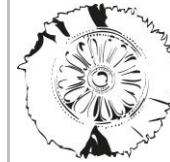


# Thermo-Chemical Energy Storage



**CERTH**  
CENTRE FOR  
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HELLAS

## Description

Solar calcium-looping integration into Concentrated Solar Power (CSP) plants for thermo-chemical energy storage.

## Objectives

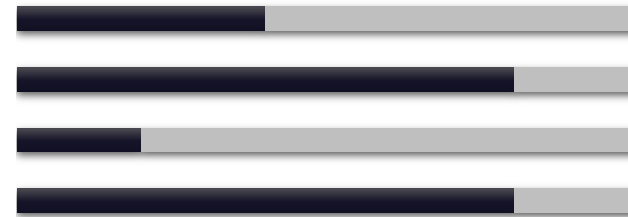
- To determine costs to optimize them and select the best options in economic terms. To provide quantitative and qualitative information on the sustainability of their development and implementation,
- To identify potential risks of the carbonation reaction, their reasons and corrective measures to rectify them and provide a technical risk assessment suitable for future market studies, comparing existing technologies to the new prototypes and tools developed.

## Activities

- Sustainability assessment:
  - Life-Cycle Costing LCC,
- Risk management:
  - Operational and technological risk assessment.

## Challenges

- Input data complex to collect
- Technical knowledge required
- Legal & legislation barriers
- Technology readiness level



## Expected outcomes

- - 10% receiver cost,
- - 20% solar thermal storage cost,
- Improved storage capacity,
- Improved efficiency of CSP plants.

