GLOBE phase 1 view : May 2024 update

A sustainable project that respects our communities

Our aim is to integrate the GLOBE project into its environment in a sustainable way.
The design of the site has been entirely rethought, taking into account the local geography, the new facilities and the living environment of local residents. In particular, the GLOBE project will incorporate the following:

- the organisation of dolime transport to the West Gate, divided into 2 main shipment flows (up to 10 lorries/day to the Marche-les Dames station and 15 lorries/day to the N90)
- no additional traffic to the South Gate
- a feasibility study for loading dolime by train
- the implementation of filtration tools based on the best available technologies
- dedicated internal facilities and traffic lanes, including waiting, washing and weighing areas.

Lhoist will maintain regular communication with local residents and the authorities throughout the project and will organise a prior information meeting. The impact assessment, which will be carried out by an independent consultancy approved by the Walloon Region, will objectively assess the impact of all the measures taken.

GLOBE: a major carbon reduction project for Wallonia

The GLOBE project plans to be deployed in the heart of Wallonia, at our Marche-les-Dames site in Belgium. This major investment project demonstrates our local roots and our commitment to the economic development of the Walloon region.

In addition to its positive economic impact, our project would generate the skilled jobs needed to ensure the optimal operation of this state-of-the-art equipment.

For Wallonia, GLOBE would represent a significant milestone in the fields of CO_2 capture and industrial decarbonization. Large-scale projects of this kind require the support of local authorities, policymakers and close collaboration with all partners, working together to build a more sustainable future.

At Lhoist, we are pursuing ambitious decarbonization targets by investing in a range of innovative projects and low-carbon solutions.

Our low-carbon offering

Dolime with a reduced carbon footprint from 2027

As early as phase 1 of GLOBE, CO_2 emissions (also known as the carbon footprint) resulting from the production of dolime at the new facilities would be reduced by 15 to 30%*, thanks to the technologies put in place and the fuels used.

Towards low-carbon dolime from 2031

With phase 2, the carbon footprint of dolime would be reduced by 80%* thanks to the capture, transport and storage of CO_2. This would make it possible to produce the first LEVEL|GREEN® low-carbon dolime manufactured in Belgium, a benchmark for our industry.

LEVEL|GREEN®: Lhoist's low-carbon offering

LEVEL|GREEN® products aim to reduce CO_2 emissions by 80% compared with standard production. In partnership with our customers, we will contribute to reducing CO_2 emissions and meeting climate objectives throughout the value chain.

* Compared with 2023 internal production benchmark

Our decarbonization projects

- co$_2$ncreat, is a project related to the capture of part of the CO_2 emitted at our Hermalle site, for the manufacture, in Belgium, of building blocks based on an innovative process. These blocks will be partly composed of CO_2 from our production site located a few kilometers away.
- Implementation of the CalCC project in Rety, France, would reduce CO_2 emissions from lime production by 80% compared with the current situation.
- The EVEREST project aims to decarbonize Lhoist's lime production at its Flandersbach site in Germany, adopting technologies similar to those we plan to implement at Marche-les-Dames.
- Lhoist is also actively involved in the Peak Cluster project, which aims to decarbonize Lhoist's lime production plant in Hindlow, UK, as well as other industrial production sites present in the region.

co$_2$ncreat, CalCC et EVEREST
Funded by the European Union
Emissions Trading System Innovation Fund

GLOBE

Our project to produce the first low-carbon dolime, made in Belgium

Visit our website
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The GLOBE project that we intend to develop at our Marche-les-Dames site in Belgium would represent the first major investment in the construction of an industrial kiln for dolime production designed to operate in Oxyfuel mode.

State-of-the-art technology to significantly reduce CO_2 emissions

The latest generation of kilns helps maximise the energy efficiency of dolime manufacturing. By incorporating state-of-the-art technology based on targeted use of oxygen for combustion (Oxyfuel), these kilns maintain their efficiency while delivering a flue gas concentrated in CO_2, enabling the optimised use of carbon capture, transport and storage technology, also known as Carbon Capture and Storage (CCS).

As part of the GLOBE project, this innovative kiln with a capacity of 700 t/day would run on natural gas from 2027 and could then be fueled by biomass from 2028. From the first phase of the project, this would ensure a 15 to 30% reduction in specific CO_2 emissions, compared with the 2023 baseline.

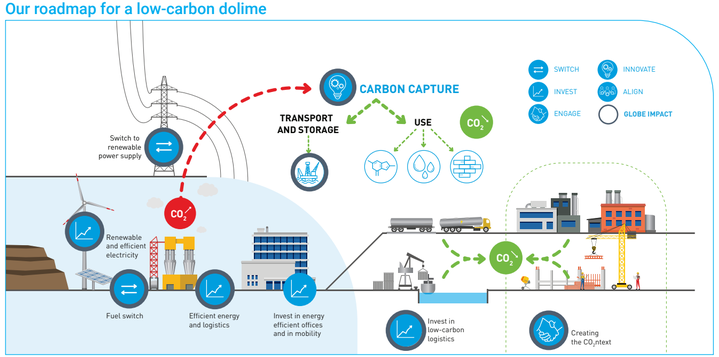
Capturing carbon: why and how?

The GLOBE project includes a second phase involving the implementation of CCS technology to enable the production of low-carbon dolime by capturing CO_2.

CCS technology is considered one of the most effective options for reducing significant atmospheric emissions of CO_2 from human activities. It involves capturing the carbon dioxide generated by industrial facilities, then transporting and storing it safely, for example in underground geological formations. It is essential in the context of fired dolime production, where the majority of CO_2 comes from the transformation reaction.

CCU, or Carbon Capture and Utilization, offers an innovative approach by transforming the captured carbon dioxide into useful raw materials. In this way, the CO_2 is recycled in industrial processes, promoting sustainable development by creating closed cycles and minimising the environmental impact of carbon emissions. However, current outlets only represent limited volumes.

Our roadmap for a low-carbon dolime



A quality raw material to meet the growth of the Green Steel market

Our dolime for the steel industry (known as 'Steel Grade') is used extensively in the main steelmaking process, where it helps to refine steels by reducing impurities such as phosphorus and sulphur. It also improves energy and refractory performance within steelmaking, optimising productivity and reducing carbon footprint. High quality, low-carbon dolime is therefore an essential product in the Green Steel Transition for all steel producers.

An investment of over €250 million

The GLOBE project is planning an initial test phase using oxygen in 2027. This first phase should enable the sizing of the carbon capture equipment to be optimised, which we plan to install and operate in a second phase. Scheduled to come on stream in 2031, this solution will enable us to produce a low-carbon dolime for our customers.

This projected investment of more than €250 million over the two phases of the project is perfectly in line with our desire to decarbonise our activities and offer our customers effective low-carbon solutions.

This project is part of our commitment to sustainability via the decarbonization of our operations, and will enable us to offer a low-carbon product without compromising on quality. Together with our colleagues, our customers and all our stakeholders, we innovate to reduce our CO_2emissions and help build a more sustainable future.

GLOBE, long-term project

Phase 1 (2024 → 2027)

- Installation of a latest-generation Oxyfuel kiln with a capacity of 700 t/day
- Construction of dolime storage and loading facilities
- Optimizing of the traffic plan and relocating buildings within the site
- Oxygen reception to supply the new kiln (first test phase)
- Supplying the kiln with natural gas and sustainable biomass

Phase 2 (2028 → 2031)

- Installation of carbon capture technology for transport to a secure storage site in the North Sea
- Oxygen supply
- Interconnection solution to a CO_2 pipeline and/or hub and storage of our carbon

GLOBE phase 1: preliminary information meeting

This represents the first step in the permit application process. The objective is to inform the general public about the purpose of the project and to initiate the environmental impacts assessment.

Scheduled for 21 June 2024, local residents and the authorities will be able to submit their comments and suggestions so that they can be considered in the environmental impact assessment. This will be followed by the submission of the impact study and the permit application procedure.

Lhoist and Marche-les-Dames since 1937

Lhoist's history in Marche-les-Dames has been rooted in innovation ever since we first set up in this region.

For decades, our site in Marche-les-Dames has been the cradle of innovative initiatives in dolime solutions, actively contributing to local industrial development.

Building on this heritage, we continue to evolve, invest in sustainability, and strengthen our engagement towards the communities and local authorities, affirming our position as a reliable and responsible industrial partner with family roots in Belgium.

GLOBE facts and figures

700 t/day
of dolime

€ 150 millions
estimated direct investment for phase 1

€ 100 millions
estimated direct investment for phase 2

-15% to -30% CO_2/t dolime from 2027
following phase 1, compared with 2023 internal benchmark

-80% CO_2/t dolime from 2031
following phase 2, compared with 2023 internal benchmark

15 direct jobs
would be supported by this project