



**IEA Bioenergy**

# *Liquid Biofuels from Biomass*

Newsletter #11, October 2004

[www.forestry.ubc.ca/task39](http://www.forestry.ubc.ca/task39)

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## **EDITORS NOTES**

*David Gregg*

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Welcome to the eleventh issue of the Task 39 newsletter. In this issue, we provide you with a feature article describing ongoing activities in the biodiesel area. Task 39 is working hard to increase dialogue on the common issues that challenge all biofuels in the march towards greater utilization and commercialization.

Interest in the newsletter format as a means of communication within tasks continues to grow. Recent discussions by the IEA ExCo have underscored the utility of this medium in supporting efficient Task operation. We encourage all Task members to make use of this newsletter, to contribute content, and to suggest changes that can further improve the document.

In the final issue of the Task 39 Newsletter for 2004, you will note that we are continuing to streamline and improve both layout and content. The current issue of the newsletter sports an updated logo and colour scheme that will shortly be reflected in our on-line content; our website will be updated later this fall. We have also made some technical changes that will greatly reduce the time required to prepare various international versions of the document.

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## **FROM THE TASK LEADER**

*Jack Saddler*

<mailto:jack.saddler@ubc.ca>

In the final newsletter of 2004, I am very pleased to announce that Task 39 continues to grow. South Africa and Italy are in the midst of confirming their participation in early 2005, while Germany has begun discussions to join the task later in the New Year. This will increase the size of our network and provide contacts in some key areas around the world.

As always, I would like to thank all of our participants and to encourage you all to continue utilizing this network. Interest in commercial biofuels is reaching new heights as oil prices continue to climb, and IEA Task 39 will be there as the dialogue continues.

Finally, I would like to extend my personal thanks to Dr. Shiro Saka, who is hosting our next meeting in December of this year at Kyoto, Japan. I look forward to joining many of our members in Kyoto for a successful and fruitful meeting!

We are always looking for organizers, presenters and writers and all it takes to get started is an email to one of the Task executive members listed later in this article.

Best wishes from Vancouver!

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## **UPCOMING MEETINGS**

*Warren Mabee*

<mailto:warren.mabee@ubc.ca>

The next IEA Bioenergy Task 39 meeting will be held in Kyoto, Japan from December 12-15. We are in the process of assembling the agenda for this workshop. We would particularly like to thank our host, Dr. Shiro Saka, who has arranged the meeting to take place in the Clock Tower facility of Kyoto University. If you are interested in attending this meeting, we ask that you please contact Warren Mabee at [warren.mabee@ubc.ca](mailto:warren.mabee@ubc.ca).

The Task 39 meeting has been arranged to coincide with the 2<sup>nd</sup> International Symposium on Sustainable Energy Systems, part of the 21 COE program. This meeting will take place on the 17<sup>th</sup> and 18<sup>th</sup> of December, and will include a number of talks that are of particular interest to Task 39 members. If you are interested in attending this meeting, please contact Dr. Shiro Saka at [saka@energy.kyoto-u.ac.jp](mailto:saka@energy.kyoto-u.ac.jp).

## BIODIESEL – YESTERDAY, TODAY AND TOMORROW?

*Manfred Wörgetter, Dina Bacovsky*

The development biodiesel made within the last decade is rather remarkable. In 1980, research on the production and use of oilseed derived products was not yet taken seriously. Nevertheless, in 1987 France and Austria started commercializing biodiesel. At that moment the prices for crude oil and protein feed were high, and biodiesel was regarded as a possibility to develop rural areas. Sponsored by public programmes, from 1988 on first demonstration plants took up production in Aschach (Austria), Compiègne (France) and Livorno (Italy). Industry suffered from the decrease of crude oil prices at the beginning of the 1990's, but rising energy prices revived the market and supported its further development.

European biodiesel production reached a total of nearly 1.2 Mio tons in 2002, which is equivalent to an increase of more than 37% compared to 2001. Germany became the leading biodiesel producer (550 000 t in 2002), overtaking France (350 000 t in 2002). Germany has further been investing to develop its production capacity and it is today the number one producer with a production capacity of 1.1 Mio t. Unlike France, where only a given quota of biodiesel is tax exempted per year, the German government does not impose any limits in term of volumes of biodiesel that can benefit from adjusted taxation; this is mainly driven by Germany's intention to secure employment and the regional development as well as the intention to reduce global and local pollution. Italy has also increased its production to reach 220 000 t. Austria follows with a production of 30 000 t in 2002, whereas the production capacity has been increased to even 100 000 t in 2004 (see also [http://europa.eu.int/comm/energy/res/sectors/bioenergy\\_en.htm](http://europa.eu.int/comm/energy/res/sectors/bioenergy_en.htm)).

Commercially available diesel vehicles can be operated with a blend of biodiesel and fossil diesel, or, also, with B100 (pure biodiesel). A B5 blend performs very well, but for the performance of B100 the automotive industry had objections: rubber materials might be attacked, and the viscosity of biodiesel and its distillation curve might influence the injection and combustion. In order to prove the suitability of B100 and to develop biodiesel-suitable vehicle technology, several European countries carried out extensive studies including fleet tests with B100 and B30. Research and industry cooperated in the development of quality

parameters, and national standards were established in France, Austria, Sweden, Italy, Germany and the Czech Republik. Ordered by the European Commission finally European standards were elaborated at CEN, the European Standardization Organization. Hence, leading European manufacturers like Volkswagen were able to approve the use of high quality biodiesel as B100 in their vehicles. Meanwhile standards for biodiesel were also elaborated in North America, thus now the requirements for failsafe operation are given in all countries with high numbers of vehicles.

The new "Biofuels Directive" released by the European Union requires a market share of 5.75% biofuels in each member state by 2010. A complementary directive permits complete tax exemption of biofuels. These are indicative targets, and the member states are free in their way to achieve these goals. Member states are obliged to report progress and actions annually, including information on the reduction of CO<sub>2</sub> emissions.

Some countries, like Germany and Austria, will focus on biodiesel for the next years. The position other countries take is not yet known, but will be evident as soon as their reports to the European Commission are released. However, besides biodiesel, bioethanol and biogas will be important, too. And there are programs which encourage the production of Fischer-Tropsch Fuels in Germany; these may bring further amounts of biofuels onto the market by 2010.

While the driving forces for the implementation of biofuels – security of supply, regional development, and reduction of pollution – are similar in Europe and North America, the markets are different. Whereas in North America mainly heavy-duty vehicles operate on diesel, diesel vehicles have been generally adopted for private transport in Europe in the past years. The European automotive industry has accomplished enormous progress in the development of diesel engines for passenger cars. The fuel consumption of diesel operated vehicles is very low and because of turbo charging the engines are (nearly) as strong as gasoline engines; their high torque at part load is fun to drive. Surplus gasoline production is exported from Europe to North America, and the European refineries are interested in additional volumes of diesel fuels.

The Biodiesel Subtask of Task 39 has carefully observed the development of oilseed derived fuels in the past period, and has elaborated three studies:

1. A Worldwide Review on Biodiesel Production: The study defines the state of the world-wide development of biodiesel and is made in a modern form - a multitude of well arranged links offers the access to the comprehensive biodiesel web world.

2. A Best Case Studies on Biodiesel Production Plants in Europe: This study gives a comprehensive overview on selected examples of the impressive European biodiesel industry. Data on companies, feedstock supply, installed technology, capacity, quality management and financial issues are included.

3. A Review on Biodiesel Standardization World-wide: The study describes general aspects of the standardization process, important regulations and recommendations as well as the state of the standardization in Europe, North America, Australia and Brazil and reflects the actual state of the biodiesel standardization world-wide.

Additionally the Biodiesel Subtask has worked out a small study on the state of the development of rapeseed oil as fuel for farm tractors with interesting information on the situation in Germany.

It is planned to publish these reports in a CD version as well as in the Internet. For more information on the Biodiesel Subtask, please contact: Manfred Wörgetter ([Manfred.woergetter@blt.bmlfuw.gv.at](mailto:Manfred.woergetter@blt.bmlfuw.gv.at)) or Dina Bacovsky, ([Dina.bacovsky@blt.bmlfuw.gv.at](mailto:Dina.bacovsky@blt.bmlfuw.gv.at))

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## THE BIODIESEL ASSOCIATION OF CANADA

*Christine Paquette*  
<mailto:christinep@biodiesel-canada.org>

The Biodiesel Association of Canada (BAC) is a national organization that represents the biodiesel industry in Canada. The BAC was formed in December 2003.

The BAC was formed to promote the development of a Canadian commercial biodiesel industry through efforts to support government policy and legislation, to create consumer awareness and acceptance of renewable fuels, to contribute to the creation of common trade standards and product technical specifications, provide a forum for the discussion and study of matters pertaining to the biodiesel industry and maintain an authoritative centre of information on all aspects of significance to

biodiesel. Currently the board consists of members from the Canadian Oilseed Processors Association, the Canadian National Renders Association, the Ontario Soybean Growers Association, the Canadian Canola Growers Association, Canadian Biodiesel Producers and the Canadian Renewable Fuels Association. As this new association gains momentum, we hope to attract other groups to our organization.

In June 2004, Christine Paquette joined the BAC as the Executive Director. Prior to this, she worked with Natural Resources Canada in the alternative fuels area, specifically the ethanol and biodiesel files.

The BAC provides a free information email service containing biodiesel specific and related information through its "BAC News".

For more information refer the association's website at [www.biodiesel-canada.org](http://www.biodiesel-canada.org) or contact Christine.

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## FUTURE TASK 39 ACTIVITIES

*Warren Mabee*  
<mailto:warren.mabee@ubc.ca>

We are planning on two meetings per annum for the remaining two years of the triennium. In 2005, we will host a Special Session at the 27<sup>th</sup> Symposium for Biotechnology for Fuels and Chemicals, to be held in Denver, Colorado. Lund University (Sweden) will host an IEA Task 39 meeting in November 2005. In 2006, the University of British Columbia (Canada) will host the final task meeting, in November 2006.

Reports will also be a part of the deliverables for this Task; the nature and topics of these reports have been discussed at the meeting in Rome/Chattanooga, May 2004. The Task will be contracting work in the next two months, with reports deliverable in the spring of 2005.

## **FUTURE WORKSHOPS/SYMPOSIA**

### **Environmental Solutions Expos 2004**

October 19-21, 2004  
Olympia in London  
<http://www.energy-expo.info>

### **Energy in motion**

Oct. 19 - 2004 to Oct. 20 - 2004  
Amsterdam  
<http://www.eu-conference2004.nl>

### **IHE Int. Trade Fair and Conf. for Wood Energy**

October, 21st - 24th, 2004  
Fairground Augsburg, Germany  
<http://www.ihe-woodenergy.com/>

### **Biofuels Workshop & Trade Show - Pacific and Western Region**

October 25-27, 2004  
Hyatt Regency Hotel  
Sacramento, California, USA  
<http://www.bb ethanol.com/biofuelsworkshop/>

### **Congress Synthetic Biofuels**

Wolfsburg, Germany  
Nov. 3-4, 2004  
<http://www.fnr.de/btl-symposium/>

### **Biomass and Bioenergy Production for Economic and Environmental Benefits/ Annual TASK 30 Meeting**

8 to 11 November 2004  
Historic Francis Marion Hotel Charleston  
South Carolina, USA  
[theo.verwijst@lto.slu.se](mailto:theo.verwijst@lto.slu.se)  
[www.woodycrops.org](http://www.woodycrops.org)

### **Pacific Ethanol & Biodiesel Conference & Expo II**

Bangkok, Thailand  
December 1-3, 2004  
<http://www.pacificethanol.com/>

### **Clean Energy Power**

Berlin  
Jan. 26 - 2005 to Jan. 27 - 2005  
<http://www.energiemessen.de/engl/index.htm>

### **2005 National Ethanol Conference**

The Camelback Inn, a JW Marriott Resort & Spa  
Scottsdale, AZ  
February 7-9, 2005  
<http://www.ethanolrfa.org/nec.shtml#four>

### **ENEX - New Energy 2005 kompakt**

Kielce, Poland  
Mar. 21 - 2005 to Mar. 23 - 2005  
<http://www.enex-expo.com/engl/>

### **Asia Pacific Conference**

Wellington, New Zealand  
May. 9 - 2005 to May. 11 - 2005  
<http://www.apcseet.org/>

### **3rd DUBROVNIK CONFERENCE ON SUSTAINABLE DEVELOPMENT OF ENERGY, WATER AND ENVIRONMENT SYSTEMS**

Dubrovnik - Croatia  
Jun. 5 - 2005 to Jun. 10 - 2005  
<http://www.dubrovnik2005.fsb.hr/>

### **21st Annual Int. Fuel Ethanol Workshop & Expo**

Kansas City Marriott Downtown Hotel & Kansas City  
Convention Center  
June 28-July 1, 2005  
<http://www.fuelethanolworkshop.com/>

### **Non-CO2 Greenhouse Gases (NCGG-4)**

Utrecht, The Netherlands  
Jul. 4 - 2005 to Jul. 6 - 2005  
<http://www.milieu kundigen.nl/pages/ncgg4/>

### **International Hydrogen Energy Meeting**

Istanbul - Turkey  
Jul. 13 - 2005 to Jul. 15 - 2005  
<http://www.ihec2005.org/>

## **WORLD EVENTS/INFORMATION**

*Click the links below to connect to online stories. For our readers using hardcopy, please refer to our website at [www.forestry.ubc.ca/task39](http://www.forestry.ubc.ca/task39)*

[New biodiesel plant hopes to turn waste grease into fuel](#)

[OPIS Launches New Weekly Ethanol and Biodiesel Newsletter](#)

[STMicroelectronics Malta Powers up with 100% Biofuel](#)

[Brazil urges Asia to use more biofuel](#)

[BNSF Moves 10,000th Carload of Ethanol Through BNSF Ethanol Express\(TM\) Unit Train Service](#)

[Minnesota ethanol proposal welcomed by corn producers](#)

[Minnesota governor opens push for stricter ethanol requirement](#)

## CONTACT INFORMATION

Please find information below for both the IEA Bioenergy contacts and IEA Bioenergy Task 39 contacts. Additional information is available at [www.iea.org](http://www.iea.org) and at [www.ieabioenergy.com](http://www.ieabioenergy.com).

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