



Project Acronym: CLARA

Project Number: SEP-210486610

Call: H2020-LC-SC3-2018-2019-2020

Topic: LC-SC3-RES-21-2018

Project title: Chemical Looping gasification for sustainable production of biofuels (CLARA)

Main Category of the Project: Biofuel

TRL: Current: 3, Project Goal: 5-6

Keywords: Chemical Looping Gasification (CLG), Syngas Purification, Full Process Chain, Pilot Scale (1 MW_{th})

Technological approach of the Project:

- develop and test selected innovative technologies:
 - > Chemical looping gasification of biomass in dual connected fluidized bed reactor system
 - > Syngas purification using a novel cleaning technology and subsequent fuel synthesis
- demonstrate and assess the full process chain of biofuel production in pilot scale (1 MW_{th})

Expected Impact of the Project:

- significant reduction in biofuel production costs compared to state-of-the-art technologies (0.70 €/L)
- alleviation of negative impacts on environment (e.g. GHG emission, pollution, land use)

Highlights (technological/non-technological):

- de-carbonization of fuel & chemical industry
- facilitation of net-negative CO₂ emissions (BECCS/U)

What is needed in future:

- political framework encouraging scale-up to industrial scale
- Full implementation in industrial scale



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