs to be urgently reviewed as it is out-of-date and likely over-allocates some participants for their electricity use
8. **note** that over-allocation caused by the EAF presents a significant and ongoing fiscal risk to the Crown
9. **agree** to the release of the consultation document *Issues Paper on Modelling the Electricity Allocation Factor* for public consultation for a period of five weeks from 20 November to 20 December 2019
10. **authorise** the Minister for Climate Change to make minor technical and editorial changes to the consultation document prior to its public release
11. **agree** to proactively release this Cabinet paper on the Ministry for the Environment's website
12. **invite** the Minister for Climate Change to report back to Cabinet in March 2020 following consultation and stakeholder workshops, on a preferred revised EAF value.
13. **note** that an updated EAF will be in place by 2021 following consultation, policy decision, and legislative drafting.
14. **note** the Minister for Climate Change will consider options for realigning industrial allocation outcomes with policy objectives over 2020.

Authorised for lodgement.

Hon James Shaw
Minister for Climate Change

Proactively released

**Attachment 1. New Zealand Emissions Trading Scheme: Issues Paper on
Modelling the Electricity Allocation Factor**

Proactively released

Proactively released