



Powering the future
of ceramic heating

Electrified heating systems for high temperature processes from the ceramic industries

The European ceramic industry emits 19 million tonnes of CO₂ annually, accounting for about 1% of total European industrial emissions. The thermal processes used in this sector significantly contribute to greenhouse gas emissions. **Electrification of these high temperature processes has the potential to slash emissions**, a crucial step for the EU to achieve its 2050 target of climate neutrality.

To this end, eLITHE aims at developing **highly efficient and safe electric high temperature heating processes** that replace fossil-based heating systems in the industrial ceramic sector.



Co-funded by
the European Union

Technology demonstration

eLITHE will demonstrate three different routes to achieve full electrification of heating processes.

The three technologies will be implemented in **three real-life demo sites**, situated in Spain, Greece and Germany and their **three digital twins**.



Induction and electrode-based heating for frits melting

Frits smelter (1100–1500°C)
TORRECID (Spain)



Microwave-assisted heating

Al₂O₃ CALCINER (1200°C)
METLEN (Greece)



Hybrid furnace for brick firing

Bricks firing (1100°C)
IZF (Germany)

eLITHE's impacts



Scientific

Introduce new viable and competitive technologies to diversify the energy supply for the ceramic sector.



Societal

Contribute to climate change mitigation by ensuring cost-effective decarbonisation of hard-to-abate industrial sectors. Additionally, eLITHE will support green job creation.



Economic

Maintain EU industrial competitiveness under new regulations while promoting economic growth.

Learn more, visit our website

