Protecting the competitiveness of low-carbon and circular industries: the case of Aluminium

26 January 2021 / 13:00 – 14:30

Sponsored by
Important to note

• The event is recorded and will be shared

• All attendees are muted

• Ask your questions via the “Questions” box
  o Please write down your organisation and question
  o All data will be on the record

• You will find a copy of the speakers’ bios & the agenda in your “Handouts” section
Opening remarks

Maria da Graça Carvalho
Member of the European Parliament

Protecting the competitiveness of low-carbon and circular industries in Europe: the case of Aluminium
26 January 2021

Sponsored by

EUROPEAN ALUMINIUM
About the intergroup

A forum for discussion on the multifaceted dimensions of long-term and sustainable investments, and of a comprehensive EU industrial policy. More at www.investmentindustryintergroup.com

Bureau

Simona BONAFÊ  
S&D, Italy

Maria da Graça CARVALHO  
EPP, Portugal

Dominique RIQUET  
Renew, France

Members

100+ MEPs

Secretariat

Partners

60+ entities that support the Intergroup

Protecting the competitiveness of low-carbon and circular industries in Europe: the case of Aluminium

Sponsored by European Aluminium
Video statement

Simona Bonafé
Member of the European Parliament

Protecting the competitiveness of low-carbon and circular industries in Europe: the case of Aluminium
26 January 2021

Sponsored by
Statement from MEPs

Christophe Grudler
Member of the European Parliament

Protecting the competitiveness of low-carbon and circular industries in Europe: the case of Aluminium
26 January 2021

Sponsored by

EUROPEAN ALUMINIUM
Statement from MEPs

Susana Solis Pérez
Member of the European Parliament

Protecting the competitiveness of low-carbon and circular industries in Europe: the case of Aluminium
26 January 2021

Sponsored by

EUROPEAN ALUMINIUM
Statement from MEPs

Anna-Michelle Asimakopoulou
Member of the European Parliament

Protecting the competitiveness of low-carbon and circular industries in Europe: the case of Aluminium
26 January 2021

Sponsored by
Protecting the competitiveness of low-carbon and circular industries in Europe: the case of Aluminium
26 January 2021

Sponsored by
This new report looks at:

- How the demand risk for each mineral changes, depending on whether it is used in one technology, or across multiple technologies clean energy technologies
- Deep dive into different low-carbon technologies and how technological improvements and material efficiency could impact mineral demand
- Potential role of recycling and re-use in meeting demand under a 2-degree scenario
- Carbon footprint of the minerals needed for low-carbon technologies relative to conventional technologies
NEW FINDINGS:
DEMAND WILL INCREASE SIGNIFICANTLY FOR SOME MINERALS TO ACHIEVE 2DS

Demand for Minerals by 2050 from Energy Technologies

If we want to keep global warming below 2°C. Projected mineral demand as compared to 2018 production levels.

Minerals for Climate Action:
The Mineral Intensity of the Clean Energy Transition

WORLD BANK GROUP
Climate Smart Mining
International Finance Corporation

January 2021
METHODOLOGY: RECYCLING

• Estimates of current end-of-life (EOL) and recycled content (RC) rates drawn from the literature

• Assumed increase of EOL to 100% by 2050 and ratio of EOL to RC rates remain constant

• **RC rates** used to give estimates of primary and secondary demand

<table>
<thead>
<tr>
<th>Mineral</th>
<th>End-of-life recycling rates</th>
<th>Recycled content rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>42%–70%</td>
<td>34%–36%</td>
</tr>
<tr>
<td>Cobalt</td>
<td>68%</td>
<td>32%</td>
</tr>
<tr>
<td>Copper</td>
<td>43%–53%</td>
<td>20%–37%</td>
</tr>
<tr>
<td>Lithium</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Nickel</td>
<td>57%–63%</td>
<td>29%–41%</td>
</tr>
</tbody>
</table>

Source: UNEP 2011.
NEW FINDINGS:  
THE ROLE OF RECYCLING IN MEETING DEMAND UNDER 2DS

- **Current recycling rates** refer to how many minerals are recycled at the end of a product’s life (EOL RR)

- **Recycled content** refers to secondary minerals, which is the amount of recycled mineral that is used in new products

- Even if aluminum and copper from current products are recycled at EOL at 100%, it still wouldn’t be enough to meet mineral demand under a 2DS

- While recycling can play an important role in meeting demand, primary production will still be needed

Note: 2DS = 2-degree scenario.
Climate-Smart Mining

CSM supports the sustainable extraction, processing and recycling of minerals and metals needed to secure supply for low-carbon technologies by minimizing the climate and material footprints of these technologies throughout their value chain.
# Building Blocks of ‘Climate-Smart Mining’

<table>
<thead>
<tr>
<th>Strong governance and adequate regulatory framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate mitigation</td>
</tr>
<tr>
<td>Integration of renewable energy in the mining sector</td>
</tr>
<tr>
<td>Climate adaptation</td>
</tr>
<tr>
<td>Forest-Smart Mining with landscape management</td>
</tr>
<tr>
<td>Reducing material impacts</td>
</tr>
<tr>
<td>Adoption of a circular economy for low-carbon minerals</td>
</tr>
<tr>
<td>Creating marketing opportunities</td>
</tr>
<tr>
<td>De-risking investments for low-carbon minerals</td>
</tr>
</tbody>
</table>

**World Bank, IFC support to decarbonize and reduce material footprint of mining sector**

<table>
<thead>
<tr>
<th>Innovation in extractive practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource efficiency in mineral value chain</td>
</tr>
<tr>
<td>Reuse / recycling of low-carbon minerals</td>
</tr>
<tr>
<td>Reuse / recycling of low-carbon minerals</td>
</tr>
<tr>
<td>Leverage carbon finance instruments</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Energy efficiency in mineral value chain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation waste solutions</td>
</tr>
<tr>
<td>Low-carbon mineral supply chain management</td>
</tr>
<tr>
<td>Robust geological data management</td>
</tr>
</tbody>
</table>

**Gender and multi-stakeholder engagement**
Context: What are the opportunities for developing countries to produce green aluminum to supply solar PV panels?

- Two countries have been selected for this research (Brazil & Guinea), which are bauxite and/or alumina producers with different energy profiles and geographical locations (Africa and Latin America)
Making Green Aluminum for Solar PV

This research intends to identify different approaches to decarbonizing aluminum production in Brazil and Guinea by:

- Analyzing the **environmental** and **economic challenges** and **opportunities** to maximize the value of developing countries’ bauxite resources while reducing their carbon footprint as far as possible when supplying aluminum products to the solar PV sector.

- Developing a **cost analysis instrument** of producing green aluminum from three selected countries from extraction to end-use of aluminum in solar PV - examining costs, value-added and emissions implications of different supply chains.

- Assessing how, if applied, a regional and/or global **carbon price** could increase the competitiveness of local production (refining and smelting) and how it might impact on the economics of different supply chains.

- Identifying opportunities to **implement CSM practices** into these countries’ bauxite/alumina/aluminum sector to reduce CO2 emissions & integrate into their NDCs.

**Objective:** Provide decision-makers involved in the aluminum and solar PV supply chain with data to understand the different options available for countries & companies to reduce their environmental impact while maximizing value-added opportunities of green aluminum production.
Presentation

Emilio Braghi
European Aluminium Chairman

Protecting the competitiveness of low-carbon and circular industries in Europe: the case of Aluminium
26 January 2021

Sponsored by
A cluster-driven European Industry

Aluminium industry in Europe: more than **600 plants** covering the entire aluminium **value chain**
Growing demand in aluminium is driven by low carbon applications

Strong growth rate of aluminium semi-fabricated consumption 2017-2050: +39%

Source: European Aluminium based on CRU Group datasets (2018)
Aluminium ingot demand by 2050

The European demand for aluminium in 2050 will be met by almost equal shares of primary and recycled aluminium.

To enhance its strategic autonomy, Europe should preserve its aluminium primary production and further boost its recycling capacity.

This can only happen if a set of framework conditions are met.
High exposure to global unfair competition

Footprint in Europe is 3 times lower compared to China

OECD report stresses the disruption caused by heavily subsidised overcapacity in China

Source: European Aluminium Environmental Profile Report, 2018

Source: European Aluminium
Europe has lost more than 30% of its primary production capacity since 2008!

Europe has higher electricity prices* vs. main competitors that have no carbon pricing systems in place

*Source: CEPS, Jan 2019: Composition and drivers of energy prices and costs in Energy Intensive industries
To make the required investments, we need a fair market and the right policy conditions:

- More high quality recycling – no more landfilling, separate waste collection, better dismantling

- Incentivise circularity/recycling in Europe:
  - 50% of the demand could be supplied through post-consumer recycling in 2050
  - Recycling can contribute to CO₂ savings of 46% per year in 2050
3 keys to a sustainable aluminium supply chain

A clear strategy to ensure the availability of climate neutral electricity at globally competitive prices for industrial electricity consumers like Aluminium.

Boosting circularity: Supporting Aluminium recycling in Europe. The climate mitigation benefits of aluminium recycling should also be considered in the upcoming revision of the ETS.

More public investments for industrial decarbonisation. The EU Taxonomy should reflect the global competitiveness of manufacturing industries & not only focus on the best in class in Europe.
Video statement

Pedro LOURTIE
Deputy Ambassador, Permanent Representation of Portugal to the EU

Protecting the competitiveness of low-carbon and circular industries in Europe: the case of Aluminium
26 January 2021

Sponsored by

EUROPEAN ALUMINIUM
Presentation

Peter Handley
Head of Unit, Energy Intensive Industries & Raw Materials, DG GROW, European Commission

Protecting the competitiveness of low-carbon and circular industries in Europe: the case of Aluminium
26 January 2021

Sponsored by

EUROPEAN ALUMINIUM
Panel discussion

Moderated by Frédéric Simon, Editor, Energy & Environment, Euractiv

- Maria da Graça Carvalho, Member of the European Parliament
- Christophe Grudler, Member of the European Parliament
- Susana Solis Pérez, Member of the European Parliament
- Anna-Michelle Asimakopoulou, Member of the European Parliament
- Daniele La Porta, Senior Mining Specialist, World Bank Group
- Emilio Braghi, European Aluminium Chairman
- Peter Handley, Head of Unit – Energy Intensive Industries & Raw Materials, DG GROW

Protecting the competitiveness of low-carbon and circular industries in Europe: the case of Aluminium
Sponsored by European Aluminium
Closing remarks

Maria da Graça Carvalho
Member of the European Parliament

Protecting the competitiveness of low-carbon and circular industries in Europe: the case of Aluminium
26 January 2021

Sponsored by
Thank you!

Protecting the competitiveness of low-carbon and circular industries in Europe: the case of Aluminium

26 January 2021

Sponsored by

www.investmentindustryintergroup.eu