

PRESS INFORMATION 080714

The European RENEW project releases final scientific report about the future of liquid bio fuels:

Chemrec process for renewable fuels most energy- and cost efficient with more than 95% reduction in CO₂ emission

The Chemrec process to convert biomass to motor fuels based on black liquor gasification has the highest conversion efficiency, the lowest product cost and the highest green house gas emission reduction amongst the studied processes in the RENEW project. The Chemrec process is also one of two recommended for demonstration in industrial scale.

RENEW is a consortium of 31 European entities that recently concluded its 4-year, €20 million study evaluating six different production routes for second generation renewable biomass-to-liquid (BtL) fuels.

The report states that demonstration on a commercial scale of the most advanced BtL concepts is of utmost importance and that the Chemrec process is ready for such a demonstration.

– We are very encouraged by the recognition our process has received after the thorough examination carried out within the RENEW project, says Chemrec CEO Jonas Rudberg. The examination shows that our route from biomass to renewable motor fuels is the best both regarding cost, at €0.5/litre diesel equivalent, and efficiency at 69% and - perhaps even more significant - has a technology maturity that makes it suitable for demonstration at commercial scale today.

Biomass-to-liquid for climate protection and supply security

One of the main drivers for BtL fuels is climate protection and the potential for achieving a reduction in greenhouse gases emissions. The Chemrec process reduces CO₂ emissions by 95%, also best in the study, while simultaneously increasing security of fuel supply. The evaluated Chemrec process is designed as an integral part of a pulp mill and produces an environmentally friendly, carbon-neutral diesel fuel, DME (dimethyl ether).

The efficiency is high due to a shift to more advanced technology in the energy and chemical recovery area of the pulp mill and the high efficiency achievable in DME and methanol synthesis. In the process biomass is converted to BtL fuels utilizing an highly concentrated liquefied biomass stream in the pulp mill, so called black liquor. The process uses locally available biomass not competing with food production.

– Countries with a high concentration of pulp production sites, thus having a high potential for Chemrec BtL plants, include USA, Canada, Japan, Brazil, Sweden, Finland and Chile, says Patrik Löwnertz, VP Marketing and Sales.

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For information on RENEW and the full Scientific Report visit www.renew-fuel.com

About Chemrec

Chemrec AB is a Swedish company providing technology for black liquor gasification which integrated in pulp mills provides the opportunity to produce large quantities of renewable motor fuels or electricity from biomass. The technology has potential to globally provide motor fuels equivalent to over 45 billion litres/year of gasoline (12 billion gallons/year). For more information visit www.chemrec.se.

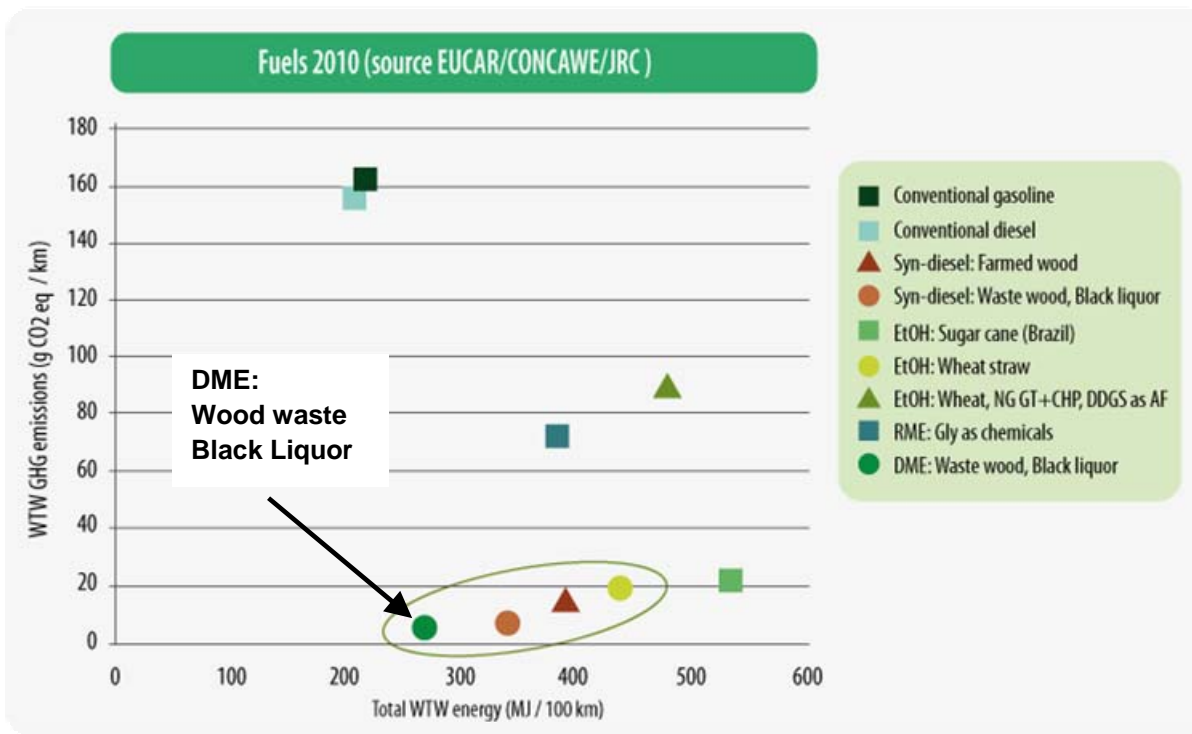


Fig 1: Well-to-wheel greenhouse gas emissions (in CO₂-equivalents/km) versus total energy use for running a mid-size car over a distance of 100 km.
 (Source EUCAR/CONCAWE/JBC, European Bio fuels Technology Platform www.biofuelstp.eu)

About RENEW

The RENEW consortium was led by Volkswagen with participation of a group of industrial companies from all parts of the production chain, including sectors like automotives (Daimler, Renault, Volvo), the mineral oil industry (BP, Total), representatives of electricity producers (EDF), pulp and paper production (Södra) and process engineering companies (Chemrec, CHOREN/UET, TUV/Güssing, Abengoa). Universities and institutes from nine European countries supported the activities.

The consortium was supported by the European Commission's 6th framework programme and defined the following main objectives:

- to extend the knowledge on BtL production pathways and investigate the suitability and use of BtL fuels in today's and future power trains
- to assess the regional biomass potential available in Europe and analyse environmental, economic and technical properties of BtL production and
- to prepare commonly agreed recommendations to stakeholders on the future of BtL