

Sustainability in the Aluminium Industry – Challenges and Opportunities

Pernelle Nunez¹, Marlen Bertram², Miles Prosser³ and Linlin Wu⁴

1. Deputy Secretary General, Director – Sustainability

2. Director – Scenarios & Forecasts

3. Secretary General

4. Manager – Statistical Analysis

International Aluminium Institute, London, United Kingdom

Corresponding author: nunez@international-aluminium.org

Abstract

Aluminium is lightweight, durable, conductive and infinitely recyclable. It is this unique combination of properties that make it a material of choice across many end-use sectors and a metal that can enable solutions to some of society's biggest sustainability challenges. Global demand for aluminium is expected to grow by 80 % over the next 30 years. This growth reflects aluminium's potential across the transport, consumer durables, electrical and building and construction sectors. As sustainability continues to embed itself into society and across industries, the aluminium sector should use this opportunity to collectively minimise its impacts and deliver sustainable products. The International Aluminium Institute has a long history of data collection and analysis and this paper brings together material flow analyses, life cycle analyses and waste and emissions data to provide an overview of some of the key long-term sustainability challenges and opportunities facing the industry.

Keywords: Sustainability, Material flow, Greenhouse gases, Waste management, Life-cycle.