



- SYNBIOS -

Second Generation Automotive Biofuel Conference
18-20 May 2005 in Stockholm, Sweden



We welcome you to the SYNBIOS international conference on automotive biofuel production by thermal gasification of biomass!

Conference

The SYNBIOS conference is intended for those who are interested in creating a sustainable transport sector. Over 200 speakers and visitors from 26 countries are currently registered. These include leading scientists, researchers, engineers and politicians, as well as representatives from industry, governments and authorities.

Thermo-chemical conversion - the syngas route - has been shown to be the most energy and cost-effective way of producing automotive biofuels from biomass. The flexibility of the process allows several fuels to be produced.

Of these, H₂ (hydrogen), FTD (Fischer-Tropsch Diesel, also called BTL, Biomass-to-Liquids), DME (Dimethyl ether) and methanol represent the greatest opportunity for creating a transport sector based on sustainable energy sources.

Gasification of biomass is thus the key technology for producing the second generation of automotive biofuels. These shall be renewable and CO₂ neutral, available as a large global resource and energy efficient from Well-to-Wheel.

Organisation

The SYNBIOS conference is supported by the European Commission – EIE, the Swedish Energy Agency and the Swedish Road Administration. It is organised by Ecotrafic ERD³ and Nykomb Synergetics and co-hosted by IEA Bioenergy Task 33: Thermal Gasification of Biomass, the International DME Association (IDA) and the Swedish Bioenergy Association (SVEBIO).

The conference is located in the centre of Stockholm City at: Näringslivets Hus (the House of Trade and Industry) Storgatan 19, Östermalmstorg, Stockholm, Tel: +46 8 783 8000.

Program

The SYNBIOS conference starts on 18 May with strategies and visions followed on 19 May by technical sessions on thermo-chemical conversion and vehicle development and the fuel market. A conference dinner hosted by Volvo will take place on 18 May at the world famous Vasa maritime museum, which houses the worlds only surviving 17th century ship.

On 17 May IDA will have an open meeting during the day and an evening dinner to which all participants are invited. IEA will also have a meeting and dinner for Task 33 members only.

Exhibition, posters and study visit

SYNBIOS is proud to host the world premiere of Volvo's new prototype DME-fuelled truck, to be displayed on 18 May. A poster exhibition showcasing recent research into gasification will also be displayed on both days of the conference.

On 20 May there will be a study visit to Chemrec's world leading, pressurised, high temperature black liquor gasification development plant, DP-1 in Piteå, Sweden. A special invitation is available on the conference website www.ecotrafic.se/synbios.



Accompanying program

Stockholm is a beautiful city and May is the perfect time to explore it. We encourage guests of conference participants enjoy Stockholm, taking the opportunity to look at the Old Town and the Royal Palace in particular. Separate information is available in the document "A Brief Guide to Tourist Activities in Stockholm, May 2005".



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Conference Program



Time	Wednesday, 18 May, Plenary Session	
8:00	Conference registration, Refreshments	
Session	Political Strategies & Visions	Chair: Dr. Tomas Käberger IIIEE, Lund University
9:00	Conference inauguration	Mr. Mats Hellström County Governor Stockholm County
9:15	The Swedish Energy Agency's directive and vision – changing from a fossil fuel based society to renewable motor fuels	Mr. Thomas Korsfeldt Director General Swedish Energy Agency
9:30	Sweden's role in pushing for renewable fuels	Mr. Lars Guldbrand Deputy Director Ministry of Sustainable Development
9:50	Impact on oil reserves depletion to 2020 for renewable fuels and development of alternatives	Dr. Kjell Aleklett President Association for the Study of Peak Oil
10:10	Alternative fuels for heavy duty commercial vehicles. Scenario and conclusions.	Mr. Anders Kroon Vice President Volvo Powertrain Corp.
10:30	Coffee & tea break	
Session	Biomass Market & CO₂ Legislation	Chair: Dr. Tomas Käberger
11:00	Preparations for the creation of a European Technology Platform on Biofuels	Mr. Wiktor Raldow Head of Unit Directorate J DG Research, European Commission
11:20	Market and potential for wood fuel, vision and strategy for the forest industry	Dr. Urban Eriksson Vice President Sveaskog
11:40	Stabilising the world's carbon dioxide emissions, the need for measures beyond the Kyoto treaty	Dr. Christian Azar Professor Physical Resource Theory, Chalmers
12:00	Conference lunch	
12:00	Poster presentations, Exhibition of prototype DME Truck from Volvo	
Session	Pathways of Production Technology	Chair: Dr. Tomas Käberger
13:30	Potential of biorefinery as large-scale production plant for liquid fuels in the forest and pulp industry	Dr. Eric D. Larson Research Engineer PEI, Princeton University
14:00	Strategic assessment of the RTDD needs and overview of the syngas/liquid biofuels assessment of the raw material availability	Dr. Kai Sipilä Professor VTT Processes
14:30	Development and pathways for competitive large-scale production of biomass based synfuels	Dr. André Faaij Professor Dept. Science, Tech., Utrecht University
15:00	Coffee & tea break	
Session	Fuels & Vehicles	Chair: Dr. Tomas Käberger
15:30	Heavy duty DME vehicles – Technical highlights from the second generation prototypes	Mr. Henrik Landälv Manager, Environmental Projects Volvo Powertrain Corp.
15:50	Biomass-based synthetic fuels as an integral part of Volkswagen's fuel strategy and the RENEW project	Dr. Frank Seyfried Head of Group Research, Fuels & Oils Volkswagen
16:10	10 years of experiences in selling alternative fuels - future challenges and visions	Mr. Göran Lindblå Chairman OK-Q8
16:30	Potential for biomass as feedstock to alternative automotive fuels and competing uses	Mr. Kent Nyström Manager Svebio (Swedish Bioenergy Association)
16:40 - 17:30	General panel discussion	Above speakers Chair: Dr. Tomas Käberger
19:00 - 20:00	Guided tours at the Vasa maritime museum Conference dinner, hosted by Volvo at the Vasa maritime museum Dinner speaker: Dr. Tony Bridgwater, Aston University	



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Conference Program



Thursday, 19 May, Plenary Session				
8:00 - 16:00	Poster presentations			
Session	Research & Market	Chair: Dr. Tomas Käberger		
9:00	Sweden's strategy for the European Union's Biofuel Directive - taxation, distribution, "green" certificates	Mr. Hans Sandebring Ex-Commissioner Ministry of Environment		
9:20	Syngas routes to alternative fuels, efficiencies and potential with update on current projects	Dr. John Bøgild Hansen Senior Scientist Haldor Topsøe		
9:40	Development of DME direct synthesis process, demo plant and project results of biomass gasification to DME	Mr. Mamoru Omiya Manager of Catalyst Developm. Team JFE Holdings		
10:00	Techno-economics of biomass & black liquor gasification for automotive fuel production	Mr. Tomas Ekbohm Technical Director Nykomb Synergetics		
10:30	Coffee & tea break			
	Breakout Sessions Chair and co-chair:		Chair and co-chair:	
Sessions	Thermo-Chemical Conversion	Dr. Suresh P. Babu Gas Technology Institute Ms. Eva K. Larsson TPS Termiska Processer	Vehicle Development and Fuel Market	Dr. Tomas Käberger IIIIEE, Lund University Ms. Ebba Tamm Swedish Petroleum Institute
11:00	State-of-the-art of biomass gasification and pyrolysis technology 2005	Mr. Erik Rensfelt Consultant ERen Energy	Views on automotive fuels, current & future regulations and emissions	Mr. Olle Hådel Expert Swedish Road Administration
11:30	Novel ultra-clean concepts of biomass gasification for liquid fuels	Mr. Esa Kurkela Group manager VTT Processes	Tomorrow's fuels for advanced power trains, engine test emission results	Dr. Frank Seyfried Head of Group Research, Fuels & Oils Volkswagen
12:00	Overview of US biomass gasification projects and fuel tax exemptions	Dr. Richard Bain Group Manager NREL	Preferred alternative fuels motor concepts, novel types of engines	Mr. Peter Ahlvik Senior Consultant Ecotrafic ERD ³
12:30	Conference lunch			
14:00	Status of Chrisgas project, production of hydrogen-rich synthesis gas	Mr. Lars Waldheim Manager, Gasification TPS Term Processer	Comparison of Well-to-Wheels analyses of biofuels	Dr. Guido Reinhardt Scientific Director IFEU - Heidelberg
14:30	Status and potential of CHEMREC black liquor gasification	Mr. Ingvar Landälv Technical Director Chemrec	Status of Neste's biobased NExBTL-diesel production for 2007	Mr. Raimo Linnaila Business Developm. Manager Neste Oil Corporation
15:00	Clean syngas from biomass by pressurised entrained flow gasification of slurries from fast pyrolysis	Dr. Edmund Henrich Group leader Forschungszentrum Karlsruhe	Overview on novel and alternative fuels with strategies and visions	Mr. Leo Petrus Project leader Bio-fuels Shell Global Solutions Int.
15:30	Operation experiences of Carbo-V process for FTD production	Mr. Matthias Rudloff Head of Developm. Choren	Synthetic BioDiesel: a step towards even more environmentally friendly vehicles	Dr. Pierre Rouveiolles Head of Research Renault
16:00	Coffee & tea break			
16:30	Summary and highlights of session thermo-chemical conversion presentations		Mr. Bram van der Drift ECN Biomass	
16:40	Summary and highlights of session vehicle development and fuel market presentations		Dr. Tomas Käberger	
16:50 - 17:00	Closing remarks Prize winner of best poster		Dr. Tomas Käberger	

This program is subject to change.
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