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Safeguard and Industrial Policy Section
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Dear Minister

Re: National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Prescribed Production Variables) Rule 2020 [the Amendment]

Australia's aluminium smelters, alumina refineries and bauxite mines are all required under the Safeguard Mechanism to keep their net Scope 1 emissions below a facility-specific baseline. In March 2019 amendments to the Safeguard Mechanism provided for the development of Government-determined prescribed production variables (which broadly define what is produced at Safeguard facilities) and default emissions intensity values.

The Council appreciates the ongoing consultation on the development of these production variables, and notes that feedback made during consultation in 2019, in particular on the methodology for electricity generation and saleable bauxite measurement, has been considered in the publication of this draft rule. This Submission focuses on the four Parts of the Amendment of relevance to the industry.

Aluminium

The proposed methodology and default emissions intensity is reflective of the processes, measurement techniques and industry data.

Alumina

The production variable definition for alumina currently states:

1. Tonnes of alumina (aluminium oxide (Al2O3)) that:
   (a) has a concentration of aluminium oxide equal to or greater than 95%; and
   (b) is produced as part of carrying on the alumina refining activity at the facility; and
   (c) is of saleable quality.
2. The metric in subsection (1) is applicable to a facility that conducts the activity of alumina refining through the physical and chemical transformation of bauxite (which is an ore containing mineralised aluminium compounds) into alumina (aluminium oxide (Al2O3)) with a concentration of aluminium oxide equal to or greater than 95% (the alumina refining activity).
3. The default emissions intensity is 0.545 t CO2-e per tonne of alumina.

Section 4.2 of Safeguard Mechanism: Prescribed production variables and default emissions intensities [the Paper] refers to "Note that this production variable includes production of specialty aluminas and hydrate (alumina trihydrate, Al(OH)3)." However, the Council does not believe the definition included in the Amendment reflects this proposed inclusion of hydrate and specialty alumina.

The Council proposes that the definition in the Amendment is updated to better align with the Renewable Energy Target (RET) definition of alumina; the definition proposed in the previous Department of the Environment and Energy consultation paper "Production Variable Development - Aluminium Sector including Alumina" (November, 2018) and Section 4.2 of the 2019 Paper.

Therefore, the Council proposes the addition of 2 (a) in the alumina definition:
2 (a) This includes saleable quantities of specialty aluminas and alumina trihydrate, $Al(OH)_3$; to be reported in alumina equivalent tonnes.

The revised definition would be:

1. Tonnes of alumina (aluminium oxide (Al2O3)) that:
    (a) has a concentration of aluminium oxide equal to or greater than 95%; and
    (b) is produced as part of carrying on the alumina refining activity at the facility; and
    (c) is of saleable quality.
2. The metric in subsection (1) is applicable to a facility that conducts the activity of alumina refining through the physical and chemical transformation of bauxite (which is an ore containing mineralised aluminium compounds) into alumina (aluminium oxide (Al2O3)) with a concentration of aluminium oxide equal to or greater than 95% (the alumina refining activity.
    (a) This includes saleable quantities of specialty aluminas and alumina trihydrate, $Al(OH)_3$; to be reported in alumina equivalent tonnes.
3. The default emissions intensity is 0.545 t CO2-e per tonne of alumina.

Explanatory text would need to be updated to reflect these changes to the definition. The rest of the proposed methodology for bauxite is reflective of the processes and measurement techniques.

Bauxite

The production variable definition for bauxite currently states:

1. Tonnes of bauxite product that:
    (a) is suitable as a feedstock for refining to produce alumina; and
    (b) is produced as part of carrying on the bauxite mining activity at the facility; and
    (c) is of saleable quality.
2. The metric in subsection (1) is applicable to a facility that conducts the activity of mining bauxite through:
    (a) the physical extraction of aluminium ores such as such as gibbsite (Al(OH)3), boehmite (γ-Aloo(OH)) and diaspore (α-AlO(OH)); and
    (b) the processing of the extracted ores by crushing and separation into a bauxite product.

There are two areas of the current definition where it does not reflect the diversity of the Australian bauxite mining industry:

1. Not all bauxite sold is sold to be used as a feedstock to produce alumina. Therefore, the Council proposes that the current 1(a) is deleted.
2. It implies all bauxite is crushed and separated prior to sale as a product. Not all mines have a crushing plant. Therefore, the Council proposes Section 2b be amended to: "the processing of the extracted ores ~~by crushing and separation~~ into a bauxite product".

The revised definition would be:

1. Tonnes of bauxite product that:
    (a) is produced as part of carrying on the bauxite mining activity at the facility; and
    (b) is of saleable quality.
2. The metric in subsection (1) is applicable to a facility that conducts the activity of mining bauxite through:
    (a) the physical extraction of aluminium ores such as such as gibbsite (Al(OH)3), boehmite (γ-Aloo(OH)) and diaspore (α-AlO(OH)); and
    (b) the processing of the extracted ores into a bauxite product.

Explanatory text would need to be updated to reflect these changes to the definition. The rest of the proposed methodology for bauxite is reflective of the processes and measurement techniques.

The Council notes that the default emissions intensity is listed as yet to be defined (XX t CO2-e per tonne of bauxite product) and would appreciate the ongoing opportunity to consult on this intensity prior to its final publication.

Electricity generation

Australia's aluminium sector generates electricity onsite, including:

- Diesel generation at remote mine sites, which are not grid connected;
- Cogeneration at alumina refineries which may be connected to the NEM or SWIS grids; and
- Incidental generation via solar PV installations.

Of these, cogeneration at the alumina refineries is the most significant.

The proposed methodology and default emissions intensity, as a single production variable, for on-site electricity generation is aligned with the policy intent and the application of the four principles (Effective, Consistent, Practical and Robust) outlined by the Department for assessing default production variables.

Given the importance of greenhouse and energy policy to the industry, the Council welcomes the opportunity to be involved in ongoing consultation on refinement of the Safeguard Mechanism and the associated Production Variables.

Yours sincerely,

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