

RE4Industry

Success Case Factsheet

HERACLES/Holcim Group

Key information

Strategic goals of the company:
 Reduction of the total gross CO₂ emissions to 1,522 kt CO₂ (2030) from 2,103 kt of CO₂ (2019)
 Increase the substitution of fossil fuels by **alternative fuels** to **50 % by 2023**

Company: HERACLES Group

(member of Holcim Group)

Founded: 1911

Plant: Milaki Cement Plant

(founded in 1982)

Located: Evoia, Greece

Products:

- 6 types of Cement &
- 4 types of Clinker (EN, ASTM & API 10A),
- 6 categories of Solid Fuels



Decarbonisation activities

- The RE technology applied at the Milaki Cement Plant (**MCP**) is based on the co-processing concept of simultaneous recycling of mineral materials and recovery of energy within cement manufacturing;
- MCP is co-processing biomass, SRF and dried sewage sludge;
- The co-processing technology / alternative fuels use in the cement plants of HERACLES started in 2013. along with other measures applied at HERACLES facilities, contributes to the reduction of the total/specific CO₂ emissions;
- Supply of alternative fuels, including biomass, is carried out through Geocycle Hellas – a subsidiary of HERACLES focusing on non-hazardous waste management.

Environmental aspects

- ✓ GHG emission reduction
- ✓ Gaseous pollutants regulation
- ✓ Reduction of landfilling

Social aspects

- Fossil fuels substitution from alternative fuels & biomass is a key pillar of HERACLES sustainability program.
- Not developed AF market (few streams, circular economy is not yet established in all fields) maturity of AF production (not stable quantities/qualities), distance from big cities/industrial hub
- Use of biomass is a less controversial practice compared to the use of waste-derived fuels

The future...

- The use of **alternative fuels** – including biomass – will continue to grow in importance, both for Holcim Group and for HERACLES. HERACLES aims to achieve a 60 % substitution rate of fossil fuels by 2025, with biomass contributing to a 45 % substitution
- **Carbon neutrality** is the ultimate goal for Milaki Cement Plant by adopting several actions: extended use of alternative fuels & raw materials, improved energy efficiency, reduction of clinker factor, preparation for carbon neutrality CCS/U.
- **CCS/U:** Milaki is getting prepared to become carbon neutral. A CCS scheme is under design: the CO₂ that can not be avoided by all other actions will be captured before emission & transported in appropriate facility for underground storage. The captured CO₂ will be also considered for utilization (e.g.CO22MeOH) in a later stage, as the market is not mature & synergies need to be developed.

