

# Pioneering Sustainable Aluminium: Aluminium Dunkerque's Decarbonization and Partnership Strategy

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## Abstract

Aluminium Dunkerque (AD) benefits from the low carbon footprint of the French electricity grid and the continual improvement of its smelting technology, which places AD in the top quartile worldwide for carbon emissions (scope 1 & 2). Building on this enviable position, AD revealed in 2023 its decarbonization strategy, which aims to halve its emissions by 2030 and achieve carbon neutrality by 2050. To achieve this, Aluminium Dunkerque has formed partnerships with other entities to prepare and implement this ambitious plan.

As early as 2017, along with other industrial companies from the Dunkirk port hub, it helped found the "Industry, Carbone and Territory" committee, which was established to engage with local, regional, and national public authorities in a platform for exchange and innovation with a view to decarbonizing this industrial territory. This initiative has since been recognized as France's first Low-Carbon Industrial Zone.

Subsequently, with the support of long-standing partners, members of Aluminium France, AD initiated the first phase of its decarbonization roadmap, the design of a solution for pre-concentrating and capturing CO<sub>2</sub> in pot flue gases, specifically tailored to the aluminum smelting technology.

Finally, AD is also forging partnerships with international companies active in the transport and long-term storage of CO<sub>2</sub>, with a view to preparing the scaling-up of this CCS solution and being able to share the costs associated with the transport and the storage of the captured carbon at various sites below the North Sea.

Aluminium Dunkerque is convinced that success in these innovative and capital-intensive fields can only be achieved by forging ad hoc, solid, and ambitious partnerships.

**Keywords:** Aluminium Dunkerque, French aluminium, Partnership, Innovation, Decarbonation, CO<sub>2</sub> emissions, Carbon capture and storage (CCS).