A new competitive liquid biofuel for heating (COMBIO)

Results

Project Information

COMBIO

Grant agreement ID: ENK5-CT-2002-00690

Project closed

Start date
1 January 2003

End date
30 June 2006

Funded under
Programme for research, technological development and demonstration on "Energy, environment and sustainable development, 1998-2002"

Total cost
€ 2 348 572,00

EU contribution
€ 1 295 023,00

Coordinated by
FORTUM OIL AND GAS OY
Finland

This project is featured in...

RESEARCH*EU MAGAZINE

Results Supplement No. 010

NO 10 DECEMBER 2008

CORDIS provides links to public deliverables and publications of HORIZON projects.

Links to deliverables and publications from FP7 projects, as well as links to some specific result types such as dataset and software, are dynamically retrieved from OpenAIRE.

Deliverables

Preliminary specifications for pyrolysis liquids

CEN`s Technical Board created the working group CEN/BT/WG 149 Liquid and Gaseous Alternative fuels in December 2002. The Swedish Standards Institute SIS assumed the responsibility for the secretariat of this WG, and VTT contributed initially in the work. In the longer term, CEN was recommended to prepare to start working also on the pyrolysis oil standards as alternative fuels for stationary applications. At the plenary meeting of CEN/TC 19 in June 2005 on standardization of liquid and gaseous alternative fuels the CEN/BT/WG 149 recommendations were included to the workplan.

Fuel oil specifications are proposed based on feedback from pyrolysis liquid end-users. Preliminary specifications for boiler use in three size classes were proposed in the proejct. A paper on specifications has been published in Energy & Fuels and reported in the project.

Oasmaa, A, Peacocke, C., Gust, S., Meier, D., McLellan, R. Norms and Standards for Pyrolysis Liquids. End-User Requirements and Specifications. Energy & Fuels., vol. 19 (2005) 5, s. 2155-2163. doi:10.1021/ef040094.

Economic assessment

Integrated production of PO and CHP was assessed in Fnland. Pyrolysis plant is integrated to an existing CHP power plant. The power plant is based on fluidized-bed boiler. Consumer prices for light

(LFO) and heavy fuel oil (HFO) in Finland are used as reference prices. Consumer price for the LFO has varied between 30 and 40 euro/MWh during the time of the project.

Two economic estimates are shown for pyrolysis oil:
- Production cost is estimated using the annuity method for valuating capital costs.

- Internal rate of return (IRR) is calculated assuming a lower price for pyrolysis liquid fuel to take into account higher transportation and increased utilisation costs compared to LFO.

Using 8.3 /GJ (30 /MWh) as a value for the liquid biofuel an internal rate of return of 10 % is calculated (pre-tax). IRR is especially sensitive for sales price and yield and to a lesser extent to investment cost.

Last update: 28 July 2005

Permalink: https://cordis.europa.eu/project/id/ENK5-CT-2002-00690/results