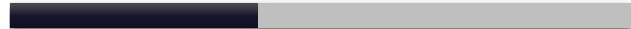







ttz Bremerhaven

# Thermo-Chemical Energy Storage

<p><b>Description</b></p> <p>Solar calcium-looping integration into Concentrated Solar Power (CSP) plants for thermo-chemical energy storage.</p>	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>To determine costs associated to power cycle technologies, 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,</li> <li>To identify potential risks of the integration of the technologies mentioned and during the prototype construction, their reasons and corrective measures to rectify them and provide a technical risk assessment suitable for future market studies.</li> </ul>
<p><b>Activities</b></p> <ul style="list-style-type: none"> <li>Sustainability assessment:             <ul style="list-style-type: none"> <li>– Life-Cycle Costing LCC,</li> </ul> </li> <li>Risk management:             <ul style="list-style-type: none"> <li>– Operational and technological risk assessment.</li> </ul> </li> </ul>	<p><b>Challenges</b></p> <ul style="list-style-type: none"> <li>Input data complex to collect </li> <li>Technical knowledge required </li> <li>Legal &amp; legislation barriers </li> <li>Technology readiness level </li> </ul> <p><b>Expected outcomes</b></p> <ul style="list-style-type: none"> <li>- 10% receiver cost,</li> <li>- 20% solar thermal storage cost,</li> <li>Improved storage capacity,</li> <li>Improved efficiency of CSP plants.</li> </ul>

