Carbon Dioxide Capture and Hydrogen Production from Gaseous Fuels

Fact Sheet

Project information

CACHET

Grant agreement ID: 19972

Start date
1 April 2006

End date
31 March 2009

Funded under:
FP6-SUSTDEV

Overall budget:
€ 13 447 999

EU contribution
€ 7 500 000

Coordinated by:
BP EXPLORATION OPERATING COMPANY LTD
United Kingdom

Objective

CACHET aims to develop technologies to significantly reduce the cost of CO2 capture from natural gas with H2 production. The primary objective is to reduce the cost of CO2 capture from current levels to €20-30 per tonne. Capture and storage of CO2 with H2 production is a large-scale option for long-term CO2 emissions reduction in Europe. While some CO2 capture technology integrated with H2 production is available today the main barrier to its use is its high cost and lack of proper integration with H2-based power production and high pressure, high purity vehicle fuel applications. This project plans to overcome these barriers targeting CO2-free power production and H2 for vehicle fuel. It will focus on gaseous fuels, which are a major component of the Europe an energy system. CACHET will be devoted to researching four promising technologies: advanced steam methane reforming, redox technologies, metal membranes and sorption enhanced water gas shift. By the end of the project the technologies should be ready for pilot-unit testing followed by pre-commercial demonstration, with commercial use foreseeable by ca. 2015. The project will also research the integration of the CO2 capture technologies with H2 production systems for power generation and fuel applications. All the technologies will be evaluated and costed on a consistent, integrated basis. CACHET is a strong and diverse consortium of research institutes, universities, energy business, engineering and manufacturing communities. Its partners have a track record, 8 partners including the Co-ordinator, BP are from the CO2 capture project (CCP), a major international collaborative
project. Other major partners are also highly experienced in the area, and new partners will be involved from key countries including new EU members, China and Russia.

Programme(s)

FP6-SUSTDEV - Sustainable Development, Global Change and Ecosystems: thematic priority 6 under the Focusing and Integrating Community Research programme 2002-2006.

Topic(s)

SUSTDEV-1.2.2 - New technologies for energy carriers - Hydrogen
SUSTDEV-1.2.7 - Capture and sequestration of CO2

Call for proposal

FP6-2004-ENERGY-3

See other projects for this call

Funding Scheme

IP - Integrated Project

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