

By integrating alternative feedstocks with breakthrough electrolysis technologies, **Europe can lead the global shift toward truly carbon-free primary aluminium production.**

KEY TECHNOLOGICAL PILLARS FOR SCALING



Inert Anodes

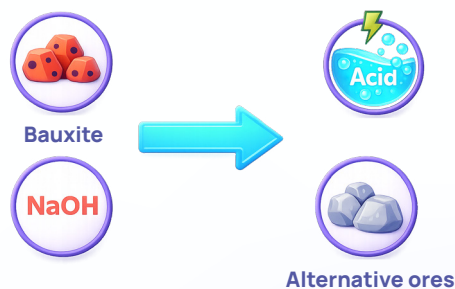
Validate long-term cell performance with advanced monitoring/control.



Carbon-chlorination

Optimise system integration focusing on impurity control and closed-loop chlorine/carbon recovery.

ALTERNATIVE ORES (E.G., ANORTHOSITE) COMPLEMENTING BAUXITE FOR ALUMINA PRODUCTION VIA ELECTRIFIED ACIDIC LEACHING



Design, build, and operate pilot and demonstration plants to validate process efficiency at scale.

WHAT ENABLES THIS SHIFT IN EUROPE?



Establishing fit-for-purpose permitting, safety frameworks, and value-chain collaboration.



Securing major investment and EU funding to de-risk first-of-a-kind deployments.



Ensuring access to affordable, stable, and low-carbon electricity across the region.