



LC-SC3-NZE-5-2019-2020

C4U

Full Title: Advanced Carbon Capture for steel industries integrated in CCUS Clusters

Aim:

The C4U project aims to achieve four headline research objectives. The project will elevate two CO₂ capture technologies, known as DISPLACE (High-temperature sorption-displacement process for CO₂ recovery) and CASOH (Calcium Assisted Steel mill Off-gas Hydrogen production), from TRL5 to TRL7 and design for their optimal integration in the steel industry. It will analyse the economic, environmental and business impacts and opportunities of applying CCUS (Carbon capture, utilization, and storage) in a large-scale (TRL9) steel plant in a North Sea Port industrial cluster and develop and test approaches with stakeholders and end-users to assess and advance societal readiness for CCUS in industrial clusters. Finally, the project will ensure that its results are exploited to their full extent and disseminated to relevant stakeholders to facilitate the large-scale rollout of CCUS.

Concept:

Funded by the European Union's Horizon 2020 programme, C4U is a holistic interdisciplinary project addressing all the essential elements required for the optimal integration of CO₂ capture in the iron and steel industry as part of the CCUS chain. This spans demonstration of two highly efficient solid based CO₂ capture technologies for optimal integration into an iron and steel plant and detailed consideration of the safety, environmental, societal, policy and business aspects for successful incorporation into the North Sea Port CCUS industrial cluster in Belgium and the Netherlands.

Start date:

01/04/2020

End date:

31/03/2024