

DECARBONIZING OUR OPERATIONS WITH CCUS

GO4ZERO

Decarbonizing cement production using state-of-the-art technologies



 **OBOURG, BELGIUM**



Funded by the European Union
Emissions Trading System
Innovation Fund





GO4ZERO will deploy an innovative air-oxyfuel switchable kiln with carbon purification technology at Holcim’s cement plant in Obourg, Belgium. CO₂ will then be sequestered under the North Sea. The project aims to be operational by 2028 and store around 1.1 million tonnes of CO₂ per year.

In 2023, the project was selected for a grant from the EU Innovation Fund.

The technology behind the project

The project will be carried out in two phases. The first phase consists of replacing the current clinker kiln with a next-generation air-oxyfuel switchable kiln. This will enable a reduction in CO₂ emissions of nearly 30% per tonne of clinker.

The second phase consists of capturing CO₂ and implementing an innovative oxyfuel process using Air Liquide’s Cryocap™ Oxy technology. The technology will purify CO₂ generated from production in Obourg to above 99.5%. Captured CO₂ will then be transported via Fluxys’ network to the Antwerp@C CO₂ Export Hub where it will be liquified and shipped for storage under the North Sea.

At a glance



NET-ZERO
by 2029



FUNDING
Support from the EU
Innovation Fund



ANNUAL CO₂ CAPTURE
Around
1.1 million tonnes



INNOVATION
Air-oxyfuel switchable
cement kiln



PATHWAY
Storage



TECHNOLOGY
OXYFUEL

The OXYFUEL integrated process replaces air for combustion with oxygen to manufacture cement. This removes nitrogen from the system and generates a highly concentrated CO₂ exhaust stream.

Our Partners

- Air Liquide (co-beneficiary of the EU Innovation Fund) for their development of the Cryocap™ Oxy technology
- Fluxys for CO₂ transport
- Antwerp@C for CO₂ liquefaction and export hub
- Sea shipping and oil and gas companies for offshore sequestration

“With GO4ZERO, we are developing a full carbon capture, transport and storage value chain with the goal to be producing net-zero cement by the end of the decade.”



Vincent Michel
Program
Director
GO4ZERO

