



European Commission

 CEMENT AND LIME



# INNOVATION FUND

Deployment of net-zero and innovative technologies

**OLYMPUS: Ascending to the top of CO2 avoidance in the EU cement sector through the innovative OxyCalciner technology**

The Innovation Fund is 100% funded by the EU Emissions Trading System

## | Project Factsheet

The large-scale Carbon Capture and Storage (CCS) “OLYMPUS” project aims to transform the Milaki cement plant in Evia, Greece into a net-zero carbon cement plant, through the adoption of innovative technologies. Captured CO2 will be liquefied and transported by sea to the Greek offshore sequestration facility of Prinos in the northern part of the Aegean Sea. The project is planned to achieve a 95% relative greenhouse gas (GHG) emission avoidance compared to the reference scenario.

The Milaki plant will be retrofitted with state-of-the-art technologies, increasing energy and resource efficiency, as well as circularity, allowing for low incremental capturing costs of CO2. The technology is expected to reduce the complexity compared to a full oxyfuel approach and aims to optimise the cost efficiency of captured CO2. Further to the maximum energy recuperation with

### COORDINATOR

HERACLES GENERAL CEMENT CO

### LOCATION

Greece

### CATEGORY

Carbon capture and geological storage (CCS)

### SECTOR

Cement lime

### AMOUNT OF INNOVATION FUND GRANT

EUR 124,268,490

### EXPECTED GHG EMISSIONS AVOIDANCE

6,883,349 tonnes CO2 equivalent

### STARTING DATE

01 January, 2024

### ENTRY INTO OPERATION DATE

01 January, 2029

### FINANCIAL CLOSE DATE

31 December, 2025

the Waste Heat Recovery System (WHRs), the plant will cover its full electricity demand of 365 gigawatt hour (GWh)/year (for reference, similar to 220 000 EU average annual citizens consumption). This will be achieved via renewable energy with a >90% penetration rate, whereas thermal energy demand will come from >80% alternative (non-fossil) fuels. The project expects to have an absolute GHG emissions avoidance of 6.8 million tonnes CO2 equivalent during the first ten years of operation.

The project will contribute to the objectives of REPowerEU strategy, by helping to reduce fossil fuel consumption in industry and transport, and particularly to the objectives of the Net-Zero Industry Act (NZIA) of reaching 50 mega tonnes (Mt)/year CO2 storage capacity by 2030. The project will also promote the production of green construction materials, sequestering more than

900 000 tonnes CO2/year. The project will contribute to both Greek and European climate-neutrality, by creating new markets for climate neutral and circular products, such as steel, cement and basic chemicals.

The project will have positive socio-economic impacts at the regional level, expecting to create 1 000 jobs (400 direct and 600 indirect), including the collaboration with subcontractors and suppliers, thus contributing to the overall economic development of the area. OLYMPUS will also serve as a CCS knowledge hub, promoting knowledge sharing among policymakers, academia, professionals and other stakeholders. The creation of knowledge sharing networks, exchange of technology, expertise and best practices will also facilitate stakeholder learning, and contribute to the development of innovative solutions for decarbonising energy-intensive industries.

## | Participants

HERACLES GENERAL CEMENT CO

Greece

HOLCIM TECHNOLOGY LTD

Switzerland