



UNDER STRICT EMBARGO UNTIL 0900 hrs EST Wednesday 21 September 2022

Aluminium industry backs action this decade for net zero by 2050

Mission Possible Partnership maps action in next 10 years to decarbonise materials production by mid-century

Leading companies in the aluminium sector have endorsed a new strategy from the Mission Possible Partnership (MPP) for action to decarbonise the sector in this decade. Backed by key industry leaders, the tally of endorsements reflects growing momentum behind calls for action in the near-term to make the global goal of net zero 2050 viable.

Signatories to the report include Alcoa, Emirates Global Aluminium, and Rio Tinto. The Aluminium Transition Strategy from MPP is an ambitious but achievable plan, detailing what the global aluminium industry could look like in a zero-carbon world, and what is required to get there in terms of energy, infrastructure, financing, and policy.

Matt Rogers, CEO of MPP said: “This Aluminium Transition Strategy is operationally relevant and industry-backed, not wishful thinking or pie in the sky. We know how to reduce emissions, initially deploying resources and technology available today. The imperative is to act now, in this decade: we’re working with industry, supply chains and finance to deliver the clear thinking and asset-by-asset plans to make net zero viable”.

Abdulnasser Bin Kalban, CEO of Emirates Global Aluminium, said: “Aluminum plays an essential role in decarbonisation economy-wide, but it also matters how aluminum is made.

Decarbonising aluminium by 2050 requires rapid and proactive cooperation with other sectors, from developing more renewables to designing final products that are easily recyclable. The Mission Possible Partnership’s roadmap will help us achieve this great task.”

Aluminium is deeply embedded in all parts of a modern developed economy, from cars and construction to cans. MPP’s strategy deploys a combination of low carbon power, new technology for smelters and refineries, increased recycling and improving material efficiency to drive rapid decarbonisation, while also meeting increased demand over the coming decades.

Priority is given to early emissions reductions from adoption of low carbon power in this decade, while bringing to market the technologies to achieve deep decarbonisation in the following decades. Today, the sector accounts for about two percent of global emissions and four percent of electricity consumption.

Key insights

- Power decarbonisation is critical to the transition. All smelters need to switch to low carbon power by 2035, implying an annual demand of approximately 1,000 TWh.
- Commercialisation and deployment by 2030 of low carbon anodes and new refining technologies is a condition for sectoral decarbonisation within a 1.5°C-aligned sectoral 'carbon budget'.
- Recycling and improved material efficiency will play a critical role. Clean power and new technology are necessary but not sufficient: the supply of recycled aluminium can increase from 33% in 2020 to more than 50% by 2050.
- Market development to boost demand for low-carbon aluminium will help to mobilise investment. Higher costs for zero emissions aluminium are estimated in the region of \$400 USD per tonne by 2035 (equivalent to less than 0.5% of the cost of a new car).
- Total investment required over the coming three decades is approximately \$1 trillion USD to decarbonise the primary aluminium sector, of which more than 70% is required for supporting infrastructure, primarily for power supply.

Endorsing companies

Signatories as of September 20th include:

- Alcoa
- Alumina Limited
- Aluminerie Alouette
- Aluminium Association
- Aluminium Association of Canada
- Aluminium Dunkerque
- Aluminium Stewardship Initiative
- Australian Aluminium Council
- Ball Corporation
- CBA
- Constellium
- Emirates Global Aluminium
- European Aluminium
- Hindalco
- HSBC
- Novelis

- Norsk Hydro ASA
- Rio Tinto Plc
- South32
- Vattenfall

To download the report

Please go to the MPP website:

Making Net-Zero 1.5°C-Aligned Aluminium Possible

<https://missionpossiblepartnership.org/wp-content/uploads/2022/09/Making-1.5-Aligned-Aluminium-possible.pdf>

Interactive tool

MPP has released an interactive ‘Explorer’ tool to compare decarbonisation options in different regions, with the functionality to generate custom user scenarios. The Python model for STS analytics is also available, with full coding and open-source input data.

Aluminium: Explore the Net-Zero Transition

<https://dash-mpp.plotly.host/aluminium-net-zero-explorer/>

<https://github.com/missionpossiblepartnership/mpp-shared-code>

Making net zero industry possible

MPP seeks to inspire cross-sector learning and real-world projects that will translate global strategic thinking into local action.

This Aluminium Transition Strategy joins a series of industry transition strategies developed by MPP to guide decarbonisation of seven hardest-to-abate sectors. Of these, four are from the materials industries: aluminium, chemicals, concrete, and steel. Transition strategies for the mobility and transport sectors - [aviation](#), [shipping](#), and [trucking](#) – were released earlier this year and are available online.

Each sector transition strategy is premised on the same modelling assumptions, to enable policymakers and financial institutions usefully to compare the findings of all MPP sector transition strategies.

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The Mission Possible Partnership is an alliance of climate leaders focused on supercharging efforts to decarbonize some of the world's highest-emitting industries. By leveraging the convening power, talent and expertise of world-leading organizations on climate action, the MPP aims to trigger a net-zero transformation of seven industrial sectors; Aviation, Shipping, Trucking, Steel, Aluminium, Chemicals and Concrete. MPP is led by four core partners: the Energy Transitions Commission, RMI, We Mean Business Coalition and the World Economic Forum. Our goal is to propel a committed community of CEOs from carbon-intensive industries—together with their financiers, customers, and suppliers—to agree and act on decarbonizing industry and transport in this decade.