



pure kiwi mettle

NEW ZEALAND'S ALUMINIUM SMELTER

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17 January 2020

Committee Secretariat
Environment Committee
Parliament Buildings
Wellington

By email to: en@parliament.govt.nz.

Submission on: *The Climate Change Response (Emissions Trading Reform) Amendment Bill*

New Zealand Aluminium Smelters Limited ('NZAS') is pleased to have the opportunity to provide a submission in response to '*The Climate Change Response (Emissions Trading Reform) Amendment Bill*' (the 'NZ ETS Amendment Bill'). Nothing in this submission is confidential.

NZAS is the operating company for the aluminium smelter at Tiwai Point in Invercargill which is managed by Rio Tinto (79.36% ownership) in joint venture with Sumitomo Chemical Company, Limited, a Japanese company. The Tiwai Point smelter is a world-class facility which contributes around half a billion dollars to the Southland economy annually (6.5% of Southland's GDP¹) and supports more than 2,600 direct and indirect jobs in the region. In 2018, NZAS paid \$502 million to New Zealand suppliers and in wages and salaries. This included \$49 million to suppliers in Southland. NZAS is the only smelter in the world producing ultra-high purity aluminium using hydro-electricity generated from renewable sources, giving it one of the lowest carbon footprints of a smelter anywhere.

NZAS is the largest single user of electricity in New Zealand and with the chemistry of the process for producing aluminium inherently requiring the production of CO₂, climate and energy policy are vitally important to NZAS and its future. You will be aware that Rio Tinto, NZAS's majority owner, is currently undertaking a strategic review of its interests in NZAS, which pays one of the highest delivered electricity prices, outside of China. It is this very high electricity and transmission cost which has resulted in aluminium production at NZAS ceasing to be internationally competitive for its owners. We remain hopeful that a solution in Rio Tinto's strategic review can be found to secure NZAS' future as a vital contributor to the New Zealand economy and an EITE business with a demonstrated commitment to emissions reduction.

In this context, NZAS supports action by the New Zealand Government to ensure that New Zealand delivers on the international commitments made under the Paris Agreement. In providing our comments on the NZ ETS Amendment Bill we are seeking to ensure that proper attention is paid to the workability of the detailed design of New Zealand's climate policy and in particular, to ensuring that emissions-intensive trade-exposed (EITE) industries continue to be supported in New Zealand by climate policy that recognises the real risk of emissions leakage where the timing and scale of transition is not properly married with comparable international carbon action in those industries.

¹ Venture Southland: The economic and social impacts of NZAS on the Southland Economy summary, 2019

Aluminium will continue to have a significant role in a carbon-constrained world. It is light, strong, flexible, non-corrosive and endlessly recyclable. Recycling aluminium uses only five per cent of the energy needed to produce primary metal. Its use in lightweight vehicles means it is the fastest growing material used in the automotive sector. The use of one kilogram of aluminium to replace heavier materials in a car or light truck can save a net 20 kilograms of CO₂ over the life of the vehicle.

NZAS has taken every opportunity to reduce emissions where it is commercially sustainable, reducing on-site emissions by 55% from ~4.5 tCO₂-e/t Aluminium to ~2 tCO₂-e/t Aluminium since 1990. Currently the only process for economically producing aluminium on an industrial scale, the Hall-Héroult electrolysis process, releases CO₂ because of the inherent nature of the chemical reaction taking place. Rio Tinto, Alcoa, Apple and the Government of Quebec have recently announced a joint venture called “Elysis”² supported by the Government of Canada which looks to scale up and demonstrate the economic viability of an alternative process for making aluminium that does not release CO₂ as part of the underlying chemical reaction. The joint venture is targeting the middle of this decade to demonstrate this process at an industrial scale. The applicability and economic viability of retrofitting this, as yet undeveloped, process to NZAS (or to any other site) is at this stage unknown. As with any major capital investment at an aluminium smelter, the possibility of retrofitting the process will depend on the ability of NZAS to secure an internationally competitive electricity price for the long term.

It should also be noted that this process is potentially significant only where the emissions of a smelter's electricity supply are low. Powered by renewable hydro-electricity, NZAS has one of the lowest carbon footprints of a smelter in the world, emitting around 15 tonnes less of CO₂-e per tonne of aluminium produced than its coal-fired competitors. NZAS is now one of a small number of smelters which has its metal certified by the Aluminium Stewardship Initiative and marketed by Rio Tinto under its 'RenewAl' Brand³. This certifies the aluminium is made from traceable raw materials and is produced with electricity from low carbon sources, using world class smelting processes. Despite NZAS being by far the largest consumer of electricity in New Zealand, using up to 12% of total generation, aluminium production contributed only 0.7% of national emissions in 2015⁴.

In considering climate policy measures, Rio Tinto adheres to the framework set out in its Climate Change Position Statement⁵. The focus of our response to the NZ ETS Amendment Bill is on how to maintain the competitiveness of New Zealand industry, as one of the engines of the New Zealand economy, during the transition to a low emissions future. The suggested changes in Attachment 1 are therefore primarily focussed on the NZ ETS changes to industrial allocation and do not address the detail of other changes set out in the NZ ETS Amendment Bill. In particular, NZAS recommends amendments that

- Allow for adjustment to reduce the phase-out rate for individual activities, subject to the minimum phase-out rates determined in the policy;
- Focus the basis for adjusting phase-out rate for individual activities to be on how emissions policies in competing jurisdictions affect those specific activities and assess available technology to reduce emissions on an economic basis;
- Explicitly recognise the importance of the treatment of agriculture in determining the emissions budget determinations for EITE activities.

² <https://elysistechnologies.com/en>

³ For further information, refer to: <http://www.riotinto.com/aluminium/renewal-low-co2-aluminium-20272.aspx>

⁴ New Zealand Productivity Commission. (2018). Low-emissions economy: Draft report. Available from www.productivity.govt.nz/inquiry-content/low-emissions-draft-report-p30 (Figure 2.6)

⁵ http://www.riotinto.com/documents/RT_Climate_change_position_statement.pdf

Decisions regarding climate policy will be most effective when government, community and industry work together. New Zealand now has the opportunity to demonstrate to the world the ability for these groups to act collaboratively applying both policy and technical innovation to do so in a way which transitions not just the economy broadly but the EITE components of the economy in industry and agriculture to a low emissions future. The impact of transition and moving too early in a manner that reduces the competitiveness of emissions-intensive trade-exposed industries is a challenge that New Zealand will need to successfully meet if we aspire to international leadership. Reducing domestic emissions by forcing the relocation of entire sectors of the economy offshore will be damaging to New Zealand and will not reduce global emissions. In fact given New Zealand's extensive use of renewable energy relocation of industry offshore will increase global emissions as well as being unconvincing as a model of international leadership to the international community. It is imperative therefore to get the design of the NZ ETS Amendment Bill right as this provides the framework for how EITE activities are managed as part of New Zealand climate policy.

If you would like to discuss our comments further, please contact either Daniel Woodfield by email: [REDACTED] or Jennifer Nolan on [REDACTED] or by email:

Yours sincerely



Stewart Hamilton

General Manager

New Zealand's Aluminium Smelter

Attachment 1: Comments on the NZ ETS Amendment Bill

Maintaining competitiveness for trade exposed industries during transition is fundamental. Withdrawal of transitional assistance must be calibrated to what happens in competitor countries

Aluminium is a globally priced commodity; sold on the London Metals Exchange ('LME'), therefore aluminium smelters must manage their international competitiveness by ensuring operating costs are as low as possible. Relative to the overall aluminium industry, NZAS' high delivered electricity price means that it has thin operating margins, and is therefore highly exposed to fluctuations in both the New Zealand dollar and the LME, affecting its ability to achieve long-term commercial sustainability.

The main risk for NZAS associated with climate policy settings remains the lack of comparable action our competitors are exposed to and are unlikely to be exposed to in the short to medium term.

It would not benefit the world or reduce global emissions to introduce more stringent carbon measures in a country that has one smelter using hydro-electricity and already struggling with high delivered energy costs, thereby handing a trade advantage to aluminium producers in other countries using coal fired electricity⁶.

We also share the perspective set out in the Ministry for the Environment's ('MfE's') 2018 paper '*Improvements to the New Zealand Emissions Trading Scheme – Consultation Document*' (the 'NZ ETS Consultation Paper') that 'if emissions leakage occurred, it may also have significant economic and social impacts. This is particularly the case for regions where a single emission-intensive facility may be important for the local economy'. This discussion highlights that imposition by government on the competitiveness of industry can have significant economic and social impacts while a facility still remains in operation and this is also what industrial allocation should also seek to address.

NZAS as a business is well positioned to leverage a competitive advantage of producing some of the lowest carbon aluminium in the world when there is an equivalent price of carbon as it applies to aluminium smelting across the global economy. It is important that the policy choices New Zealand makes, as they apply to emissions intensive trade exposed activities, are calibrated to the international response in competitor countries. For this reason, NZAS has consistently supported the wind back of transitional allocation being linked to the development of international schemes applying to a substantial percentage of each global industry, rather than being based only on New Zealand domestic policy. While this approach has not been explicitly recognised in the NZ ETS Amendment Bill, the broad issue of aligning the phase out of transitional assistance to competitiveness has.

The NZ ETS Amendment Bill provides the specific policy measures that will be the basis for determining the future carbon related competitiveness of NZAS. It is important that decisions regarding allocation are focussed outwards on what is happening internationally and that it is sufficiently flexible to allow governments to respond to both a changing domestic and a changing international context to ensure the ongoing viability of New Zealand's emission intensive and trade exposed industries.

⁶ The alternative to producing hydro-powered aluminium at NZAS is the addition of new coal fired based smelting capacity in China (where >50% of the world's aluminium is currently produced).

Specific amendments to elements of the NZ ETS Amendment Bill

The ability to slow the rate of decline in allocation should be able to be applied to individual activities

The new Sections 84A to 84D of the *Climate Change Response Act 2002* (the 'CCRA') set out in clauses 75-79 of Part 1 of the NZ ETS Amendment Bill as currently proposed allow for regulations to be made to increase the applicable phase-out rate for specific eligible industrial activities (Section 84B). However, regulations can only be made to provide for the reduction of the applicable phase-out rate generally (i.e. for *all* activities) (Section 84A(3)). Recognising that the minimum applicable phase-out rate under all circumstances is specified in in Section 84A(2)(b) as at least 0.01 for the period 2031-2040 and 0.02 for the period 2041-2050, the ability for the Minister to make regulations to also slow the applicable phase-out rate for specific eligible industrial activities, having regard to the same criteria as are set out in Section 84C(3), appears to be entirely consistent with the policy rationale set out in the MfE's' 2019 impact statement "*NZ ETS Tranche two Impact Statement – A phase-down of industrial allocation*" (the "Impact Statement") and associated Cabinet Paper and Cabinet Minute. Adopting this approach would allow the Climate Change Commission and the Minister more opportunity to address the differential possibilities of emissions leakage, recognising that competitor countries and the policy impact of EITE activities within those countries will differ widely for different New Zealand EITE activities.

This issue could be addressed in a number of ways in the NZ ETS Amendment Bill drafting. The simplest pathway would be to amend the heading of Section 84B to be '*Regulations increasing adjusting phase-out rate for specific activities*' and amending Section 84B(2) to read:

- '(2) The phase-out rate must be more than: ~~the rate in sections 81(2)(a) and 83(2A)(a)~~
- (a) 0.01 for a year in the period beginning 1 January 2026 and ending on 31 December 2040; and
 - (b) 0.02 for a year in the period beginning on 1 January 2041 and ending on 31 December 2050.

The procedure for regulations setting phase-out rates for an activity should reflect the entry of agriculture into the NZ ETS and the effect of policies in competing jurisdictions on that activity

Given the scale of agricultural emissions in New Zealand's emission budget, the entry of agriculture into the NZ ETS and the phase out of allocation over time for agriculture will be important considerations in determining both the available emissions budget and equity issues in with regard to allocation to manage emissions leakage risk for economic activity within New Zealand. As decisions regarding agriculture have been made subsequent to the drafting of the Impact Statement, and further decisions regarding changes in allocation will be required over time, it is NZAS' view that the treatment of agriculture within the NZ ETS should be explicitly recognised as a consideration in 84C(3). An additional consideration to inserted into Section 84C(3) that addresses this could be 'the equitable allocation to other activities under the NZ ETS including agriculture'

Further Clarifications on Section 84C(3)

- (a) The current drafting of Section 84C captures a range of important Ministerial considerations but requires some adjustment to recognise the basis on which investment decisions are made. In Section 84C(3)(c) there needs to be recognition that the ‘emissions-related costs and policies in competing jurisdictions’ are those that apply to the specific activity – it is entirely possible to have significant policies that apply to particular part of a countries’ economy or activities that have a very different impact on a particular activity. The following amendment to the text of Section 84C(3)(c)(i) is recommended “the emissions-related costs and policies in competing jurisdictions related to the activity”.

- (b) With regard to the availability of low-emission technologies that relate to an activity (Section 84C(3)(f)) it is important that those technologies can be economically deployed. It is recommended the text of Section 84C(3)(f) be amended as follows: ‘the availability of economic low-emission technologies related to the activity’.