EUROPEAN ALUMINIUM SECTOR SHOWS ENVIRONMENTAL PROGRESS AND CALLS FOR BOLD POLICIES TO DECARBONISE FURTHER

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Press Release

European Aluminium has released its 2024 Environmental Profile Report, providing a comprehensive analysis of the industry's environmental impact across the entire aluminium value chain in Europe[1]. The report highlights significant reductions in carbon emissions thanks to increased energy efficiency and the growing use of low-carbon electricity. However, the findings also underscore the urgent need for policy support to sustain Europe's low-carbon aluminium production and mitigate the increasing reliance on high-carbon imports.

Key findings of the report include:

1. European Primary Aluminium Continues to Lead in Emissions Reductions

The carbon footprint of primary aluminium produced in Europe continues its downward trend, driven by incremental improvements and increased reliance on low-carbon electricity. In 2023, carbon emissions from European primary aluminium dropped to 6.3 kg CO2 per kg, down from 6.7 kg CO2 in 2015—a 5% reduction. This progress builds on a longer trend, with emissions cut by more than 50% since 1990. European primary aluminium now has a carbon footprint almost 60% lower than the global average, thanks in large part to the rising use of low-carbon energy[2] in smelters. For instance, by 2023, 78% of electricity used in European primary aluminium production came from renewable energy sources, up from 67% in 2015.

2. Major Emissions Reductions in Aluminium Semi-Fabrication and Recycling

Aluminium recycling and semi-fabrication have made notable progress in reducing emissions between 2015 and 2021. Carbon emissions from remelting aluminium dropped by 22%, while emissions from refining decreased by 4%. Recycling remains a cornerstone of aluminium's sustainability, using only 5% of the energy required for primary production. Significant environmental improvements have also been achieved in semi-fabrication processes such as rolling, foil production, and extrusion. For example, the Global Warming Potential (GWP) of aluminium extrusion processes has decreased by 44%, reflecting substantial energy efficiency gains across the value chain.

[1] EU, EFTA and UK unless noted otherwise.
[2] Low-carbon energy refers to energy sources that produce minimal or no carbon emissions, including renewable energy (solar, wind, hydropower) and nuclear energy.

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3. Energy Crisis and Rising Reliance on High-Carbon Aluminium Imports Threaten EU Climate Goals

The energy crisis has led to the closure of five additional EU aluminium smelters since 2021, on top of the two that had already shut down since 2015. This has significantly reduced domestic production capacity, forcing Europe to rely more heavily on aluminium imports, which now account for 51% of the primary aluminium consumed in Europe, up from 48% in 2021. While imports from Russia have sharply declined—falling to 18% in 2023 from 39% in 2015—the gap has been filled by imports from regions such as the Middle East and Central Asia (e.g. India), where aluminium is primarily produced using fossil fuels such as coal and natural gas. This shift has driven a 33% increase in imports from these regions and contributed to a rise in the carbon footprint of imported aluminium by 11% since 2021. The carbon intensity of these imports is now significantly higher than that of European-produced primary aluminium, which has half the carbon footprint of imported ingots. **This growing dependence on high-carbon imports not only jeopardises the EU's climate targets but also underscores the urgent need to boost domestic primary and recycling production, especially as aluminium is a *strategic* raw material for the EU green transition, and its demand is set to rise substantially in the next years**.

"*If we're serious about reaching net-zero by 2050, both industry and policymakers need to step up*," said Paul Voss, Director General of European Aluminium. "*The industry has made significant progress, but we're approaching the limits of what current technologies can deliver. EU policymakers must deliver a strong industrial policy, fast-track the shift to clean, affordable energy and encourage investments in breakthrough technologies and recycling. Without bold action in the next five years, Europe risks becoming entirely dependent on high-carbon imports, undermining both our strategic autonomy and the green transition*."

The executive summary of the *Environmental Profile Report* is available for download on the European Aluminium website.

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Note to Editors

The *Environmental Profile Report* provides detailed insights into the environmental performance of the aluminium value chain in Europe, covering primary production, semi-fabrication, and recycling processes. The report is based on 2023 models, 2021 and 2022 production data, and updates the previous 2015 report, offering the most comprehensive and accurate industry life-cycle inventory (LCI) datasets available. These datasets are essential for calculating the environmental impact of products using aluminium and are used by Life Cycle Assessment (LCA) practitioners, policymakers, and industry stakeholders to track progress and make informed decisions about aluminium products.

The full report is available upon request here. For further details, please contact European Aluminium.

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