

On 9 March 2020, the European Commission released the final Recommendations by the Technical Expert Group (TEG) on Sustainable Finance. This advice will feed into the Commission's ongoing legislative work on the Delegated Acts for climate mitigation and adaptation needed for the EU Taxonomy Regulation to fully apply across the EU as of 31 December 2021. European Aluminium actively participated to the consultation activities organised by DG FISMA and TEG experts, both by attending the dedicated workshops¹ and by submitting written input to the draft Recommendations² released for stakeholder comment in June last year.

We welcome in the Recommendations the recognition of Aluminium manufacturing as an enabling climate mitigation activity for achieving the transition towards a low carbon economy. Also, the inclusion of **secondary aluminium production**³ as eligible under such framework, due to the significantly lower emissions than primary production, is a **very positive element**.

However, we would like to express our **strong concerns regarding the approach chosen for the eligibility of aluminium primary production** to the taxonomy and the **proposed mitigation thresholds**:

- We appreciate the flexibility introduced compared to earlier drafts of the report. However, **we strongly oppose the proposed solution by the TEG: making the current ETS benchmark a compulsory criterion, while leaving the choice between the other two criteria (i.e. the electricity consumption of electrolysis and the average carbon intensity of the electricity consumed respectively) is not realistic and would not stimulate the right investments in our sector, thus having the opposite effect of the proposed taxonomy.**
- It is important to note that the methodology for the update of the ETS benchmarks, which is based on arbitrary yearly reduction rates (as foreseen in Article 10a(2) of the ETS Directive) **does not guarantee that the benchmarks will actually reflect the performance of the 10% more efficient installations in each sector.** Therefore, linking the mitigation thresholds to ETS benchmarks is unsuitable, as it risks leading to a situation where it is impossible for any installation to satisfy the taxonomy's criteria, **given the limited technological margin today to further reduce the direct emission of our production processes.** Indirect emissions (i.e. CO₂ generated by the electricity consumed) are the key differentiator of the production at global level and Europe has one of the least carbon intensive electricity supply in the world.
- Furthermore, while we welcome that the revised TEG Report now includes as eligible under the taxonomy investments to meet the proposed criteria as eligible under the taxonomy, **the time-frame and approach is unrealistic: investments made in our industry have a longer-term** and must take into account several other elements, which go beyond the identified three thresholds. **This provision might need more clarification and we would like to understand the exact intention of the TEG.**
- We also note that in the TEG report from June, **incineration with energy recovery, and thus also with recovery of the aluminium from bottom ash and the subsequent cleaning and pre-treatment for material recycling, would not anymore be eligible under the taxonomy.** This would penalise investments in bottom ash treatment technologies, **which are vital for recycling aluminium, especially from packaging waste.**
- Related to the above, we would also like to ask for a clarification about the future status of the 'pyrolysis' pre-treatment process under the taxonomy. This innovative method is used for liberating the aluminium fraction in composite (laminated) multi-material packaging solutions. **It is both material and energy-efficient,**

¹ See [here](#) participants list of the TEG stakeholder workshop on climate mitigation and the Sustainable Finance Taxonomy

² See [here](#) draft Sustainable Finance Taxonomy Technical Report, June 2019

³ See [here](#) technical annex final Sustainable Finance Taxonomy Technical Report, p.172, March 2020

particularly used in combination with the Extended Producer Responsibility (EPR) schemes for collecting and sorting the so-called 'PMD' packaging fraction (i.e. mixed plastics and metal packaging and drink cartons).

As long as there is no total ban or phasing out of landfilling of post-consumer recyclable waste at European level and no sufficient sorting capacity, **bottom ash treatment and pyrolysis remain key technologies for recycling aluminium, especially from packaging and household waste.**

Please find more information in the next sections. **Detailed Recommendations are also provided. We support the EU Taxonomy and look very much forward to continue working on the initiative in close dialogue with DG FISMA and other Commission services** in order to achieve the EU's sustainability ambitions.

Indirect emissions & aluminium production

European aluminium smelters are significantly below the world average of CO₂-emissions, and the taxonomy should underpin the sustainability of aluminium production in a global perspective. Indirect emissions (i.e. CO₂ generated by the electricity consumed) are the key differentiator of the production at global level and Europe has one of the least carbon intensive electricity supply in the world. As mentioned in our written submission to the draft TEG report and our exchanges with the experts, the taxonomy thresholds should be independent from the ETS scheme for the following reasons:

- A mitigation threshold based on the ETS Benchmark – which is based on direct emissions – does not reflect what is possible to implement based on the electro-intensive nature of the aluminium smelting process and the reality of European electricity markets. Europe has higher electricity prices compared to its main competitors⁴ (Russia, UAE and China), whereas electricity accounts for roughly 40% of primary aluminium production costs⁵. For this reason, electricity costs are a key differentiator for the sector's global competitiveness. No producer outside Europe faces the cost passed on by power producers when purchasing emission allowances under the EU ETS (indirect carbon costs). Furthermore, some players in the global aluminium industry are also heavily subsidised⁶. Until the electricity cost constraints are resolved for our sector, there will be no other means for industry to operate in Europe⁷.
- Aluminium ETS benchmarks are set to be defined for phase IV of the ETS (2021 – 2030) and the current value of 1.514 tCO₂/tAl, set for phase III, starting on 2021 will be reduced on a yearly basis by a factor between 0.2% and 1.6%, still to be determined. The yearly reduction factor will be based on the historical performance of installations within the sector and there is no guarantee that the same rate of improvement will be (or even can be) repeated in the future: performance improvements in our sector tend to happen in “larger steps” (caused by technological breakthroughs), rather than following a linear annual improvement. Therefore, it is possible that in a given year no smelter can match the new benchmark because the new value will not be based on the technical achievability, but just on the application of an arbitrary linear reduction factor.
- The problem of this approach is also the transitioning period. Now and for the next few years, electricity prices in Europe are very high. In order to get some additional value and reduce delivered electricity cost, many

⁴ See CEPS Study, commissioned by DG ENERGY, [here](#) “Composition and drivers of energy prices and costs in energy intensive industries”, 14 January 2019

⁵ European producers' exposure to indirect EU ETS costs is determined by the carbon cost that is inherent in the marginal electricity price (regardless of the carbon content of the electricity that is actually consumed). For more on marginal pricing see EC [Impact assessment SWD](#) on EU Electricity Markets reform (30.11.2016) and [EC Impact assessment Report](#) on 2012 State Aid Guidelines on indirect costs 22.05.2012

⁶ See OECD [report](#) “Measuring distortions in international markets: the aluminium value chain”, January 2019: China affects international prices through subsidised dumping. It produces 57% of worldwide primary aluminium, compared to 10% 15 years ago. According to OECD, 85% of the \$70bn support to aluminium companies worldwide went to just 5 Chinese firms.

⁷ See [here](#) our response to the European Commission's consultation on the draft ETS State Aid Guidelines (March 2020)

aluminium producers have engaged in demand-response schemes, where the smelting plants instantly curtail operation to help meeting peaks in electricity demand for a short period of time. This operation compromises the performance of the plant in terms of specific electricity consumption and direct GHG emissions (PFC and carbon consumption) but it is a necessary service to the grid operators, which also facilitates the integration of more variable renewables into the electricity system. Also, for this reason, setting thresholds based on the ETS GHG emissions benchmark is not suitable.

Therefore, a compulsory strict direct emission threshold would reward those who meet criteria for this part of the technology specifically, where there is very limited margin for improvement and technological breakthroughs are very much needed. This was also recognised⁸ by the Commission's Joint Research Centre (JRC). At the same time this could exclude smelters that are not on the same level but still significantly below the world average CO₂-emissions. Implementing such criteria could therefore be counterproductive, i.e. penalising aluminium producers with a below-average carbon footprint and leading to a displacement of their production by more carbon-intensive producers operating in third countries (carbon leakage). As already mentioned, the most important climate differentiator for aluminium is indirect emissions from electricity consumption.

Secondly, the third criteria proposed (i.e. average carbon intensity of electricity below: 100 g CO₂e/kWh) is challenging. While we agree on the need of high ambition, this element is a function of the smelter's location and the local availability of carbon-free electricity. Most smelters have very little or even no control over it.

- We thus **invite DG FISMA and other Commission Services to not follow the approach suggested by the TEG**. As mentioned in our consultation response, **a threshold based on the ASI-methodology⁹ would reflect the carbon footprint of European smelters compared to the aluminium industry globally**. It would also better mirror the value chain analysis and evidence-based approach recommended by the TEG itself.
- **Alternatively**, we would recommend to the **Commission to allow aluminium manufacturers the possibility to freely choose which two out of the three thresholds to comply with**. This would better reflect the electro-intensity of our production process while providing the right incentives to invest into the decarbonisation of our value chain.

Bottom ash treatment: a second-best option but still essential for aluminium recycling & circularity

According to the TEG report, incineration with energy recovery, and consequentially also with recovery of the aluminium fractions from bottom ash¹⁰, would not qualify as eligible to the taxonomy under the climate mitigation criteria. In our view, this contradicts the mitigation criteria for aluminium where it is clearly stated that all secondary

⁸ See [here](#) JRC Study "Energy Efficiency and GHG Emissions: Prospective Scenarios for the Aluminium Industry", 2015

⁹ As explained in our consultation response to the draft Sustainable Finance Taxonomy Technical Report, June 2019: "ASI has taken 7 years to build a standard based on consensus among all constituencies and covering a holistic approach to governance, social and environmental performance. This is the most robust and recent set of requirements for the aluminium industry and therefore should be used as guidance: A threshold of 8 CO₂e/ton of Al including scope 1 and 2 emissions, to be met for new smelters from 2020, and by 2030 or earlier for existing smelters". For further information, see ASI's website and proposed methodology [here](#).

¹⁰ See [here](#) European Aluminium and Alufoil factsheet on bottom ashes treatment, February 2014

aluminium would qualify. With still considerable amounts of municipal waste ending up in landfills, incineration with energy recovery and bottom ash treatment are still needed to obtain the metal for material recycling.

Related to the above, we would like to obtain full clarity about another pre-treatment recovery technology called “pyrolysis”, which is mainly used for composite (laminated) aluminium and plastics packaging. Pyrolysis is an ‘oxidation free’ recovery process during which the plastic (and paper) components are oxidized in order to free the aluminium layer. It is a very helpful complementary separation technology in countries with EPR schemes for the collection of mixed plastic and metal packaging as well as drink cartons. The sorted fractions can still contain significant amounts of smaller (laminated) plastic and some paper items. Temperatures stay below 500 degrees so aluminium will not be oxidized. Usually the plastic component is turned into fuel and can be used for local heating / energy using activities nearby the pyrolysis plant.

As long as there is no total ban or phasing out of landfilling of post-consumer recyclable waste at European level and no sufficient sorting capacity, bottom ash treatment and pyrolysis remain key technologies for recycling aluminium, especially from packaging and household waste.

- For this reason, we invite the Commission to **carefully consider in the upcoming work on the technical screening criteria on circularity to not penalise aluminium recovery from both bottom ash treatment and from pyrolysis.**
- Secondly, given these two technologies’ **key role in recovering the material from packaging and household waste (and the production of secondary aluminium), they should also both be taxonomy eligible** under the climate mitigation criteria.

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