



CE-SC3-NZE-2-2018

C2FUEL

Full Title: Carbon Captured Fuel and Energy Carriers for an Intensified Steel Off-Gases based Electricity Generation in a Smarter Industrial Ecosystem

Aim:

C2FUEL project aims to develop energy-efficient, economically and environmentally viable CO₂ conversion technologies for the displacement of fossil fuels emission through a concept of industrial symbiosis between carbon intensive industries, power production, and local economy. This concept will be demonstrated at Dunkirk between DK6 combined cycle power plant, Arcelor Mittal steel factory and one of the major European harbor, a solid showcase for future replication.

Concept: The CO₂ present in the blast furnace gas will be selectively removed and combined with green hydrogen generated by electrolysis fed with renewable electricity to produce two promising energy carriers. It will allow to simultaneously reuse CO₂ emission from the steel-making factory, electricity surplus in the Dunkirk area and to improve the operational and environmental performance of the DK6 combined cycle.

Start date: 01/06/2019

End date: 31/05/2023