

Thermo-Chemical Energy Storage



Universidad
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Description

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

Objectives

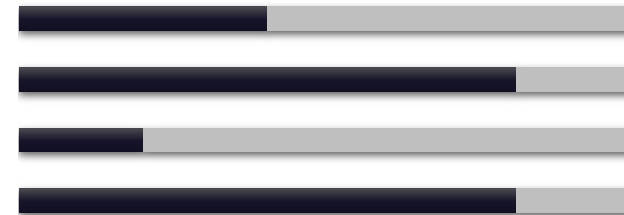
- To determine costs associated to this technology, including carbonation, solar calcination and power system, to optimize them and select the best options in economic terms,
- To identify potential risks at any stage mentioned, their reasons and corrective measures to rectify them and provide a technological 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.

