

## Project Acronim: FLEXICAL

### Project Title: Development of flexible coal power plants with CO<sub>2</sub> capture by calcium looping

**Type of project:** Research

**Duration (months):** 36

**Start date:** 01/07/2016

**End date:** 30/06/2019

**Total budget:** 2 452 366 euro

**EU Contribution:** 1 471 420 euro

**Abstract:** Coal power plants undergo flexible operation with load changes and partial load operation due to the increasing amount of renewable energy. The main objective of this proposal is to evaluate and enhance the flexibility of power plants with CO<sub>2</sub> capture by post combustion Calcium Looping. Two novel process options (a highly load flexible plant concept and a system using an Energy storage using CaO/CaCO<sub>3</sub>) are experimentally investigated at pilot scale to evaluate operational limits. Data on load changes and energy storage are used to validate dynamic system and reactor models in order to scale up efficient and flexible Calcium Looping systems.

#### Project Consortium:

##### Coordinator

AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS - Spain

##### Partners

UNIVERSITAET STUTTGART - Germany

HULLERAS DEL NORTE SA - Spain

POLITECNICO DI MILANO - Italy

PGE Energia Ciepła – Poland