



## CIMENTALGUE

### DEVELOPING THE ECONOMIC POTENTIAL OF CEMENT WORKS WASTE THROUGH INDUSTRIAL PRODUCTION OF PHOTOSYNTHETIC MICROALGAE

The CIMENTALGUE project is part of the development of a new 'industrial symbiosis' combining the cement industry, which produces industrial effluent rich in CO<sub>2</sub>, NO<sub>x</sub>, trace elements and unavoidable energy waste, on the one hand and the emerging microalgae cultivation industry, which consumes CO<sub>2</sub>, nitrogen, trace elements and heat, on the other.

CIMENTALGUE is aimed at developing a process for exploiting CO<sub>2</sub> and unavoidable heat waste from industrial sources by producing photosynthetic microalgae in natural light in photobioreactors under glass.

The project will install a 500-m<sup>2</sup> demonstrator microalgae production unit inside a cement works. This installation will be operated for two and a half years to provide representative data for the entire value chain from capture and treatment of industrial waste gas to developing the economic potential of the microalgae biomass produced.

The project will perfect and optimise its process, prove its sustainability and ensure its economic and environmental validation in terms of norms, social acceptance and profitability on target markets (as additives for animal feed, dyes, materials, etc.).

#### Partners

##### Companies

Groupe VICAT, site de Montalieu-Vercieu [[Project Developer](#)]  
AlgoSource Technologies, Saint-Nazaire et Gargenville  
TotalEnergies, Paris

##### Research center

Laboratoire de Génie des Procédés - Environnement - Agroalimentaire (GEPEA), Université de Nantes, Saint-Nazaire

##### Other partner

Institut de recherche en Génie civil et Mécanique (GeM), Saint-Nazaire

#### Funders

- Ademe
- Conseil régional des Pays de La Loire

#### Labelisation

12/12/2014

#### Overall budget

2 000 k€