

DECARBONIZING OUR OPERATIONS WITH CCUS

eCapt-Rhône

Creating the world's first CO₂ capture facility at a white cement plant



 **LE TEIL, FRANCE**



Co-funded by the European Union
Emissions Trading System
Innovation Fund





The eCapt-Rhône project uses renewable hydrogen production and CO₂ captured from Holcim’s cement plant in Le Teil to generate e-methanol. It is set to become the first large-scale plant in France to produce 138 kilotons (kt) of e-methanol per year. The project aims to replace about 20% of current French methanol consumption by providing locally produced e-methanol to industrial firms, thereby reducing CO₂ emissions by 70%.

The plant’s goal is to capture 100% of CO₂ emitted - around 200,000 tons - annually, by 2028. In 2023, it received a grant from the EU Innovation Fund.

The technology behind the project

The eCapt-Rhône project is driven by three technological processes:

- Carbon capture: a fully electric and chemical-free solution will be used. This involves both boosting oxygen levels in the kiln line and using end-of-pipe cryogenic carbon capture technology.
- Hydrogen production: a 170 MW electrolyser powered by green energy will produce 27 kt/y of green hydrogen
- E-methanol production: a first-of-its-kind high capacity reactor will be able to provide 138 kt/y of methanol.

The capture brick will be located at Le Teil cement plant while the hydrogen and e-methanol production infrastructure will be installed at the Osiris chemical platform, located just 100 kilometers from the plant. Transportation will be managed by rail.

At a glance



OPERATIONAL
by 2028



FUNDING
EU Innovation Fund



ANNUAL CO₂ CAPTURE
200,000 tons



INNOVATION
Cutting-edge project using captured carbon to produce high quality e-methanol ready for immediate industrial use



PATHWAY
Conversion utilization



TECHNOLOGY
End-of-pipe cryogenic carbon capture technology

End-of-pipe cryogenic carbon capture technology is a fully integrated technology that combines the capture of CO₂ with its liquefaction and conditioning. This enhances reliability, optimizes CO₂ for utilization and minimizes process units and interfaces.

Our Partners

- Elyse Energy for their specialization in producing e-methanol

“The eCapt-Rhône project has an important role to play in the industry, both by making the large-scale capture of CO₂ in a cement plant a reality and by producing e-methanol directly amidst industrial consumers.”



Thomas de Charette
Head of Decarbonization, Holcim France



Le Teil cement plant