



RENEW

Full Title: Renewable Biofuels for Advanced Powertrains
Instrument: FP6 Integrated Project, Priority area: Sustainable Energy Systems
Contract: 502705 Scientific officer: E. Nägele, DG Research K3
Budget: 19,8 M€
Website: www.renew-fuel.com
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Abstract

In 2003 a European consortium of 32 partners among them automotive manufacturers (Daimler, RENAULT, VOLVO, VW), mineral oil industry (BP, TOTAL), plant engineers (CHOREN, CHEMREC) and R&D institutes from all over Europe joined forces to cooperate in the four year integrated project RENEW to enhance and assess production routes for 2nd generation biomass-to-liquid (BtL) fuels. Renew has been a very successful project as it has been selected for publication by DG RTD as one excellent example of the positive impacts EU research can achieve. It will be featured in the catalogue of FP6 Success Stories.

This project identified processes which support the major objectives of the EU energy policies on the reduction of green house gases and on the security and diversification of energy supply, without affecting the food supply chains. It showed that the gasification of lignocellulosic biomass with subsequent synthesis of fuels combines little primary energy input with excellent fuels. Several thousand litres of these Fischer-Tropsch diesel were produced in the project from wood and straw and showed along with dimethylether DME in engine tests superior combustion and emission properties. The outcome is reliable knowledge on different BtL-production pathways, open to all stakeholders in the EU and commonly agreed strategic recommendations of the industry on future technology options. The accompanying thorough assessment revealed that:

- Lignocellulosic biomass may cover up to 17% of 2020 EU diesel demand with sustainable feedstock from European fields and forests not affecting food supply
- BtL-fuels lower the tail pipe emissions (pollutants and CO₂) without additional technology
- BtL-fuels lower the overall CO₂ emissions significantly
- Two BtL-production concepts are ready for demonstration
- European large scale market implementation needs public support

The project results, published recently, make a substantial contribution to the ongoing bio-fuel debate.

Published results available: www.renew-fuel.com

Executive summary brochure, 22 p. / Final report, 180 p. in print
TV Film, 20 min.