

FLEXICAL

The growing share of intermittent renewable energy, such as wind and solar power, needs fossil fuel-based power plants as back-up by operating with daily load changes and even with relatively long shut-down periods.

The flexible operation is being increasingly recognized as a major obstacle to the development and deployment of CCS. CO₂ capture technologies based on high temperature solid looping cycles present the possibility of being integrated with thermal energy storage to improve their flexibility.

The FlexiCal project will evaluate the flexibility of power plants with CO₂ capture by post-combustion Calcium Looping. Different process options (including thermo-chemical energy storage using CaO/CaCO₃) will be experimentally investigated at pilot scale to evaluate operational limits. Data on load changes and energy storage will be used to validate dynamic system and reactor models in order to scale up efficient and flexible CaL systems. www.flexical.eu

