

GREENING OUR OPERATIONS WITH CCUS



STATE-OF-THE-ART TECHNOLOGIES IN A 4.0
INDUSTRIAL IMPLEMENTATION OF THE GREEN DEAL.

OBOURG, BELGIUM

STATE-OF-THE-ART TECHNOLOGIES IN A 4.0 INDUSTRIAL IMPLEMENTATION OF THE GREEN DEAL.



Innovative new air-oxyfuel switchable cement kiln to facilitate the capture and purification of CO₂, for geological storage in the North Sea and/or for an innovative e-fuel production scheme.

Opportunities

- New cement portfolio with lower clinker factor and significantly reduced carbon footprint
- Up to 40% of alternative raw materials in the mix using CDW & recycled aggregates supply to concrete
- Land and lakes available to develop PPA from photovoltaic with a direct line (29GWh to be commissioned for 2023, to be doubled by 2028)
- Full digital transformation with a 5G industrial network, artificial intelligence
- CO₂, H₂ pipelines being developed & O₂ pipeline already crossing the plant
- Connection to the port of Antwerp, to an Innovation Fund awarded project
- Proximity of the North Sea with many CO₂ sinks being developed
- Proximity of petrochemical hub and petrochemical infrastructure for CCU

Challenges

- CBAM implemented no later than 2026
- Cost of CO₂ under EU ETS high enough
- CO₂ bilateral agreement in place between countries (London protocol)
- Permits / local legislation for inland CO₂ transport

Main Benefits



Zero fossil fuel



High energy efficiency



Circularity

Environmental Success



Carbon-neutral by: 2029



Amount of CO₂ captured:
1.1 million tonnes

Key Facts

Actual/projected captured CO₂
1.1 million tonnes per year

Technology

Switchable oxyfuel kiln +
Compression and Purification
Unit

CO₂ storage/usage model

Storage

Partners

Air Liquide (capture), Fluxys
(transport), Antwerp@C
(terminal), TotalEnergies
(sequestration)

Funding

Running for Innovation Fund,
Just Transition Fund, Recovery
Fund

Estimated CAPEX

EUR 500 million

Most innovative aspect

Zero emission and CO₂ negative
plant once CCS chain in place

“GO4ZERO is not only aiming to sustain our operations in Belgium and its surrounding markets. The developed groundbreaking technology includes a set of innovative solutions to reduce cement production’s environmental footprint and will allow Holcim to demonstrate its leadership in combatting climate change, while proposing a portfolio of ultra low-carbon cement and binders before the end of the decade.”

Vincent MICHEL
GO4ZERO Program Director
+32 478 300 430



Further information
available at
holcim.be/go4zero

