



Project No:
764697 (EU) and 2017YFE0112500(CHINA)

Project acronym:
CHEERS

Project full title:
Chinese-European Emission-Reducing Solutions

Type of Action: **RIA**

Call/Topic:

This research is co-funded from National Key Research and Development Plan of China (No. 2017YFE0112500) and European Union's Horizon 2020 Research and Innovation Program (No. 764697).

Start-up: 2017-10-01

Duration: 60 months

Deliverable D6.1: Test site definition

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Organisation name of lead beneficiary for this deliverable:
Tsinghua University and Dongfang Boiler Group Co., LTD.

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Dissemination Level		
PU	Public	
CO	Confidential, only for members of the consortium (including the Commission Services and MOST)	X

Abstract for publication on the website of CHEERS

Chinese-European Emission-Reducing Solutions Project (CHEERS), co-funded by EU and China, aim to demonstrate chemical looping combustion (CLC) technology at 3MW_{th} scale. This 3MW_{th} CLC-CCS demonstration unit will be installed on a Dongfang Group Co., LTD. (DBC) site in Deyang city of Sichuan province, China. During the cooperation, China partners will demonstrate their technologies with lignite as fuel, and EU partner will demonstrate their technologies with petcoke as fuel. This 3MW_{th} CLC-CCS demonstration unit should successfully achieve its operational goals and validate the developed CLC concept. It will also permit the evaluation of different technological and engineering challenges specific to CLC. Successful demonstration of CLC on this scale is a critical step towards implementing this as an industrial process.

This 3MW_{th} CLC demonstration unit will retrofit the existing circulating fluidized bed (CFB) as single air reactor (AR), while the fuel reactor (FR) will be newly built. The existing auxiliary facilities in DBC site will be utilized for this demonstration. The available space and conditions from test site need to be defined for the basic design and process design package (PDP). In this deliverable, the aim is to provide detailed test site information to ensure successful basic design and further construction and demonstration.

