Aluminium

The mission of the First Movers Coalition (FMC) is to advance the most **critical emerging climate technologies** required for deep decarbonization of the world's heavy-emitting sectors. To do this, FMC is building early market demand for such technologies by 2030, in order to help scale and catalyse their mainstream adoption for carbon-intensive sectors.

First Movers Coalition – Aluminium commitment

The First Movers Coalition has set the following ambitious commitments for purchasers of primary aluminium. Companies joining the FMC Aluminium sector each take the following pledge:

- "At least 10% of all our **primary aluminium** volumes procured per year will be low-carbon (as per definition below) by 2030."

In addition, FMC Aluminium members are invited to undertake an optional commitment to encourage the use of recycled / secondary aluminium:

- "In addition to our primary commitment, at least 50% of the total mass of our aluminium procured per year will be from **recycled / secondary aluminium** by 2030."

Primary commitment details

(Mandatory for FMC aluminium members)

All members of the First Movers Coalition Aluminium sector commit to procuring low-carbon **primary aluminium** (99.7% purity)[1] satisfying the following criteria:

- Primary aluminium with a carbon footprint of **less than 3 tonnes of CO_2e per tonne of aluminium produced**, including all emissions covered by the sector-specific carbon footprint methodology for primary aluminium by the International Aluminium Institute (IAI).[2]
    - The IAI methodology boundary includes, *"unit processes [of] bauxite and/or other ores mining, alumina production (hydrate production & calcination), anode production, electrolysis, ingot casting, raw materials transport, electricity generation, and waste processing. It also includes the production of ancillary materials and fuels required for primary aluminium production. It does not include the stages of "production of semi-finished products from raw material", "use" and "end-of-life."*
- Primary aluminium (satisfying the FMC threshold) may follow identity preserved[3] or segregated[4] chain of custody models. Controlled blending[5] and site-level mass balance[6] chain of custody models may also be used given that emissions claims are tracked (e.g., via a registry) and verified by a third party to provide transparency, avoid double counting, and ensure accuracy. Group-level mass balance and book & claim[7] chain of custody models are not applicable to the FMC aluminium commitment at this time.[8]
  Decisions made within the transport sector regarding alternative chain of custody approaches can also be applied to the transport-related emissions of materials in other FMC sectors such as aluminum. This promotes consistency across sectors and reflects the interconnected nature of supply chains. An overview of which chain of custody model is allowed in which sector can be found here.
  In addition, the First Movers Coalition has established high-level, cross-sector guardrails that must be followed when implementing chain of custody models and can be found here.
- Primary aluminium emitting less than 3 tonnes of CO_2e per tonne of aluminium produced as measured by the designated methodology can be produced using any technological pathway. Leading analysis indicates that the commitment is *most likely* to be achieved with clean technologies for direct emission reductions (such as inert anodes, carbon capture, carbo-chlorination, among other technologies) paired with low carbon power for electrified/hydrogen-ready processes.

- The use of carbon offsets[9] is not applicable toward fulfilling this FMC commitment.
- The primary commitment applies only to primary aluminium, not recycled / secondary aluminium.

Recycled / Secondary commitment details

(Optional for FMC aluminium members)

Members of the First Movers Coalition aluminium sector may also optionally commit to procuring recycled / secondary aluminium recovered from pre-consumer and/or post-consumer aluminium scrap.

The recycled / secondary aluminium commitment can be met by procuring aluminium that may contain a proportion of primary aluminium that does not meet the primary aluminium threshold defined above.

Disclaimers

Voluntary commitments made by members of the First Movers Coalition are subject to the availability of material(s), fuel(s), service(s) supply and regulatory approvals. Members acknowledge that procuring the material(s), fuel(s), or service(s) needed to meet these commitments may come at a premium cost.

Commitment design process

The original aluminium commitment was launched in 2022 with support from the design committee sector contributors Aluminium for Climate (WEF) and Mission Possible Partnership.
The commitment was revised in 2024 through the biennial Commitment Review process.

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[1] See London Metals Exchange Rules and Regulations for further details, part 6, page 215, as of 2 April 2024.

[2] See "Good Practice Guidance for Calculation of Primary Aluminium and Precursor Product Carbon Footprints" v2.0 August 2021; subsequent IAI updates to this guidance will be considered the latest source of reference against the fulfilment of FMC commitment.

[3] Identity preserved: "the materials or products originate from a single source and their specified characteristics are maintained throughout the supply chain." ISO 22095:2020

[4] Segregated: "specified characteristics of a material or product are maintained from the initial input to the final output." ISO 22095:2020

[5] Controlled blending: "materials or products with a set of specified characteristics are mixed according to certain criteria with materials or products without that set of characteristics resulting in a known proportion of the specified characteristics in the final output." ISO 22095:2020

[6] Mass balance: "materials or products with a set of specified characteristics are mixed according to defined criteria with materials or products without that set of characteristics." ISO 22095:2020

[7] Book & claim: "the administrative record flow is not necessarily connected to the physical flow of material or product throughout the supply chain." ISO 22095:2020

[8] Exceptions apply to the use of book and claim market-based approach to carbon accounting for energy attribute certificates required to prove the origin of purchased energy per Greenhouse Gas (GHG) Protocol Scope 2 Guidance

[9] Per ICROA, carbon offsetting is "a mechanism used to compensate for corporate [or individual] carbon footprints through the purchase of carbon credits issued by accreditation standards to projects that remove GHG emissions from the atmosphere or avoid generating the emissions in the first place"