Ministry for the Environment
Manatū Mō Te Taiao

PROACTIVE RELEASE COVERSHEET

Minister	Hon Simon Watts	**Portfolio**	Climate Change
Name of package	New Zealand Aluminium Smelter Industrial Allocation Adjustment	**Date to be published**	20/03/2025

List of documents that have been proactively released		
Date	***Title***	***Author***
12 December 2024	BRF-5526: Approval to lodge NZAS industrial allocation adjustment Cabinet paper	Ministry for the Environment
29 January 2025	ECO-25-SUB-0004 – New Zealand Aluminium Smelter Industrial Allocation Adjustment	Ministry for the Environment
29 January 2025	Regulatory Impact Statement - New Zealand Aluminium Smelter Industrial Allocation Adjustment update	Ministry for the Environment
29 January 2025	ECO-25-MIN-0004 – New Zealand Aluminium Smelter Industrial Allocation Adjustment	Cabinet Office
3 February 2025	CAB-25-MIN-0014 – Cabinet Minute of Decision	Cabinet Office

Information redacted **YES**

Any information redacted in this document is redacted in accordance with the Ministry for the Environment's policy on proactive release and is labelled with the reason for redaction. This may include information that would be redacted if this information was requested under Official Information Act 1982. Where this is the case, the reasons for withholding information are listed below. Where information has been withheld, no public interest has been identified that would outweigh the reasons for withholding it.

Summary of reasons for redaction

Some information has been withheld from *ECO-25-SUB-0004 New Zealand Aluminium Smelter Industrial Allocation Adjustment* under Section 9(2)(h) of the Official Information Act to maintain legal professional privilege and under Section 9(2)(g)(i) to maintain the effective conduct of public affairs through the free and frank expression of opinions by or between or to Ministers of the Crown.

Ministry for the Environment
Manatū Mō Te Taiao

Briefing: Approval to lodge NZAS industrial allocation adjustment Cabinet paper

Date submitted: 12 December 2024
Sub Security level: CLASSIFICATION
MfE priority: Urgent

Actions sought from Ministers		
Name and position	***Action sought***	***Response by***
To Hon Simon WATTS **Minister of Climate Change**	Agree to lodge NZAS industrial allocation adjustment Cabinet paper	13 December 2024

Actions for Minister's office staff
Return the signed briefing to the Ministry for the Environment (ministerials@mfe.govt.nz).

Appendices and attachments
1. Cabinet paper: New Zealand Aluminium Smelter Industrial Allocation Adjustment
2. Regulatory Impact Statement: New Zealand Aluminium Smelter Industrial Allocation Adjustment
3. Talking points for Cabinet ECO Committee meeting Withheld in full under section 9(2)(g)(i) of the Act

Key contacts at Ministry for the Environment			
Position	***Name***	***Cell phone***	***First contact***
Principal Author	Scott Gulliver		
Responsible Manager	Simon Mandal-Johnson		
General Manager	Mark Vink		✓

Minister's comments

Approval to lodge NZAS industrial allocation settings Cabinet paper

Purpose

1. We seek approval to lodge the attached Cabinet paper (Appendix 1) and its regulatory impact statement (Appendix 2). The paper seeks agreement to an electricity contracts allocation factor (ECAF)[1] for the New Zealand Aluminium Smelter (NZAS) for its industrial allocation in the NZ ETS.

2. Once lodged, it will be considered by the Cabinet Economic Policy Committee (ECO). We will work with your office to schedule this ECO discussion at the next available meeting. In this brief, we have included suggested talking points for this meeting (Appendix 3).

Background

3. NZAS receives emission units from the government under the industrial allocation policy of the NZ ETS. That policy protects firms like NZAS from facing the full costs the NZ ETS would otherwise place on them, to reduce the risk of industrial activity reducing or closing in New Zealand and production moving elsewhere in the world.

4. The NZ ETS imposes direct (emissions from aluminium smelting) and indirect (emissions from electricity consumption) costs on NZAS. For most other firms, allocation for electricity costs is calculated using a standard electricity allocation factor (EAF) which estimates the impact of the NZ ETS on wholesale electricity prices.

5. However, NZAS has historically negotiated favourable electricity contracts which mean it faces lower emissions costs per unit of electricity compared with other firms. Basing NZAS's industrial allocation calculations on the standard EAF would therefore lead to over-allocation.

6. Under the Climate Change Response Act 2002 (the Act) you have powers to adjust allocation calculations to take account of electricity-related contracts. In the past this has been applied by using an NZAS-specific electricity contracts allocation factor (ECAF) rather than the standard EAF, to more accurately reflect the indirect emissions costs NZAS faces from consuming electricity.

7. NZAS's allocation is currently, almost entirely, for emission costs that arise from the chemical process of making aluminium. The firm does not receive allocation for the NZ ETS impacts on its electricity costs because it did not face indirect emissions costs under its previous electricity contracts. This means the NZAS's ECAF is currently set at zero.

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[1] The 'electricity contracts allocation factor' (ECAF) was previously known as a 'unique electricity allocation factor' (unique EAF). This terminology has been changed to more accurately reflect its legal function and to prevent confusion with the EAF notified by the Electricity Authority.

8. Each time new electricity contracts enter into force, the Minister can call for a copy of the contracts to determine the most accurate rate of allocation for consuming that electricity and agree a new ECAF for NZAS accordingly. That ECAF would then be used in calculations of NZAS's allocative baseline, which is updated in regulations annually.

9. A new ECAF should now be agreed because NZAS has entered into three new electricity contracts which mean it will now face higher emissions costs for the electricity it purchases. These contracts came into effect in July this year.

10. Before entering into these contracts, NZAS approached officials and Ministers in April for analysis of their potential implications for NZ ETS industrial allocation. NZAS considered the industrial allocation they could receive, should those contracts enter into force, to be a material consideration for their decision in agreeing to the contracts. Ministers agreed to provide an indicative view to NZAS, noting final decisions will follow Cabinet consideration, should the contracts enter into force.

11. The Ministry for the Environment contracted Concept Consulting Group to independently assist with providing this indicative view. NZAS engaged Energy Link Limited as its advisor. Differences in modelling techniques were reviewed by Sense Partners. This analytical and advice work culminated in our 22 May aide memoire to yourself and the Minister for Energy, used in discussion with NZAS on 29 May [BRF-4802 refers].

12. We have since obtained copies of the final, in force contracts and compared them with the unsigned contracts that we had developed our above advice on. No material changes were identified. The attached Cabinet paper now seeks final decisions on NZAS's new ECAF.

Decisions sought by the Cabinet paper

13. The Cabinet paper provides options for the ECAF under NZAS's new electricity contracts. Your recommended ECAF to Cabinet is 0.137 tCO_2-e / MWh. This proposal will increase NZAS's industrial allocation by about 581,000 emission units in 2024/25 compared to 2023/24, and gives a total additional cost to the Crown of $37.2 million in 2024/25.[2]

14. The second option is Concept Consulting's ECAF value of 0.08 tCO_2-e / MWh. This option was included in the recommendations section of the paper on the request of the Minister of Finance. It is the Treasury's recommended option and the preferred option of those set out in the Regulatory Impact Statement. This option would increase NZAS's allocation by around 340,000 units in 2024/2025 compared to 2023/24, and gives a total additional cost to the Crown of about $21.7 million in 2024/25. This option has a lower fiscal cost than the recommended option in the Cabinet paper and is assessed – based on the Concept analysis – as providing sufficient protection to NZAS against emissions leakage.

[2] In addition to the NZUs allocated for indirect emissions from electricity use (calculated using the ECAF), under all scenarios, NZAS will continue to receive c.580k NZUs for their direct emissions from aluminium smelting. The total cost of allocation for both direct and indirect emissions will be c.$74.7m in 2024/25 under your recommended option. The fiscal costs in this brief and accompanying Cabinet paper have been calculated using a $64 carbon price, which is similar to current market prices.

15. The Ministry's regulatory impact statement is contained in Appendix 2 and compares the modelling approaches taken by the external advisors and the alternative 'merged assumptions' approached used in the Cabinet paper.

Consultation on the Cabinet paper

16. Ministerial and departmental consultation on the Cabinet paper occurred in September. Following that, we updated the financial implications section and the recommendations 8 and 10. This was done with the support of the Treasury after a decision by the Minister of Finance that the existing budget appropriation for NZUs was sufficient to cover the change in NZAS's industrial allocation. We have included a specific talking point to explain this change.

17. Treasury also requested a departmental comment be placed in the Cabinet paper. This comment summarises the Treasury's support for a lower ECAF than recommended by the paper. No further feedback was received from your office through Ministerial consultation.

18. We have also made several clarifications and editorial changes in the Cabinet paper in light of DPMC feedback, including to:

    i add a short legally privileged section to alert your colleagues to the legal risks associated with this set of decisions

    ii strengthen the Climate Implications of Policy Assessment section

    iii ensure all fiscal estimates quoted in the paper focus on those associated specifically with the decision being sought (ie, the value of NZUs that would be allocated for electricity usage under each ECAF option) rather than the overall cost of NZAS's allocation.

Next steps

19. We will work with your office on the scheduling of this Cabinet paper at ECO.

20. Once Cabinet has agreed the new ECAF for NZAS, this will be used in future calculations of NZAS's allocative baselines. This includes NZAS's final allocative baseline for 2024 and provisional allocative baselines for 2025 and 2026, which will be set in regulation in March 2025. We will seek your approval of these baselines in February 2025. This means Cabinet consideration of the paper is needed very early in 2025.

21. The Cabinet paper notes you will contact the CEO of NZAS after Cabinet has made its decision, to inform them of the ECAF that has been agreed.

Recommendations

We recommend that you:

a. **agree** to lodge the Cabinet paper *New Zealand Aluminium Smelter electricity contracts allocation factor update* and its regulatory impact statement

Yes | No

Signatures

Simon Mandal-Johnson
Manager ETS Policy
12/12/2024

Hon Simon WATTS
Minister of Climate Change
Date

Policy and Privacy

CLASSIFICATION

Office of the Minister of Climate Change

ECO - Cabinet Economic Policy Committee

New Zealand Aluminium Smelter Industrial Allocation Adjustment

Proposal

1 I seek Cabinet agreement to a key input I intend to use to adjust the New Zealand Aluminium Smelter's (NZAS) industrial allocation in the New Zealand Emissions Trading Scheme (NZ ETS).

Relation to government priorities

2 The proposals in this paper support the coalition agreements between the National Party and our coalition partners – restoring confidence and certainty in the NZ ETS and strengthening and streamlining Government regulation.

Executive Summary

NZAS receives industrial allocation for emissions costs imposed by the NZ ETS

3 New Zealand's industrial allocation system protects firms like NZAS from facing the full costs the NZ ETS would otherwise place on them. Its purpose is to reduce the risk of industrial activity reducing or closing in New Zealand and production moving overseas.

4 Under the industrial allocation system, industries that are emissions intensive and exposed to international competition receive New Zealand units (NZUs) from the government each year. Allocations are based on the industry-wide average emissions intensity of an activity (an "allocative baseline"), and the firm's actual production level.

5 An electricity allocation factor (EAF) is used to estimate the impact of the NZ ETS on electricity prices. It is used to calculate allocative baselines prescribed to industries where electricity is a source of emissions, thereby affecting their allocations.

6 The standard EAF does not accurately reflect NZAS's emissions costs because of the favourable electricity contracts it has negotiated. Accordingly, the Climate Change Response Act 2002 (the Act) gives the Minister of Climate Change powers to adjust allocative baseline calculations to take account of electricity-related contracts. I intend to do so and will return to Cabinet in the coming months to seek agreement to regulations giving effect to this adjustment.

7 This paper seeks agreement to a key input I plan to use when adjusting NZAS's allocative baseline, namely a new 'electricity contracts allocation factor' (ECAF) for NZAS. The function of the ECAF is to reflect the impact of the NZ ETS on the price of electricity purchased under NZAS's specific electricity contracts.

NZAS has signed new electricity contracts, exposing it to an emissions cost

8 NZAS's ECAF under its electricity contract for the period 2021-24 was agreed by Cabinet in 2021 to be zero [CAB-21-MIN-0530] on the basis that it did not subject NZAS to an emissions cost.[1] Consequently, NZAS did not receive industrial allocation for consuming electricity under that contract. It only received allocation for its direct emissions costs from producing aluminium and for electricity purchases from the grid.

9 NZAS has recently signed new electricity contracts with three generators: Meridian, Contact, and Mercury. These contracts took effect in July. Separate analyses from two electricity market experts have shown that NZAS now faces an emissions cost for using electricity under these contracts, meaning a new ECAF is needed.

Electricity market modelling has been used to estimate the new ECAF for NZAS

10 Determining an ECAF for NZAS is complex and requires judgements about electricity prices and the non-renewable energy share of energy supply over the next 20 years (the duration of the new contracts). Estimates are subject to considerable uncertainty and different approaches and underlying assumptions can be valid.

11 Modelling procured by the Ministry for the Environment (MfE) produced an ECAF of 0.08 tCO_2-e / MWh. This ECAF would equate to an allocation for electricity costs valued around $21.7 million for 2024/25 (and a total allocation of $59.3 million, including allocation for direct emissions costs).[2] My officials are comfortable with the methodology and underlying assumptions used to derive this estimate.

12 NZAS engaged its own market expert who used a different methodology and different assumptions to estimate a materially higher ECAF of 0.206 tCO_2-e / MWh. This ECAF would equate to an allocation for electricity costs valued around $56.0 million for 2024/25 (and a total allocation of $93.5 million, including allocation for direct costs).

13 Having considered both approaches, I propose an ECAF of 0.137 tCO_2-e / MWh. This takes the methodological approach of the MfE-procured expert but uses some key assumptions from the expert contracted by NZAS. I consider this approach is an appropriate way of bringing together the views of different experts.

14 An ECAF of 0.137 tCO_2-e / MWh would equate to an allocation for electricity costs valued around $37.2 million for 2024/25 (and a total allocation of $74.7 million). I also consider that this option better manages the risk of emissions leakage compared with the estimate provided by MfE, a point that NZAS raised during discussions. However, Cabinet may also wish to consider an ECAF of 0.08 tCO_2-e / MWh, the preferred option in the Regulatory Impact Statement, which has a lower fiscal cost.

15 A decision on an ECAF is needed now so that NZAS's allocative baseline for 2024 and 2025 can be set in regulations before the end of April 2025, when NZAS's next application for industrial allocation is due.

16 NZAS is a significant stakeholder in the NZ ETS and Cabinet's decision on its ECAF will have very material impacts on its unit allocation. 9(2)(g)(i) Therefore, I consider that this decision warrants Cabinet consideration now, before I return to Cabinet to seek formal agreement to update NZAS's allocative baselines accordingly.

[1] The 'electricity contracts allocation factor' (ECAF) was previously known as a 'unique electricity allocation factor' (unique EAF). This terminology has been changed to more accurately reflect its legal function and to prevent confusion with the EAF determined under s161FA.
[2] All estimates in this paper assume a carbon price of $64 per tonne.

Background

Industrial allocation reduces the impact of the NZ ETS on cost competitiveness

17 New Zealand's industrial allocation system partially protects firms in certain industries from competitive disadvantage because of emissions pricing. The purpose of industrial allocation is to reduce the risk of industries closing in New Zealand and production moving overseas. This would have economic and social consequences to New Zealand and could increase global emissions.

18 Under the industrial allocation system, firms in industries that are emissions intensive and exposed to international competition receive New Zealand Units (NZUs) from the government each year. The allocations allow firms to offset their NZ ETS-related costs.

19 Industrial allocation is provided to reduce direct and indirect emissions costs:

19.1 Direct emissions costs from having to purchase and surrender NZUs in the NZ ETS.

19.2 Indirect emissions costs from using fuel and electricity that has a higher price because of the NZ ETS.

20 The NZ ETS can impose significant emissions costs on firms that are large users of electricity. An electricity allocation factor is used to estimate the impact of the NZ ETS on wholesale electricity prices. It is expressed in tonnes of carbon dioxide equivalent per megawatt-hour (tCO_2-e / MWh) and is component of the allocative baselines[3] prescribed to industries where electricity is a source of emissions.

21 A standard EAF is used to calculate most allocative baselines. The standard EAF for 2024 is proposed to be set in regulations at 0.554 tCO_2-e / MWh. This is based on the modelled impact of the NZ ETS on wholesale electricity prices, which is usually set by the price of non-renewable thermal generation.

NZAS's industrial allocation is treated differently from other industries

22 NZAS is one of the largest recipients of industrial allocation. It was allocated 593,133 NZUs in 2023, valued at approximately $38 million at current market prices.

23 There is a bespoke process for calculating NZAS's allocation. This is because of the favourable electricity contracts it can negotiate, which mean the standard EAF does not accurately reflect its emissions costs. The Act gives the Minister of Climate Change powers to adjust allocative baselines calculations to take account of electricity-related contracts. In practice, this is done by using an NZAS-specific ECAF instead of the standard EAF.

24 In 2021, NZAS and Meridian agreed to a short-term electricity contract that would run to 31 December 2024. Under this contract, the electricity price paid by NZAS was substantially lower than under older contracts.

[3] Allocative baselines are key settings in industrial allocation as they determine the number of NZUs that are allocated to firms carrying out different eligible activities. The baselines are prescribed in secondary legislation - Climate Change (Eligible Industrial Activities) Regulations 2010.

25 NZAS's electricity contract was reviewed by the previous Minister under the relevant provisions of the Act.[4] An independent consultant found that there was no emissions cost for electricity purchased under the 2021-24 contract. Accordingly, the Government set NZAS's ECAF at zero (0.0 tCO_2-e / MWh) and NZAS was not allocated any units for indirect emissions costs for electricity purchased under this contract [CAB-21-MIN-0530].

26 Unless I use the power to adjust its allocative baselines to take its contracts into account, NZAS's allocation will be calculated on the basis of the default allocative baseline for aluminium smelting under the regulations, which is substantially greater than NZAS's previous allocative baselines because it uses the standard EAF (0.554 tCO_2-e / MWh). Officials have estimated that NZAS's allocation would increase to 2.9 million NZUs for its 2024/25 industrial allocation, at a total cost to the Crown of $188.0 million. Around $150.5 million of this expense would be due to the higher standard EAF, with the remainder reflecting allocation for NZAS's direct emissions, which it would receive under any scenario. This can be avoided if the Government decides that, based on review of the new electricity contracts, an ECAF should be used.

NZAS's emissions costs have increased for electricity purchased under new electricity contracts

27 In May 2024, NZAS signed new electricity contracts with three generators: Meridian, Contact, and Mercury. These contracts took effect in July 2024 and will run to 2044.

28 In July, a Gazette notice was issued requiring NZAS to provide the Minister with its new contracts for the purpose of reviewing the impact of emissions pricing on NZAS's electricity costs.

29 There are material differences between the 2021-24 contract and the new contracts:

29.1 The 2021-24 contract ran for three years, while the new contracts will run for twenty years.

29.2 The electricity price paid under the 2021-24 contract is lower than the price for electricity purchased under the new contracts.

30 Separate analyses from two electricity market experts have shown that NZAS faces an emissions cost for electricity purchased under its new electricity contracts.

Analysis

Two electricity market modellers have estimated different ECAFs for NZAS

31 The key policy judgement is not whether to update NZAS's ECAF, but rather what it should be. It is inherently difficult to estimate an ECAF and different methodological approaches can be valid and produce reasonable estimates. This kind of modelling requires assumptions on the future state of the electricity market and generator investment decisions over the next 20 years (the duration of the contracts), which can have a significant influence on the modelling outcomes and ECAF calculation.

32 I have considered two sets of modelling for NZAS's ECAF:

[4] Sections 161C (4) and 161C (5) of the CCRA allows the Minister of Climate Change to take into account electricity-related contracts when calculating allocative baselines. This power has been used to implement previous Cabinet decisions on earlier electricity contracts held by NZAS.

33 The first set came from an electricity market expert engaged by the Ministry for the Environment using the same methodological approach used to estimate the ECAF under its 2021-24 electricity contract. The expert found NZAS would incur an emissions cost for electricity purchased under the new contracts that would result in an ECAF of 0.08 tCO_2-e / MWh. This ECAF would equate to an industrial allocation to NZAS valued around $59.3 million for 2024/25, an increase of around $21.3 million compared to its 2023 allocation. My officials have reviewed this modelling and advise they are comfortable with the approach. Taking this approach is also consistent with the way the ECAF was estimated under NZAS's 2021-24 electricity contract.

34 The second set of modelling was carried out by a market expert contracted by NZAS. They took a different methodological approach along with different underlying assumptions, which resulted in a higher ECAF of 0.206 tCO_2-e / MWh. This is the same ECAF value used for older electricity contracts in place before 2021. This ECAF would equate to an allocation valued around $93.5 million for 2024/25, an increase of around $55.5 million compared to its 2023 allocation.

There are material differences between the modelled ECAFs

35 There is a material difference between modelled ECAF estimates. The choice of which estimate to prefer directly affects the industrial allocation NZAS receives in the future.

36 My officials engaged a third-party independent reviewer to explain the differences between the estimated ECAFs. This reviewer agreed with the overall modelling approach taken by the market expert engaged by the Ministry for the Environment.

37 The review noted different strengths and weaknesses of the assumptions used by the respective modellers. It did not provide a conclusive view on which set of assumptions was superior.

I recommend an ECAF of 0.137 tCO_2-e / MWh

38 Key assumptions relating to future electricity prices and the non-renewable energy share of energy supply are subject to uncertainty but have a significant influence on the modelling outcomes and ECAF calculation.

39 Having considered the different modelling methodologies and key assumptions, and their relative impacts on ECAF estimates, I propose an ECAF of 0.137 tCO_2-e / MWh. This ECAF is arrived at by taking the methodological approach of the Ministry for the Environment-procured expert but using some key assumptions from the expert contracted by NZAS.

40 In the light of the uncertainties associated with arriving at a definitive ECAF estimate, I consider that this approach is an appropriate way of bringing together the views of different experts. An ECAF of 0.137 tCO_2-e / MWh sits at around the mid-point between the two modelled estimates and results in an allocation of approximately 1.2 million units for 2024/25, valued at $74.7 million, an increase of around $36.7 million above NZAS's 2023 allocation value. I also consider that this option better manages the risk of emissions leakage compared with the estimate provided by the Ministry for the Environment, a point that NZAS raised during discussions.

41 However, Cabinet may also wish to consider the ECAF recommended in the Regulatory Impact Statement of 0.08 tCO_2-e / MWh. This option has a lower fiscal cost compared with my preferred option and is assessed by the Ministry for the Environment to provide sufficient protection to NZAS against emissions leakage. It results in a total

allocation of around $59.3 million for 2024/25, an increase of $21.3 million above the 2023 allocation value.

Implementation

42 The new ECAF for NZAS will be used until there is material change in the electricity contracts or they expire in 20 years. It will be applied through regulations, making updates to NZAS's allocative baselines each year. The baselines are updated every March according to how much electricity NZAS consumed in the previous year and from what sources. The new ECAF value will be incorporated in the next update and I will bring the amendment regulations to Cabinet for approval.

9(2)(h)

Cost-of-living Implications

45 There are no cost-of-living implications for this proposal.

Financial Implications

46 NZAS received no industrial allocation for its contracted electricity usage between 2021 and 2024. Under its new electricity contracts, NZAS would receive an allocation based on the standard EAF unless I apply an adjustment using my powers under the Act to take electricity contracts into account. An unadjusted allocation would increase industrial allocation to NZAS and would therefore increase expenses, with a corresponding negative impact on the operating balance, but no impact on net core Crown debt.

47 Expenses will therefore increase regardless of which option Cabinet decides, or if no decision is taken at all. As the existing appropriation currently has sufficient headroom, no changes to appropriations are being sought.

48 While expenses will increase in any scenario, both ECAF options in this paper are lower than the unadjusted allocation, using the standard EAF, that would otherwise apply. Therefore, both options *decrease* expenses relative to this default counterfactual. The fiscal impact from both options, compared with the default counterfactual, is shown in Table 1 below.

49 Given that in the absence of decisions forecast ETS expenses would rise, and both options reduce this impact, the Treasury has indicated that it would be appropriate for the change in expenses to flow through directly to the fiscal indicators. The decisions in this paper therefore do not need to be treated as a call against the Budget allowances.

Table 1: Allocation expenses for each ECAF option, relative to the default counterfactual[5]

Allocation expenses ($million)		**2024/25**	**2025/26**	**2026/27**
Default counterfactual (standard EAF = 0.554)	**Value of NZUs allocated *(electricity component only)***	**150.5**	**148.7**	**147.0**
	Value of NZUs allocated *(Total allocation)*	188.0	185.8	183.6
Option 1 (ECAF = 0.08)	**Value of NZUs allocated *(electricity component only)***	**21.7**	**21.5**	**21.2**
	Value of NZUs allocated *(Total allocation)*	59.3	58.6	57.9
Option 2 - **recommended** (ECAF = 0.137)	**Value of NZUs allocated *(electricity component only)***	**37.2**	**36.8**	**36.3**
	Value of NZUs allocated *(Total allocation)*	74.7	73.9	73.0

Legislative implications

50 There are no direct legislative implications from the decision on an ECAF for NZAS. The decision will be implemented through updates to the allocative baselines in industrial allocation regulations for NZAS.

51 NZAS has provisional and final allocative baselines prescribed in the Climate Change (Eligible Industrial Activities) Regulations 2010. These are updated every March according to how much electricity NZAS consumed in the previous calendar year and from what sources. Decisions on ECAFs are applied in update amendments to those regulations. Because determining the new baselines is non-discretionary and no policy options can be considered under the Act, I will issue drafting instructions and seek Cabinet's approval to the amendments in due course.

[5] Assumes an NZU price of $64. This is in line with current market prices.

Impact Analysis

Regulatory Impact Statement

52 The Regulatory Impact Analysis Review Panel at the Ministry for the Environment has reviewed the Regulatory Impact Statement: NZ Aluminium Smelter electricity allocation factor. The Regulatory Impact Statement meets the quality assurance criteria, clearly sets out the problem definition, a full set of options (with modelling based on three separate sets of expert advice) and provides adequate information on the cost and benefit.

Climate Implications of Policy Assessment

53 The Climate Implications of Policy Assessment team has been consulted and confirms that CIPA requirements do not apply to this proposal. This proposal seeks agreement to an electricity contracts allocation factor (ECAF) for NZAS. An ECAF determines the number of emissions units industries receive for using electricity.

54 Officials assess that it is not likely that this proposal will increase overall emissions relative to a counterfactual of the standard EAF. NZAS will continue to face the same underlying incentive to reduce emissions per tonne of aluminium produced as doing so will reduce its costs without decreasing its allocation. Officials have also assessed that, in most cases, production volumes – and hence emissions – are not likely to differ significantly under the proposed ECAFs, due to the practice of producing at plant capacity.

55 A higher ECAF may reduce the need for NZAS to scale back production during very high spot prices. However, officials assess that a higher ECAF is unlikely to materially affect overall emissions, given the low value of the ECAF relative to the spot price.

Population Implications

56 There are no significant population issues from the proposals in this paper. I have been mindful of the fundamental purpose of industrial allocation, being to mitigate against the risk of a loss in domestic production, with the local economic and societal impacts this would bring to a region such as Southland.

Human Rights

57 There are no human rights implications from this proposal.

Use of external Resources

58 Advice in this paper was based on the work of an independent experts. The modelling procured by the Ministry cost $55,000. The consultant has assisted officials several times in the measurement of NZ ETS impacts on electricity contracts. A competitive procurement process was followed for this work. The independent review of the modelling was done by a separate consultancy and cost $10,000.

Consultation

59 NZAS was extensively consulted with on the ECAF update. NZAS provided its own modelling and ECAF estimate, which I have considered.

60 NZAS was also given the opportunity to review and provide feedback on the modelling carried out for the Ministry for the Environment.

61 The Ministry for Business, Innovation and Employment, the Ministry for Primary Industries, and the Treasury have been consulted on this paper. DPMC has been informed.

62 The Treasury's preferred option is an ECAF of 0.08 tCO2-e/MWh (option 1), given that this option has lower fiscal costs, and is assessed as providing sufficient protection to NZAS against emissions leakage.

Communications

63 I intend to contact the chief executive officer of NZAS personally following Cabinet's decision.

Proactive Release

64 I intend to proactively release this paper and associated Cabinet committee papers and minutes within 30 business days of final decisions being confirmed by Cabinet, subject to redactions as appropriate under the Official Information Act 1982.

Recommendations

The Minister of Climate Change recommends that the Committee:

1 **Note** that NZAS has signed new electricity contracts which came into effect in July 2024 and will run to 2044

2 **Note** that, under the Climate Change Response Act 2002, I have the power to adjust NZAS's allocative baselines in light of new electricity contracts and that, unless I do so, NZAS will receive a significant over-allocation of NZUs at a total cost to the Crown of $188.0 million in 2024/25, where around $150.5 million is due to allocation for electricity costs

3 **Note** I intend to apply an electricity contracts allocation factor (ECAF) to adjust NZAS's allocative baselines before the end of April 2025, thereby impacting its industrial allocation for 2024, and to continue applying this ECAF when making similar baseline adjustments in further years until the electricity contracts are materially changed

4 **Note** that two electricity market experts, engaged separately by the Ministry for the Environment and NZAS, have estimated different ECAFs

5 **Note** that I have considered both estimates and the underlying modelling

6 **Either**

6.1 **Agree** the Minister of Climate Change will annually adjust NZAS's allocative baselines using an ECAF of 0.08 tCO_2-e / MWh (option 1), or

6.2 **Agree** the Minister of Climate Change will annually adjust NZAS's allocative baselines using an ECAF of 0.137 tCO_2-e / MWh (option 2 - recommended)

7 **Note** the total cost to the Crown in 2024/25 of emission unit allocations to NZAS will increase to around $59.3 million under option 1, where around $21.7 million is due to

the ECAF used for electricity costs, or to around $74.7 million under option 2, where around $37.2 million is due to the ECAF used for electricity costs

8 **Note** that the ECAFs in both option 1 and option 2 are lower than the standard EAF that would otherwise be used. Therefore, both options would decrease expenses relative to the counterfactual going forward, by $128.8 million for option 1 and $113.3 million for option 2 over 2024/25

9 **Note** that the increase in the expenses for both options in recommendation 6 can be managed within the existing appropriation for Allocation of New Zealand Units

10 **Agree** to manage the fiscal implications from the decision in recommendation 6 outside of the Budget operating allowances

11 **Note** that I will return to Cabinet in the coming months to seek authorisation of the submission of amendment regulations that will implement the policy decision taken here

Authorised for lodgement

Hon Simon Watts

Minister of Climate Change

Regulatory Impact Statement: New Zealand Aluminium Smelter Industrial Allocation Adjustment

Coversheet

Purpose of Document	
Decision sought:	Cabinet approval of a new electricity contracts allocation factor for the New Zealand Aluminium Smelter for its emission unit allocation under the New Zealand Emissions Trading Scheme.
Advising agencies:	Ministry for the Environment
Proposing Minister:	Hon Simon Watts, Minister of Climate Change
Date finalised:	17 January 2025

Problem Definition

Under the Climate Change Response Act 2002 (CCRA), the New Zealand Aluminium Smelter (NZAS) receives an allocation of free emissions units in the New Zealand Emissions Trading Scheme (NZ ETS) for the activity of aluminium smelting. NZAS's industrial allocation won't reflect the emissions cost it will incur in the future from using electricity. An assessment of NZAS's new electricity contracts shows it will receive an allocation of units greater than its future emissions costs. This over-allocation will result in a significant and avoidable cost to the Crown and is inconsistent with the purpose of industrial allocation in the NZ ETS.

Executive Summary

Industrial allocation is the provision of emissions units (New Zealand Units or NZUs) to businesses exposed to the NZ ETS that undertake eligible industrial activities that are emissions-intensive and trade-exposed.

The purpose of industrial allocation is to mitigate the risk of emissions leakage. Emissions leakage is where firms shift production overseas in response to climate policies, such as emissions pricing.

NZAS receives industrial allocation for the activity of aluminium smelting. It faces emissions costs from carrying out this activity:

- Direct costs from being a mandatory participant in the NZ ETS, which requires NZAS to purchase and surrender NZUs for its process emissions
- Indirect costs from using electricity and natural gas that have higher prices because of the NZ ETS

Currently, NZAS only receives an allocation for its direct emissions cost, electricity purchased from the grid, and natural gas use. It does not receive units for using electricity under its previous electricity contract with Meridian (which covered the period 2021-24). The Government determined in 2021 that NZAS did not incur an emissions cost for that electricity use.

NZAS recently signed new electricity contracts with Meridian, Contact and Mercury to take effect from July 2024. These contracts differ from NZAS's 2021-24 contract in

several ways. Separate analyses from two electricity market modellers have shown electricity prices in the new contracts are higher due to the NZ ETS. This means NZAS is now incurring an emissions cost for electricity purchased under its new contracts.

The objective of this Regulatory Impact Assessment is to align NZAS's future industrial allocations with the emissions costs it will incur for electricity purchased under its new electricity contracts.

The focus of this assessment is updating the electricity contracts allocation factor (ECAF) for NZAS from zero. [1]

The standard electricity allocation factor (EAF) is a key regulatory setting within industrial allocation policy that affects the number of NZUs firms receive for consuming electricity. It is an estimate of the cost impact of the NZ ETS on electricity prices and is expressed in tonnes of carbon dioxide equivalent per megawatt-hour (tCO_2-e / MWh).

For most eligible industrial activities, allocations are based on the standard EAF of 0.554 tCO_2-e / MWh. However, the CCRA gives the Minister of Climate Change powers to adjust allocation calculations to take account of electricity-related contracts. In practice, this adjustment is done by basing the calculations on an NZAS-specific ECAF, instead of the standard EAF. NZAS is currently the only recipient of industrial allocation with adjusted calculations for electricity contracts and has an ECAF.

Under its 2021-24 electricity contract, NZAS's ECAF was decoded to be zero – reflecting that it did not incur an emissions cost and therefore did not require an allocation of units.

To take account of NZAS's new electricity contracts, the Minister of Climate Change may consider what NZAS's new ECAF should be under these contracts and seek Cabinet approval to use that ECAF as the basis for adjusting NZAS's allocation.

Three options for NZAS's new ECAF are considered against a counterfactual where the standard EAF of 0.554 tCO_2-e / MWh is used as the basis for NZAS's allocation. This would be the case if a new ECAF isn't derived from NZAS's new electricity contracts.

The first option was modelled for the Ministry for the Environment by an independent electricity market modeller. They estimated an ECAF for NZAS of 0.08 tCO_2e / MWh.

The second option was modelled for NZAS by a separate electricity market modeller. They estimated a materially higher ECAF for NZAS of 0.206 tCO_2-e / MWh. The different estimates reflect differences in the modelling.

Option 3 is a variation of the first two estimates of 0.137 tCO_2-e / MWh. This option was developed by using the overall modelling approach taken by the MfE market modeller, with key assumptions swapped out for those used in the modelling procured by NZAS.

Option 1 is recommended. It is assessed to perform strongest against the criteria compared to the counterfactual. Option 1 is most likely to achieve the government's policy objectives for industrial allocation and comes at the lowest cost to the Crown.

A decision to update NZAS's ECAF will be used to recalculate the allocative baseline for NZAS. The new baseline will be implemented through amendments to the Climate Change (Eligible Industrial Activities) Regulations 2010. The updated allocative baseline must be in force before 30 April 2025 in order to apply to NZAS's 2024 allocation.

[1] The 'electricity contracts allocation factor' (ECAF) was previously known as a 'unique electricity allocation factor' (unique EAF). This terminology has been changed to more accurately reflect its legal function and to prevent confusion with the EAF determined under s161FA.

Limitations and Constraints on Analysis

Modelling the impact of the NZ ETS on New Zealand's electricity market and on electricity contracts is complex. Different approaches can be valid and produce reasonable estimates of an ECAF. This means there is no such thing as a definitive estimate of NZAS's ECAF. Subject to that inherent uncertainty, we are generally confident in the evidence base and analysis in this RIA.

The analysis has mainly been drawn from four key sources:

1) Expert advice on updated ECAFs provided by two electricity modellers for MfE and NZAS
1) Expert advice from a third consultancy reviewing that electricity modelling
2) Engagement with NZAS and the electricity generators
3) Past analytical frameworks and decisions on emission costs passed through to another large industrial allocation recipient for electricity use

These key sources provide all the information necessary to carry out the technical exercise of estimating the ECAF and assessing its impacts.

The Ministry for the Environment engaged Concept Consulting to model the ECAF, while NZAS engaged the consultancy Energy Link. Both are highly experienced and qualified, having previously assisted MfE in the measurement of NZ ETS impacts on electricity contracts.

We have only consulted with NZAS on this policy proposal. This is for two reasons:

1) Updating the ECAF only directly affects NZAS. Broader consultation is not warranted.
2) The policy proposal is commercially sensitive. The government cannot share confidential commercial information contained in this RIA now. However, this can be revisited following further engagement with NZAS.

Consultation with only NZAS has not been a constraint on the RIA.

Responsible Manager

Kate Whitwell

Manager

NZ ETS Policy

Ministry for the Environment

17 January 2025

Quality Assurance

Reviewing Agency:	Ministry for the Environment

Panel Assessment & Comment:	The Regulatory Impact Analysis Review Panel (Panel) at the Ministry for the Environment has reviewed the Regulatory Impact Statement: NZ Aluminium Smelter electricity contracts allocation factor. The Regulatory Impact Statement (RIS) meets the QA criteria, clearly sets out the problem definition, a full set of options (and based the modelling on three separate expert advice) and provides adequate information on the cost and benefit.

Section 1: Diagnosing the policy problem

Context behind the policy problem

Industrial allocation in the NZ ETS

1. The objectives of the NZ ETS, as set in the CCRA, are to reduce New Zealand's net greenhouse gas emissions and to assist New Zealand to meet its international climate change obligations and domestic climate change targets.
2. The NZ ETS places an obligation on firms carrying out certain activities to surrender NZUs corresponding to the amount of greenhouse gases they have reported they are responsible for in a year. By imposing a price on emissions, the NZ ETS creates an incentive for businesses and households to reduce emissions.
3. Industrial allocation in the NZ ETS is the provision of free NZUs to firms that undertake eligible activities deemed to be emissions intensive and trade exposed.[2] Examples of these activities include aluminium smelting, producing steel or cement, wood processing, and growing some vegetable crops.[3]
4. The purpose of industrial allocation is to mitigate the risk of emissions leakage. Emissions leakage is where firms shift production overseas or lose market share to overseas competitors because of NZ ETS costs. Such changes could have local economic and societal costs, and potentially increase global emissions.

[2] The eligibility criteria for industrial allocation are set out in the CCRA. Emissions intensive means the activity produces high levels of emissions per $m of revenue. Trade exposed means the product is traded overseas and potentially competes with the same product produced in other countries.

[3] There are currently 26 eligible activities that receive industrial allocation in the NZ ETS. More information on eligibility for industrial allocation can be found here: https://www.epa.govt.nz/industry-areas/emissions-trading-scheme/industrial-allocations/eligibility/

5. Industrial allocation is determined using rules set out in the CCRA (see box below). Allocative baselines are key settings used in these calculations. These baselines are prescribed in the Climate Change (Eligible Industrial Activities) Regulations 2010.

Industrial allocation calculations

Allocations are calculated using an *allocative baseline*, which is the amount of emissions attributed to a unit of product.

A firm's allocation is calculated using the formula: $A = P \; x \; AB \; x \; \mathrm{LA}$

Where:

- A is the firm's allocation for a single product (NZUs)
- P is the firm's total production of the product (typically in tonnes)
- AB is the allocative baseline for the product (t CO2-e/t product)
- LA is the level of assistance a particular activity receives (0.56 or 0.86 as based on the emissions intensity thresholds).

6. The CCRA lists the emission sources that are considered when setting allocative baselines. Most of these are direct emissions associated with the activity: on-site fuel use and process emissions.
7. However, industrial allocation is also provided for indirect emissions associated with electricity use to compensate for higher electricity prices caused by the NZ ETS. Higher electricity prices could affect the competitiveness of emissions intensive and trade-exposed firms. Industrial allocation offsets the cost impact of the NZ ETS on electricity and reduces the risk of leakage.

The New Zealand Aluminium Smelter receives industrial allocation in the NZ ETS

8. NZAS is New Zealand's only aluminium smelter, located at Tiwai Point in Bluff, Southland. Each year the smelter produces more than 335,000 tonnes of aluminium. NZAS is the largest user of electricity in New Zealand, accounting for about 12 per cent of domestic electricity consumption (about 5,000 GWh in 2023).
9. Aluminium smelting is eligible for industrial allocation. NZAS is one of the largest recipients of industrial allocation. In 2023, NZAS was allocated 593,133 NZUs, valued at about $38 million.[4]
10. Currently, NZAS does not receive industrial allocation for using electricity under electricity contracts. This is an outcome of its previous electricity contract with Meridian, under which the electricity price was unaffected by the NZ ETS (this is explained further in the next section).
11. Under older electricity contracts, NZAS did receive units for electricity use. In 2020, NZAS was allocated 1.55 million NZUs, which included units for both its direct and indirect emissions costs.

[4] A carbon price of $64 is used in this RIA. This price is close to current market prices.

A standard electricity allocation factor is used to calculate the allocation of NZUs for electricity use

12. The standard EAF is an estimate of the impact of the NZ ETS on wholesale electricity prices passed through to consumers. It is expressed in tonnes of carbon dioxide equivalent per megawatt-hour (tCO_2-e / MWh) and is part of the allocative baselines prescribed to industries considered emissions intensive and trade-exposed (see box above).

Standard electricity allocation factor

The EAF is used to calculate allocative baselines where electricity is an indirect source of emissions.

$$\text{AB} = (\text{EAF } x \text{ energy consumption per tonne of product}) + \text{direct emissions}$$

Where:

- AB is the allocative baseline for the product (t CO_2-e/t product)
- EAF is the standard EAF (tCO_2-e / MWh)
- Energy consumption per tonne of product is the electricity required to produce a tonne of product (MWh/tonne product)
- Direct emission is the emissions intensity of the direct process emissions from a tonne of product (t CO_2-e/t product)

13. Calculating the standard EAF is complex and involves electricity market modelling to estimate the marginal cost that the NZ ETS adds to grid electricity prices. This is done by the Electricity Authority. Any EAF will be an estimate based on assumptions, and different modelling approaches may lead to different but reasonable results.

14. The standard EAF is used to calculate most participants' allocative baselines. The EAF for 2024 allocations will be set at 0.554 tCO_2e / MWh.

15. Sections 161C (4) and 161C (5) of the CCRA allows the Minister of Climate Change to adjust calculations of allocative baselines after taking into account electricity-related contracts that affect the electricity cost increases firms face due to the NZ ETS. In the past, the Minister has used this power to adjust NZAS's allocative baselines by using an NZAS-specific electricity contracts allocation factor (ECAF)[5], instead of the standard EAF, in baseline calculations.

16. This process has involved analysing electricity contracts held by NZAS and seeking Cabinet decisions on an appropriate ECAF. This ECAF then impacts the allocative baseline for NZAS's production of aluminium, which is updated every year in regulations following the collection of electricity consumption data.

17. Prior to 2021 NZAS's ECAF was decided to be 0.206 tCO_2-e / MWh. This meant NZAS's allocative baseline was considerably lower than the default baseline for aluminium smelting (which used the standard EAF).[6]

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[5] The 'electricity contracts allocation factor' (ECAF) was previously known as a 'unique electricity allocation factor' (unique EAF). This terminology has been changed to more accurately reflect its legal function and to prevent confusion with the EAF determined under s161FA.

[6] The default allocative baseline for aluminium smelting is 10.256 tCO_2-e/t product. The current allocative baseline for NZAS is 2.042 tCO_2-e/t product – about a fifth of the default baseline value. This difference is attributed to the default baseline using the standard EAF and the NZAS baseline using an ECAF of zero.

The current ECAF for NZAS is zero

18. In January 2021, NZAS and Meridian agreed to an electricity contract that would run to 31 December 2024 (the 2021-24 contract). This contract was to cover the period NZAS was expected to remain open in New Zealand.

19. NZAS's 2021-24 electricity contract was reviewed by the Minister of Climate Change under the relevant provisions of the CCRA. An independent consultancy developed a model to estimate an ECAF and found that the NZ ETS had no impact on the electricity price of the 2021-24 contract.

20. Accordingly, the Government decided NZAS's ECAF would be zero (0.0 tCO_2-e / MWh). As a result, NZAS industrial allocation was significantly reduced as it only received units for its direct process emissions, not for electricity.

NZAS has signed new electricity contracts with three generators

21. In May 2024, NZAS signed new electricity contracts with three generators: Meridian, Contact, and Mercury. These contracts took effect in July 2024 and will run to 2044.

22. In July 2024, the Government issued a Gazette notice for NZAS's new electricity contracts for the purpose of calculating an ECAF.

23. There are material differences between the 2021-24 contract and the new contracts:

    a. NZAS's 2021-24 contract ran for four years, while the new contracts will run for 20 years

    b. The contract electricity price in the new contracts is higher than the price in the 2021-24 contract

24. Separate analyses from two electricity market modellers have found that the electricity price in the new contracts is affected by the NZ ETS. However, the analyses differed on the emissions cost and what the ECAF should be.

25. NZAS engaged an electricity market modeller to estimate the ECAF under the new contracts. It estimated the new ECAF should be 0.206 tCO_2e / MWh. This is the same as NZAS's ECAF under older electricity contracts (that were in place prior to 2021).

26. The Ministry for the Environment engaged a separate market modeller to estimate the ECAF. This was the same consultancy that modelled the ECAF under NZAS's 2021-24 contract. The new ECAF was recommended to be 0.08 tCO_2e / MWh.

27. The Ministry for the Environment engaged a third consultancy to review both sets of modelling and clarify what factors were driving the different estimates. It found the modelling procured by MfE to be "reasonable and compelling". The review agreed with some aspects of the NZAS modelling but questioned others.

What is the policy problem or opportunity?

28. NZAS's industrial allocation won't align with its future emissions costs and is inconsistent with the purpose of industrial allocation in the NZ ETS.

29. NZAS's ECAF is currently zero, and this ECAF expires at the termination of the contracts described above. If a new ECAF is not decided now, the default baseline for aluminium smelting will be used instead as the basis for NZAS's industrial allocations. Future allocations will reflect the higher emissions cost for electricity purchased on the wholesale electricity market, rather than electricity purchased under its new contracts.

30. This will lead to an inaccurate, over-allocation of NZUs for NZAS. Over-allocation is inconsistent with the purpose of industrial allocation in the NZ ETS and would create

avoidable fiscal costs. These costs are likely to be material as over-allocation reduces the number of NZUs the government can auction in the NZ ETS. Cash revenue generated by NZ ETS auctions helps fund other Government policies.

Objective for updating NZAS's allocative baselines

31. The Government's objective is to update NZAS's ECAF to align its future allocation with the emissions costs for electricity purchased its new electricity contracts.

32. NZAS should continue to receive an allocation that is sufficient to mitigate its risk of emissions leakage. However, its allocation should be consistent with the level of assistance NZAS is entitled to under the CCRA. It should not receive an over-allocation of NZUs and should still be incentivised through the NZ ETS to reduce its emissions. More generally, industrial allocation settings should support the overall integrity and efficiency of the NZ ETS and maintain the proper functioning of New Zealand's carbon market.

Section 2: Considerations and scope used to decide upon an option to address the policy problem

Criteria used to compare options to the counterfactual

33. The RIA assesses three options to update NZAS's ECAF against three criteria and the counterfactual.

Table 1: Criteria for assessing ECAF options

Criteria	Description
Accurately allocates NZUs	NZAS's industrial allocation should be accurate and reflect the emissions costs that are incurred.
Support consistency of industrial allocation with the purpose of the NZ ETS	NZAS industrial allocation should be consistent with the purpose of the NZ ETS to drive emissions reductions in line with emissions budgets and targets. It should: • Ensure that an incentive is maintained for NZAS to reduce emissions • Support the overall integrity and efficiency of the NZ ETS
Mitigate the risk of emissions leakage	NZAS's industrial allocation should mitigate the risk of emissions leakage from indirect emissions costs created under the new electricity contracts

What scope will options be considered within?

34. The scope of this RIA is limited to quantifying the emission costs incurred by NZAS under the new electricity contracts. Options are limited to a new ECAF.

35. We have discarded some options for NZAS's ECAF. An ECAF of zero has not been assessed given it would result in a material under-allocation for NZAS, which is demonstrably inconsistent with the policy objectives. ECAF options that have not been developed through electricity market modelling have also not been considered.

36. Other matters related to industrial allocation policy are out of scope. This includes the role of industrial allocation in the NZ ETS, the phase out rates of industrial allocation, and alternative policies to industrial allocation.

Section 3: Options for changing allocative baselines for NZAS

Determining options

37. Electricity market modelling is used to assess the cost impact of the NZ ETS on electricity prices and calculate ECAFs.

38. In July 2024, a Gazette notice was issued to NZAS to provide its new electricity contracts to the government under the relevant provisions in the CCRA.

39. Two sets of modelling have been carried out to estimate NZAS's new ECAF. The first was by Concept Consulting for the Ministry for the Environment. The second was by Energy Link for NZAS. Each estimate is considered in this RIA.

40. In May 2024, advice was provided to the Minister of Climate Change and the Minister of Energy on updating NZAS's ECAF. The advice included variations of the modelled ECAFs that were calculated by changing the assumptions.

41. The Ministers indicated a variation as their preferred option to update the ECAF. This option is also assessed in this RIA.

Counterfactual – the standard EAF for 2024 of 0.554 tCO_2-e / MWh

42. This is the standard EAF of 0.554 tCO_2-e / MWh that will be applied for 2024 allocations in general. This EAF informs the default allocative baseline for aluminium smelting.

43. If the Government does not agree to an ECAF based on NZAS's new electricity contracts, the default allocative baseline will be used as the basis for future allocations.

44. Under the counterfactual, NZAS would receive an industrial allocation of about 2.9 million NZUs in 2024/25. This is valued at about $188.0 million.

Option 1 – MfE ECAF of 0.08 tCO_2-e / MWh

45. This option is the estimate produced for MfE of 0.08 tCO_2-e / MWh.

46. Under this option, NZAS would receive an industrial allocation of about 930,000 NZUs in 2024/25. This is valued at about $59.3 million.

Option 2 – NZAS ECAF of 0.206 tCO_2-e / MWh

47. This option is the estimate produced for NZAS of 0.206 tCO_2-e / MWh.

48. Under this option, NZAS would receive an industrial allocation of about 1.5 million NZUs in 2024/25. This is valued at about $93.5 million.

Option 3 – Variation ECAF of 0.137 tCO_2-e / MWh

49. This option is a variation of Options 1 and 2 and was calculated by

    a. using the overall modelling approach taken by the MfE market modeller in Option 1[7]; but

[7] At a high-level, the modelling approach replicates how electricity generators undertook to price their respective NZAS contracts, and how this might result in a different contract price if New Zealand electricity generators were not subject to the NZ ETS. Concept's modelling tries to reproduce these pricing approaches in with- and without-carbon pricing worlds, to determine the extent to which the prices in the new contracts are likely to have been higher due to generators' carbon price expectations at the time the contracts were agreed.

b. swapping out two key assumptions for those used in the modelling procured by NZAS in Option 2.[8]

50. Using this approach the ECAF was estimated to be 0.137 tCO_2-e / MWh.

51. Under this option, NZAS would receive an industrial allocation of about 1.2 million NZUs in 2024/25. This is valued at about $74.7 million.

Assessment against key criteria: each option is given a rating outlined in the key below

Key	
++	much better than doing nothing/the status quo
+	better than doing nothing/the status quo
o	about the same as doing nothing/the status quo
-	worse than doing nothing/the status quo
- -	much worse than doing nothing/the status quo

Table 2: Impact analysis of ECAF options for NZAS for the main contract against the three assessment criteria

	Counterfactual 0.554 tCO_2-e / MWh	Option 1 0.08 tCO_2-e / MWh	Option 2 0.206 tCO_2-e / MWh	Option 3 0.137 tCO_2-e / MWh
Accurately allocates NZUs	0	++	+	+
Supports consistency of industrial allocation with the purpose of the NZ ETS	0	+	+	+
Minimise the risk of emissions leakage	0	-	-	-
Overall assessment	0	++	+	+

Criteria 1: Accurately allocates NZUs

52. Modelling New Zealand's electricity market is complex, and it is inherently difficult to quantify the impact of the NZ ETS on electricity prices. Different modelling approaches can be valid and produce reasonable and accurate estimates of the ECAF. This means there cannot be a definitive estimate of the ECAF for NZAS.

53. The counterfactual reflects the emissions cost of electricity purchased on New Zealand's wholesale electricity market. Electricity market modelling shows this is significantly higher than the emissions costs associated with electricity purchased under NZAS's new electricity contracts. The standard EAF, therefore, over-estimates NZAS's emissions costs and would result in an inaccurate over-allocation.

[8] These assumptions relate to the extent NZ ETS costs are passed onto consumers of electricity and the impact of NZAS closing on South Island electricity prices.

54. All the options are an improvement to the counterfactual and would more accurately allocate NZUs. They were modelled using information obtained from NZAS's new electricity contracts.

55. Recognising that there is inherent uncertainty in modelling any ECAF, our view is that Option 1 performs the best against this criterion. Our assessment is that its modelling approach is most likely to produce an accurate estimate of the ECAF. This assessment is based on the following factors:

    a. the approach is consistent with how the ECAF was modelled under NZAS's 2021-24 electricity contract

    b. an independent review of the modelling found the estimate developed for MfE to be "reasonable and compelling", and considered the overall modelling approach taken by the market modeller to be appropriate

    c. while the independent reviewer had a favourable view of some of the assumptions used in Option 2 (the modelling procured by NZAS), it also noted its overall assessment had limitations and unexplained departures from previous methodologies used to calculate ECAFs

56. The overall modelling approach taken under Option 1 models and compares two scenarios: 1) a scenario where New Zealand electricity generators are subject to a carbon price, and 2) a scenario where generators are not subject to a carbon price. This allows for the modeller to assess the extent to which electricity prices under the new contracts are likely to have been higher due to generators' carbon price expectations at the time the contracts were agreed.

57. The difference between Options 1 and 2 reflect assumptions used by the modellers. There are two key differences that are driving the ECAF estimates:

    a. The estimated effect of NZAS closing on South Island electricity prices

    b. The assumed rate that emission costs are passed through to consumers

58. On balance, we consider that the approach taken by MfE's modeller is most likely to provide an accurate ECAF. This is based on the independent review of both sets of modelling and the respective treatment of the two key assumptions mentioned above:

    a. ECAF results are highly sensitive to forecasts of South Island price outcomes should NZAS exit. The modelling procured by MfE is considered reliable and a good basis for estimating the ECAF by the independent reviewer, whereas NZAS's assumption may under-estimate the effect.

    b. NZAS's market modelling is more sensitive to the impact of emissions prices on electricity prices. While the independent review considered this may be more accurate in the short term, it indicated this assumption is likely less accurate over the longer term.

59. Option 3 was calculated by using the modelling approach taken by the MfE modeller but with the key assumptions swapped out for those used by the NZAS modeller. This approach produces an ECAF value that falls between Options 1 and 2. As discussed above, we are comfortable with the MfE-procured modelling and choices of assumptions, but some key assumptions relating to future electricity prices and the non-renewable energy share of energy supply are subject to uncertainty and different judgments may be equally reasonable. Swapping assumptions between models may cause internal consistency issues, however.

Criteria 2: Supports consistency of industrial allocation with the purpose of the NZ ETS

60. As described above, if the Minister did not adjust NZAS's allocative baseline using an ECAF, NZAS would receive an inaccurate allocation of NZUs under the counterfactual. NZAS's allocation would be greater than its actual emissions cost from consuming electricity. This is known as 'over-allocation'.

61. Over-allocation is inconsistent with the purpose of industrial allocation in the NZ ETS. Recipients of industrial allocation should maintain an emissions cost at the margins. As a firm carrying out a highly emissions-intensive activity, NZAS is entitled to an allocation equal to 85 per cent of its emissions costs for 2025.[9] This means NZAS should face a marginal emissions cost of 15 per cent. However, in practice, NZAS would receive an allocation greater than 100 per cent of its costs.

62. All the options perform better than the counterfactual as they would more closely align NZAS's allocation with its future emissions costs and remove over-allocation.

Criteria 3: Minimise the risk of emissions leakage

63. Under the counterfactual, NZAS would receive a significant over-allocation of NZUs and would, in effect, not incur any emissions costs for electricity purchased under its new contracts. Given this, the counterfactual significantly reduces the risk of emissions leakage for NZAS.

64. Under Options 1-3, NZAS would receive smaller allocations compared to the counterfactual and face an indirect emission cost at the margins. Exposure to this cost creates a risk of emissions leakage. Given there is a significantly reduced risk of leakage under the counterfactual, all the options perform worse against this criterion.

65. However, the materiality of this risk needs to be considered. Under Options 1-3, the allocations provided should reflect NZAS's future emissions costs and be sufficient to effectively minimise the risk of emissions leakage. The actual risk of leakage under those options is likely to be low.

66. The risk of leakage for Options 1-3 is likely to be similar. Option 2 may perform the strongest of the three given it allocates more NZUs to NZAS.

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

67. Option 1 is our preferred option. We judge that it is most likely to address the problem and meet the policy objectives. There is inherent uncertainty in accurately modelling an ECAF, but on balance we consider that Option 1 is most likely to accurately reflect the actual impact of the NZ ETS on electricity purchased under the new electricity contracts. Implementing this option by adjusting NZAS's allocative baseline accordingly would support the purpose of industrial allocation by aligning NZAS's allocation with its actual exposure to a carbon cost.

68. The trade-off is that Option 1 creates a risk of emissions leakage compared to the counterfactual.

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[9] The level of assistance is another key industrial allocation setting used to calculate how many NZUs firms receive. Firms carrying out highly emissions intensive activities (such as aluminium smelting) are entitled to an allocation equal to 85 per cent of their NZ ETS costs in 2025. The level of assistance reduces by one percentage point per annum in the 2020s, two percentage points per annum in the 2030s, and three points in the 2040s. This will eventually lead to the complete phase out of industrial allocation.

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

69. Option 1 will increase NZAS's allocation to approximately 930,000 NZUs for 2024/25. Table 3 shows current and projected allocations for NZAS.

Table 3: NZAS industrial allocation projections under Option 1

2023 (Final allocation)	2024/25	2025/26	2026/27
593,133	925,805	914,977	904,149

Note 1: NZAS's industrial allocation projections include allocations for both direct and indirect emissions costs.

Note 2: NZAS's industrial allocation are projected to decrease due to the phase-out of industrial allocation. Based on current legislated phase out rates, NZAS will receive a yearly industrial allocation for the life of the new electricity contracts.

70. Option 1 has a fiscal impact to the Crown. The changed ECAF would result in an approximate $59.3 million expense and increase in the NZ ETS liability for 2024/25.

71. It would also create an indirect fiscal cost by reducing the number of NZUs the Crown can auction in the NZ ETS. Units that are allocated freely to NZAS cannot be sold by the Government in the future. This will result in the Crown foregoing cash revenue in the future.

Table 4: Impact analysis of preferred option on costs and benefits to affected parties

Affected groups (identify)	**Comment nature of cost or benefit (***eg, ongoing, one-off), evidence and assumption (eg, compliance rates), risks.*	**Impact $m present value where appropriate, for monetised impacts; high, medium or low for non-monetised impacts.**	**Evidence Certainty High, medium, or low, and explain reasoning in comment column.**
Additional costs of the preferred option compared to taking no action			
Regulated groups	No additional cost from the status quo	$0	High
Regulators	The preferred option has a direct ongoing fiscal cost to the government compared to the status quo	$59.3 million for 2024/25	High
Others (eg, wider govt, consumers, etc.)	Compared to the status quo there is no additional costs to others	Low	Low
Total monetised costs		$59.3 million for 2024/25	
Non-monetised costs		Low	
Additional benefits of the preferred option compared to taking no action			
Regulated groups	Compared to the status quo, NZAS will receive more NZUs per tonne of product per annum for the rest of the contract term.	$59.3 million for 2024/25	High

Regulators	The preferred option has no ongoing benefit compared to the status quo	$0	High
Others (eg, wider govt, consumers, etc.)	The integrity of the NZ ETS will be improved because proposal is aligned better with the intent of industrial allocation policy than the status quo	High	High
Total monetised benefits		$59.3 million for 2024/25	
Non-monetised benefits		Low	

Engagement feedback

72. NZAS was extensively engaged in this work, which began in early 2024.
73. NZAS were given the opportunity to review and provide feedback on ECAF modelling commissioned by the Ministry of the Environment. Their feedback has been considered in this RIA.
74. Consultation on the proposal was limited to NZAS. This is because the proposal only directly impacts NZAS. Furthermore, the information relating to NZAS's electricity contracts is commercially sensitive and was provided to the government in confidence. MfE is working with NZAS to identify what information can be publicly released. Until then information and analysis related to the ECAF cannot be shared.

Recommendation

75. Option 1 is recommended because it aligns with the purpose of industrial allocation, accurately allocates NZUs to NZAS for emissions costs, and provides sufficient protection against emissions leakage.
76. Option 1 meets the objectives for updating NZAS's allocative baseline at the lowest fiscal cost.

Section 4: Delivering an option

How will the new arrangements be implemented?

77. The decision on the treatment of NZAS's ECAF will be used in the annual process of resetting NZAS's allocative baseline, to adjust the baseline calculation to take account of NZAS's electricity contracts. NZAS's allocative baseline is determined each March after reviewing the electricity consumed by NZAS over the previous calendar year (NZAS purchases a small amount of electricity from the grid each year). The final allocative baseline for the previous calendar year is prescribed alongside provisional allocative baselines for the next two years in amendments to the Climate Change (Eligible Industrial Activities) Regulations 2010.
78. The final allocative baseline is used to adjust NZAS's provisional allocation. The provision of industrial allocation has two stages. Firms receive a provisional allocation based on their production for the previous calendar year. There is then a true-up process in the next year where provisional allocations are adjusted based on the actual production data and a final allocation is awarded.

79. NZAS's new allocative baseline will apply to its final allocation for 2024. NZAS has already received a provisional allocation that was calculated using the out-of-date baseline. Its final 2024 allocation will reflect the process discussed above.[10]

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

80. The annual review of the allocative baseline requires close interaction with NZAS, beginning with the 'call for data' Gazette notice.

81. This provides an opportunity to review the allocative baselines and to discuss any potential changes to the electricity contract that may impact the analysis in this RIA.

82. The arrangements will only be reviewed if there is a change to the contract terms.

[10] NZAS's new allocative baseline will apply to all of 2024, including the period under the now expired contract and when the new electricity contracts came into effect from July 2024.

Cabinet Economic Policy Committee

Minute of Decision

New Zealand Aluminium Smelter Industrial Allocation Adjustment

Portfolio **Climate Change**

On 29 January 2025, the Cabinet Economic Policy Committee:

1 **noted** that New Zealand Aluminium Smelters Limited (NZAS) has signed new electricity contracts which came into effect in July 2024 and will run to 2044;

2 **noted** that, under the Climate Change Response Act 2002, the Minister of Climate Change (the Minister) has the power to adjust NZAS's allocative baselines in light of new electricity contracts and that, unless the Minister does so, NZAS will receive a significant over-allocation of New Zealand units at a total cost to the Crown of $188.0 million in 2024/25, where around $150.5 million is due to allocation for electricity costs;

3 **noted** that the Minister intends to apply an electricity contracts allocation factor (ECAF) to adjust NZAS's allocative baselines before the end of April 2025, thereby impacting its industrial allocation for 2024, and to continue applying this ECAF when making similar baseline adjustments in further years until the electricity contracts are materially changed;

4 **noted** that two electricity market experts, engaged separately by the Ministry for the Environment and NZAS, have estimated different ECAFs;

5 **noted** that the Minister has considered both estimates and the underlying modelling;

6 **agreed** that the Minister will annually adjust NZAS's allocative baselines using an ECAF of 0.137 tCO2-e / MWh;

7 **noted** that the total cost to the Crown in 2024/25 of emission unit allocations to NZAS will increase to around $74.7 million, where around $37.2 million is due to the ECAF used for electricity costs;

8 **noted** that the ECAFs in both option 1 and option 2 in the paper under ECO-25-SUB-0004 are lower than the standard electricity allocation factor that would otherwise be used, and that both options would therefore decrease expenses relative to the counterfactual going forward, by $128.8 million for option 1 and $113.3 million for option 2 over 2024/25;

9 **noted** that the increase in expenses from the decision in paragraph 6 above can be managed within the existing appropriation for Allocation of New Zealand Units;

10 **agreed** to manage the fiscal implications from the decision in paragraph 6 above outside of the Budget operating allowances;

11 **noted** that the Minister will report back to Cabinet in the coming months to seek authorisation of the submission of amendment regulations that will implement the above policy decisions.

Rachel Clarke
Committee Secretary

Present:
Rt Hon Winston Peters
Hon David Seymour
Hon Nicola Willis
Hon Brooke van Velden
Hon Simeon Brown
Hon Erica Stanford
Hon Paul Goldsmith
Hon Louise Upston
Hon Dr Shane Reti
Hon Todd McClay
Hon Tama Potaka
Hon Simon Watts
Hon Andrew Hoggard
Hon Penny Simmonds
Hon Mark Patterson
Hon Chris Penk
Hon Nicola Grigg
Hon Andrew Bayly
Hon James Meager
Simon Court MP

Officials present from:
Office of the Prime Minister
Office of Hon Louise Upston
Office of Hon Simon Watts
Officials Committee for ECO

Cabinet

Minute of Decision

Report of the Cabinet Economic Policy Committee: Period Ended 31 January 2205

On 3 February 2025, Cabinet made the following decisions on the work of the Cabinet Economic Policy Committee for the period ended 31 January 2025:

Out of scope

ECO-25-MIN-0004	**New Zealand Aluminium Smelter Industrial Allocation Adjustment** Portfolio: Climate Change	CONFIRMED

Out of scope

Diana Hawker
for Secretary of the Cabinet