



# IEA Bioenergy News

## Bioenergy in Germany

Guest Editorial by Birger Kerckow, ExCo Member for Germany



Renewable energies make a key contribution to the three main objectives of German energy policy: economic efficiency, security of supply and environmental sustainability. Between 1995 and 2006, the share of renewables in primary energy consumption tripled from 1.9% to 5.7%. For heat and transport fuels, biomass is by far the most important renewable resource. For electricity, the share of bioenergy so far lags behind those of hydro and wind, but has shown the most dynamic growth rate in recent years. With a turnover of 23 billion Euros, more than 236,000 employees (95,400 for bioenergy) and more than 100 million tons fossil CO<sub>2</sub> emissions avoided in 2006, the renewable energy sector forms an important part of the German economy.

Following the presentation of a comprehensive 'climate and energy package' by the European Commission in January 2007, the European Council adopted a roadmap in March 2007 which includes a binding EU target of a 20% share of renewable energy sources in primary energy consumption by 2020. In line with the EU policy, the German government agreed on an integrated national energy and climate programme in August this year, with ambitious targets for CO<sub>2</sub> reduction, energy efficiency and share of renewables. By 2020, electricity from renewables is targeted to rise to 25-30%, up from 12% in 2006. Heat provided by renewables is set to increase from 6% to 14% and for transport biofuels, an increase from 6% to 20% by volume or 17% by energy content is envisaged. Twenty-nine measures will contribute to reaching these targets, and the legislative proposals for implementation are currently in the political decision making process.

Biomass and bioenergy are of key importance in achieving the targets for 2020. Draft legislation includes measures to promote combined heat and power production; to improve the use of waste from agriculture and forestry; to support the feeding in of biogas into the natural gas grid and to promote district heating in rural areas. For transport biofuels, the federal government and stakeholders have agreed on higher biofuel shares in gasoline and diesel fuel, and on the promotion of flexible fuel vehicles. These points will be included in a general decarbonisation strategy for transport fuels.

Several scientific studies have estimated the medium-term potential for a sustainable bioenergy production as being between 5 and 6 million hectares, i.e. one third of German arable land and pastures. This is more than three times the current area of bioenergy crops (1.8 million hectares in 2007). To minimise possible conflicts with other land uses, such as food production and nature conservation, huge efforts to improve biomass production systems are required. This is a core activity of the Federal Renewable Resources Research programme owned by the Federal Ministry of Food, Agriculture and Consumer Protection and managed by the Agency for Renewable Resources (FNR). This programme also supports R&D on biofuels for transport. So-called second generation biofuels, which combine the advantages of better fuel quality, broader range of (lignocellulosic) feedstocks and higher land use efficiency, will need significant research and technology upscaling efforts (on a national level as well as within international schemes) to reach market stage.

International biomass and biofuels trade will gain importance in the forthcoming years. To ensure sustainability of biomass supply and biofuels, Germany is supporting national and international biomass certification activities.

To make the ambitious national and European renewable and bioenergy targets a reality, strong national activities and increasing international co-operation will be of paramount importance.

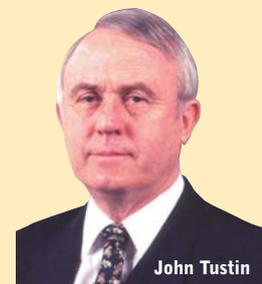
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# From the Secretariat



John Tustin

## ExCo60, Munich, Germany

The 60<sup>th</sup> meeting of the Executive Committee was held in Munich, Germany on 29-31 October, with Kyriakos Maniatis as Chairman and John Tustin as Secretary. The meeting was hosted by the Federal Ministry of Food, Agriculture, and Consumer Protection. The Chairman expressed the appreciation of the ExCo to Birger Kerckow for the excellent meeting and study tour arrangements. Some of the outcomes of the meeting are detailed below.

### Changes in the Executive Committee

New Executive Committee Members are: Mr Sandile Tyatya, South Africa and Mr Paul Grabowski, USA. New Alternate Members are: Dr Arjan Wierda, The Netherlands and Ms Nomawethu Qase, South Africa.



Björn Telenius.

### Election of Chairman and Vice Chairman

Dr Björn Telenius, the Member for Sweden, was elected Chairman and Ir. Kees Kwant, the Member for The Netherlands, was re-elected Vice Chairman.

### Task Participation for 2007

Brazil has confirmed that they will join Tasks 30 and 40; The Netherlands confirmed that they will join Tasks 30 and 31; and Ireland confirmed they will join Task 42. Task participation by the Member Countries now totals 115.

### ExCo60 Workshop

A very successful workshop titled 'Innovation in the Field of Bioenergy Business Development' was well attended by ExCo Members and Task Leaders. Presentations were:

- Emission Trading and Business Opportunities - Martin Gavelius, Öhrlings PricewaterhouseCooper
- The Role of Policy and Institutions: the European Investment Bank - Hans-Harald Jahn, European Investment Bank
- Advancing Cellulosic Ethanol - Alain Destexhe, Novozymes North America Inc
- Creating a Sustainable Biomass Infrastructure - Keith Holder, UOP
- Biomass Heating - National Implementation in the UK - Keiran Allen, The Carbon Trust
- European Cleantech and Bioenergy - Pat Burtis, Amadeus Capital Partners
- Business Development in Developing Countries - Irmgard Herold, New Energy Finance
- Pro-poor Investments in Biofuels: the case of *Jatropha* - Andreas Renner, GEXSI - The Global Exchange for Social Investment.

The presentations made at this workshop are now available on the IEA Bioenergy website.

### Bioenergy Technology Review

A major initiative during the current triennium will be the preparation of a 'Technology Review'. The aim is to provide authoritative input into IEA and national policies, and to position IEA Bioenergy as the reliable source of such information. The review will be aimed at policy and investment decision makers. It will comprise a concise summary, backed up by more in-depth technical analyses in appendices. It will focus on the fuel sources and technologies likely to be able to make a contribution to national and international energy and environmental goals. The differing states of maturity associated with these technologies will be recognised.

Production of the review will be managed by the Technical Coordinator. There will be some important inputs from the Tasks, who will be asked to provide relevant information and reports; review the technical modules produced and comment on the final report. It was agreed to appoint a contractor in early 2008, with the aim of completing the report by the end of 2008, and publishing it in early 2009.

### Energy Technology Essentials

IEA Bioenergy has the opportunity to publish material in a new four page technical fact sheet series called Energy Technology Essentials (ETE's). Produced by IEAHQ, they are used at IEA Ministerial and other policy-type meetings. They provide an excellent mechanism for communicating IEA Bioenergy information to the highest levels. At ExCo59, it was agreed that each Task would produce an ETE instead of a Task Technology Report as a 'one-time-action'. Ten draft ETE's were received and these will be passed to IEAHQ following editing and review.

### Communication Strategy

The Technical Coordinator (TC) proposed that the ExCo develop a communication strategy. Currently, the outputs from the Agreement are primarily aimed at Task participants, researchers and industry, and are not widely known or appreciated by policymakers and 'influencers' in the IEA or National Governments. It is important that the ExCo has a clear view of which stakeholders the Agreement is aiming to influence and that it develops an appropriate strategy to target them. There was strong support for this proposal and it was agreed that the TC should work with a nominated group and bring firm proposals to ExCo61.

### Strategic Publications

The paper titled 'Lifecycle Analysis of Biomass Fuels, Power, and Heat as Compared to their Petroleum-based Counterparts and Other Renewables' is currently with the editorial committee and the final version will be available in early 2008.

The proposal for a 'Handbook of Pellet Production and Utilisation' has been finalised. The project will be coordinated by the Technical University of Graz on behalf of Task 32 and funded 50% by IEA Bioenergy and 50% from Austria.

Mr Max Wohlmannstetter, HDG Bavaria (left) with Ed Hogan, Canada and Arthur Wellinger, Switzerland



## ExCo60 Study Tour

In conjunction with ExCo60, 33 attendees participated in an excellent study tour organised by Birger Kerckow and his colleagues.

The first stop was at HDG Bavaria GmbH, a biomass boiler manufacturer in Massing. The group was welcomed by Mr Max Wohlmannstetter, the Managing Director. Mr Stefan Fuchs then gave a presentation and led a tour of the production facilities. The company manufactures wood-heating systems for farmers, foresters, private homes, wood-working enterprises, communities, hotels, and guesthouses. Their product range includes solid wood boilers, woodchip burners and pellet heating systems. The main features of these are ease of use, reliable operation, low emissions, long intervals between reloading the fuel, and sturdy construction. They also feature a high degree of innovation and automation. With a staff of 180, the company distributes its products throughout Europe and to Southern Hemisphere countries such as New Zealand.

The second stop was at the biogas plant in Pliening, east of Munich. This is one of the largest biogas plants in Germany. Refined biogas is processed to biomethane on location and fed into the natural gas distribution system of a public utility company in Munich – the first system of its kind in Germany.

The plant produces 3.9 million standard cubic metres of biomethane per annum (around 43 million KW hours of energy). This corresponds to an annual natural gas consumption of approximately 1,300 single-family households. The plant was built in 2006 and is operated by Aufwind Schmack GmbH, which finances, develops, and carries out renewable energy projects throughout Europe. The company currently operates 20 biogas plants, which make it one of the country's leading biogas plant operators. Mr Lars Schwitte, a former manager of the plant, hosted the visit.

At the third stop the party was met by Mr Walter Gigl, the Mayor of Sauerlach, Mr Martin Sterflinger, and Mr Michael Gammel, who all gave very informative presentations. This was followed by a tour of the biomass-fuelled Sauerlach ORC technology, communal heat and power plant. When the plant was first built in 2004 it was called an 'outstanding example of municipal commitment to renewable energy supply'. It began as a biomass boiler and a peak-load boiler with a total nominal thermal output of 7 MW. In a second stage a further biomass boiler with an output of 2 MW was installed, followed by an Organic-Rankine-Cycle (ORC) plant for power generation via co-generation. The plant is fired with 6,000 tonnes of regional natural forest wood and left-over wood per annum (53% of the Sauerlach region is covered by forests). Sauerlach has 6,000 inhabitants, 1,250 houses

and a number of small businesses. The plant supplies numerous public buildings, residential houses, and several private and commercial bulk buyers – all connected to a supply network 14 km long. The operator of the plant is Zukunfts-Energie-Sauerlach GmbH (ZES).

Dr Rupert Schäfer, from the Bavarian State Ministry of Agriculture and Forestry, made two very interesting presentations on the bus trip. The first was titled 'Bavarian Biomass Strategy' and the second was about the 'Straubing Centre of Excellence for Renewable Resources'. He illustrated that renewables contribute 7.8% of primary energy consumption in Bavaria – wood (41%) is the most important source. Currently 12% of the arable land in Bavaria (250,000 hectares) is used for agricultural biomass (non-food) production. However, it is estimated that up to 33% of the land base could be used for non-food production without impacting on food production needs. They regard bioenergy as a 'sleeping giant.' Their next goals are to double the contribution of biomass-to-energy production from 80 PJ (2002) to 160 PJ; to optimise land-use; to sensitise the people to the 'biomass opportunity'; and to find the best bioenergy pathways for the various resources.



Jaap Koppejan of Task 32 at HDG Bavaria



Kyriakos Maniatis, EC (left) with Olav Gisleerud, Norway, Birger Kerckow, Germany and Dr Rupert Schäfer, Bavarian State Ministry; at the biomethane plant in Pliening



The study tour group outside the HDG Bavaria plant in Massing, Germany

# Canada-EU Biomass Workshop

## Introduction

Report by Dr J. Peter Hall, ExCo Member for Canada, on the recent Brussels workshop on energy from forest biomass, organised by The Mission of Canada to the European Union.

On September 24 and 25, The Mission of Canada to the European Union organized a two-day workshop on the sustainable production of forest biomass for energy. The workshop brought together experts, policy makers and Trade Commissioners from Canadian posts in Europe to discuss policy challenges, best practices, ongoing research and opportunities for collaboration between Canada and the EU. The seminar followed decisions at the conclusion of this year's Canada-EU summit, where it was agreed that Canada and the EU would cooperate to promote clean, secure, and affordable energy technologies including second-generation biofuels. While much research is being done on both sides of the Atlantic on the development and implementation of viable bioenergy technology (including forest biomass), the potential for deeper and closer cooperation should not be overlooked.

The workshop was designed to demonstrate Canada's commitment to sustainable forest management; to inform Canadian stakeholders of policy developments that will impact the EU market; and to provide a venue for exchange on policy approaches and research needs. It was structured to provide an opportunity to learn about the 'state of play' of energy from forest biomass on each side of the Atlantic; to get an appreciation for best practices and potential pitfalls; and to foster deeper understanding of the opportunities for collaborative research to advance energy from forest biomass. The format included presentations followed by discussions to encourage interactive dialogue among participants. IEA Bioenergy was well represented at the workshop with presentations by the Chairman Kyriakos Maniatis, EU and Vice-Chairman, J. Peter Hall, Canada. Presentations were also made by Rolf Björheden and Antti Asikainen of Task 31.

During the discussions several themes emerged, common to Canada and the EU, that call for both policy responses and scientific research.

## Sustainability of production/forest practices

Biomass energy is considered to be carbon neutral, as new growth absorbs the carbon released when the harvested biomass is converted to energy. However, it is important to know how much biomass we can sustainably remove from the forest environment without adversely affecting or damaging the ecosystem. In addition, more work is required on the processes that we use to harvest the biomass from forests.

Much work is being done in Canada on sustainable sources of biomass, such as selection of species and varieties of short rotation woody crops. Other research is being done into returning nutrients to the forest floor, for example by depositing the left-over ash from biomass-fired heat and power plants. European research has shown that if the wood that is harvested is left in the forest until the needles fall off, that most of the nutrients return to the soil, reducing the possibility of nutrient depletion that may occur if too much biomass is removed.

## How can we access/mobilise the resources

Canada has abundant resources of forest biomass, much of which is located in remote locations or is used to generate energy for sawmill and pulp-mill production. Discussions focused on how to access residual biomass, including what tools, infrastructure and regulatory changes are needed to make use of this potentially immense energy source. This is especially relevant in British Columbia where huge amounts of biomass result from damage to the pine forests caused by the epidemic of mountain pine beetles. Once a tree is killed by beetles, there is a finite period of time when the wood can still be used for biomass. Where the infestation is located in remote areas, most of the biomass cannot be used before it loses its viability.

In Europe, distance and accessibility are also critical issues. In Finland they are looking at using extra-long trucks to transport the wood from the northern forests to end users in the south of the country. By using longer trucks they are able to reduce the number of trucks on the road, thus reducing transport emissions and transport costs. Another solution could be to build biomass-to-energy conversion plants closer to the source of the biomass.

Researchers in Scandinavia are experimenting with new technology combining multiple harvesting functions into one machine. These new machines are designed to harvest logs and package the residual biomass for shipping. By combining functions, there is less impact on the environment, thus making

removal of the biomass more eco-friendly and economically viable. If such logging practices were used in Canada, they could help get the industry off the ground.

Another issue that Europeans face is a high level of private forest ownership. It is therefore incumbent on energy producers interested in producing energy from forest biomass to negotiate harvesting rights with multiple parties who may have limited knowledge of the bioenergy industry.

## Socio-economic issues

The use of biomass as a source of energy could aid in rural development and provide increased employment in economically disadvantaged regions. Furthermore, the mass use of this sort of technology would spur on the development of a 'bio-economy'. It was noted that the use of biomass power plants could be advantageous in Canada's remote communities, many of which are dependent on the use of diesel-fired generators to produce energy. In addition to being cheaper and more environmentally friendly, biomass energy plants would stimulate employment in these communities as a constant supply of biomass would be maintained all year round.

## Public perception and the implementation of bioenergy technologies

While the Canadian public supports the development of clean and renewable sources of energy, there also seems to be a 'not in my backyard' attitude when it comes to locating heat and power plants. Canadians seem to hold on to a somewhat outdated belief that these plants will reduce their air quality. Europeans, in general, seem to be more accepting of biofuels and biofuel plants as viable alternatives to traditional sources and forms of power generation. For example, Austria already has over 1,000 bioenergy power plants of varying size in operation. This higher level of acceptance can be attributed to a more conducive policy and regulatory environment, as well as a heightened sensitivity to dependence on and cost of energy imports. The EU has set an ambitious goal of having 20% of all energy produced by 2020 being renewable, with specific targets for individual types of renewable energy.

The EU's concern about the sustainability of supply has prompted the drafting of sustainability criteria for implementation of biofuels targets which qualify for government incentives. The EU has yet to consider legislating sustainability criteria for biomass, although third party certification of biomass for energy is a real possibility.

## Economic barriers to the bioenergy industry

Barriers include the capital intensive nature of the industry; the remote location of the feedstock; the need for specialised equipment for harvesting, collection and transportation; and the need for specialized technology to convert biomass into energy. Given these barriers, it is quite a difficult industry to enter, particularly for small to medium sized firms. Participants at the workshop commented that this is one area in particular where governments could play a more active role through grants and contributions or tax incentives to encourage investment in bioenergy.

One area where Europeans are increasingly applying biomass as a source of energy is in the heating of their homes. As most European homes are heated with hot water radiators, it is a relatively simple procedure to change the fuel from a non-renewable to a renewable source. Sweden went through the process of conversion supported by subsidies, but now that the technology is in place, heating with biomass is cost-competitive and subsidies are unnecessary. Most homes in Canada are heated using forced air, making it much more difficult and costly to convert to a biomass energy source. In addition, Canada currently lacks a biofuel distribution system which makes it even less convenient and cost-efficient to switch to a biomass powered heating system.

## Follow-up/conclusion

Cooperation and collaboration on renewable, environmentally friendly energy technologies are priorities for Canada and the European Union. This workshop was a unique opportunity for participants from both sides of the Atlantic to share and discuss ideas with each other. Bringing together such a diverse group of participants was an experiment that yielded dividends. Feedback was very positive as each participant took something away from the workshop. The wide interest in the workshop was testament to the potential for biomass energy to contribute to rural development, energy security and the fight against climate change.



## Leadership Recognised

The recent International Fuel Ethanol Workshop and Expo, held in St. Louis, USA was attended by 5,300 registrants from over 23 countries. IEA Bioenergy had a stand and was recognised for its leadership in uniting the international bioenergy community with an award which was presented to Larry Russo (see left). The conference organisers wanted to acknowledge and encourage an international component at the workshop.

## Task 30

The 2007 annual Task 30 workshop was held in Canada from August 12-17, hosted by the National Team Leader Dr Andy Gordon and his associates. The workshop was attended by 20 delegates from Canada, USA, Australia, New Zealand, Italy, Sweden and The Netherlands (who have formally joined the Task). Ten research papers ranging from feedstock production, to new research developments in short rotation bioenergy systems, were presented. The business portion of the meeting was also well-attended. Thanks were given to former Task Leader Theo Verwijst for his contribution over the years and Göran Berndes was welcomed as the new Task Leader.

The workshop was followed by a three-day field tour to the State University of New York College of Environmental Science and Forestry (SUNY-ESF), where numerous willow research trials are underway for biomass production and for phytoremediation. Several Canadian government initiated willow and hybrid poplar biomass pilot demonstration sites were visited during the three-day field tour. The group also visited the new Dynamotive plant in Guelph, which produces bio-oil from biomass through fast pyrolysis (see left).



It was brought to the group's attention that biomass production within an agroforestry context has received significant recognition in Canada over the past several years. Agroforestry land-use practices such as shelterbelts/windbreaks, riparian plantings, tree-based intercropping systems and forest farming systems are being recognised as potential biomass production systems for Canada, while continuing to deliver numerous environmental, economic, ecological and social by-products in a sustainable manner.

## Task 37

On 12-13 November 2007, Task 37 gathered for its last business meeting in Lille, France. The first day was jointly organised with Task 36. Visits were made to two brand new 'dry' digestion plants in Lille and Calais. Both still in the start-up phase, these plants will be used for the anaerobic treatment of source-separated waste. The joint Task meeting included discussions on mutual collaboration on the mechanical-biological treatment of MSW.



## Tasks 29, 38 and 40

On 25-26 October 2007, participants in Tasks 29, 38 and 40 and invited speakers met to discuss the sustainability of bioenergy (see above). The programme consisted of one day of presentations and one day of discussions about local and global issues. The goal of the meeting was to create statements on the sustainability of bioenergy and to foster links and cooperation between the Tasks. The programme, presentations and statements are available on the Task 38 website at: <http://www.ieabioenergy-task38.org/workshops/dubrovnik07/>

## Task 31

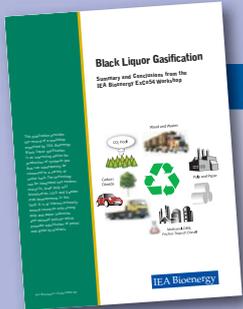
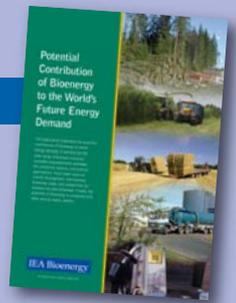
The Task held a successful international workshop in Joensuu, Finland from 29 August to 3 September 2007. The workshop was hosted by the Finnish Forest Research Institute, Wood Energy Network and Northern Woodheat, and attracted 50 participants from nine countries (see below). The workshop programme delivered 24 presentations under the theme of 'Sustainable Forestry Systems for Bioenergy: integration, innovation and information'. These presentations are being distributed to participants on CD, and formally submitted papers will be published in a peer-reviewed journal. The workshop was followed by a two day field study tour in North Karelia. Another major international bioenergy conference and exhibition – Bioenergy 2007 – took place immediately following the Task 31 workshop in the nearby Finnish city of Jyväskylä.



# Publications

## Potential Contribution of Bioenergy to the World's Future Energy Demand

This strategic paper from the IEA Bioenergy Executive Committee highlights the potential contribution of bioenergy to world energy demand. It summarises the wide range of biomass resources available and potentially available, the conversion options and end-use applications. Associated issues of market development, international bioenergy trade, and competition for biomass are also presented. Finally, the potential of bioenergy is compared with other energy supply options. Copies of the paper can be downloaded from the IEA Bioenergy Website at: [www.ieabioenergy.com/Library.aspx](http://www.ieabioenergy.com/Library.aspx) or hard copies are available from the Secretary on request.



## Black Liquor Gasification: Summary and Conclusions from the IEA Bioenergy ExCo54 Workshop

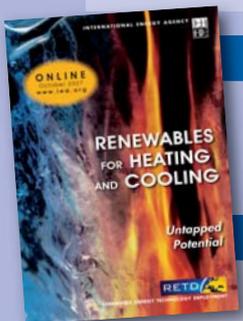
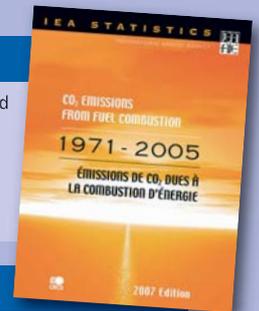
Black liquor gasification is an option for production of synthesis gas that can subsequently be converted to a variety of motor fuels. The technology can be integrated into modern, ecocyclic, kraft pulp mill biorefineries. It is of interest primarily among countries with strong pulp and paper industries and national policies which promote substitution of petrol and diesel by biofuels. This publication provides summaries and conclusions from the presentations made on this subject at the ExCo54 Workshop. Copies can be downloaded from the IEA Bioenergy Website at: [www.ieabioenergy.com/Library.aspx](http://www.ieabioenergy.com/Library.aspx) or hard copies are available from the Secretary on request.

## The Biorefinery Concept: IEA Bioenergy ExCo59 Meeting

The presentations and conclusions from this workshop are available for download from the IEA Bioenergy website at: [www.ieabioenergy.com/Library.aspx](http://www.ieabioenergy.com/Library.aspx)

## CO<sub>2</sub> Emissions from Fuel Combustion – 2007 Edition

The IEA has prepared this annual publication in recognition of fundamental changes in the way governments approach energy-related environmental issues. First published in 1997, it has become an essential tool for analysts and policy makers in international fora such as the Conference of the Parties. The data are designed to assist in understanding the evolution of the emissions of CO<sub>2</sub> from 1971 to 2005, for more than 140 countries and regions, by sector and by fuel. This book is available from the IEA Online Bookshop at: [www.iea.org/w/bookshop/add.aspx?id=36](http://www.iea.org/w/bookshop/add.aspx?id=36)



## Renewable Energy Heating and Cooling - Untapped Potential

This joint IEA/RET D report examines the technologies, current markets and relative costs for heat and cold production using biomass, geothermal and solar-assisted systems. It also evaluates a range of national case studies and relevant policies. Copies can be downloaded from: [//www.iea.org/Textbase/publications/free\\_new\\_Desc.asp?PUBS\\_ID=1975](http://www.iea.org/Textbase/publications/free_new_Desc.asp?PUBS_ID=1975)

## Renewable Energy and Energy Efficiency: Economic Drivers for the 21st Century

R. Bezdek

Renewable energy (RE) and energy efficiency (EE) technologies are driving significant economic growth in the US. In 2006, these industries generated 8.5 million new jobs, nearly \$970 billion in revenue, more than \$100 billion in industry profits, and more than \$150 billion in increased federal, state, and local government tax revenues. This is a comprehensive study of RE and EE industries, including definitions; an estimate of the size and composition of the industries; and a forecast of the growth of these industries to 2030 under three scenarios. Download this report at: [www.eere.energy.gov/biomass/progs/searchdb2.cgi?10023](http://www.eere.energy.gov/biomass/progs/searchdb2.cgi?10023)

## Biofuels: An Important Part of a Low-Carbon Diet

New rules are being developed that will require fuel providers to account for and reduce the heat-trapping emissions associated with the production and use of transportation fuels. This report aims to explain why a comprehensive accounting system for carbon emissions is needed, ie one that measures global warming emissions over a transportation fuel's entire life cycle. It also addresses the need to create performance-based policies that will reward low-carbon transportation fuels. Download this report at: [www.eere.energy.gov/biomass/progs/searchdb2.cgi?10024](http://www.eere.energy.gov/biomass/progs/searchdb2.cgi?10024)

## Energy Markets Outlook: October 2007

This report is intended to start a process of developing an improved understanding of the likely and possible sources of future risk and opportunity which will help stakeholders to form their own assessment as to how best to prepare for and respond to future developments. Download a copy at: [www.berr.gov.uk/energy/energymarketsoutlook/page41839.html](http://www.berr.gov.uk/energy/energymarketsoutlook/page41839.html)



## From Research to Market Deployment: 15th European Biomass Conference Proceedings

This event was one of the largest in the biomass sector in 2007, attracting 1465 participants from 71 countries. It provided the opportunity to take a look at a comprehensive range of issues, from research to development and demonstration, from strategy formulation to international co-operation, from social/economical issues to sustainable utilization of resources. Copies of the proceedings can be purchased from ETA Renewable Energies. Email [anna.andretta@etaflorence.it](mailto:anna.andretta@etaflorence.it) or fax to +39 055 573425.

## The Greenhouse and Air Quality Emissions of Biodiesel Blends in Australia

Beer T, Grant T, Campbell PK

This report undertakes life cycle analyses for greenhouse gas and criteria pollutants on a range of biodiesel blends and pure biodiesel. The research concludes that using pure biodiesel or blending biodiesel with standard fuel can reduce greenhouse gas emissions from the transport sector. The greenhouse gas savings do however depend on the feedstock used to produce the biodiesel. Download this report at: [//www.csiro.au/resources/pf130.html](http://www.csiro.au/resources/pf130.html)

# Calendar of Events

## IEA Bioenergy Meetings

**Task 29** will be combining its business meetings with local/regional conferences in Ireland in May 2008 and Japan in October 2008. Contact Keith Richards  
Email: [keith.richards@tvenergy.org](mailto:keith.richards@tvenergy.org)

**Task 30** is organising a meeting as a side event to World Bioenergy 2008 (27-29 May 2008) in Jönköping, Sweden, jointly with the Alliance for Global Sustainability Programme. It will also hold a seminar on 'Roles for bioenergy in a water scarce world' during World Water Week in early August 2008 in Stockholm, Sweden. Contact Göran Berndes  
Email: [goran.berndes@chalmers.se](mailto:goran.berndes@chalmers.se)

A joint workshop of **Tasks 31, 38 and 40** will take place in September 2008 at Warwick University, Warwick, UK. It will include an Industry Day with the UK Association of Professional Foresters. Contact Jim Richardson, Task 31  
Email: [jrichardson@on.albn.com](mailto:jrichardson@on.albn.com)

**Task 32** is planning for its next meeting to be in China in March 2008. Contact Jaap Koppejan  
Email: [jaap.koppejan@procede.nl](mailto:jaap.koppejan@procede.nl)

**Task 33** is likely to meet from 21-23 April 2008 for a Task 33/European GasNet workshop on 'Health, Safety, and Environmental Aspects of Small-scale Biomass Gasification Systems.' Contact Suresh Babu  
Email: [suresh.babu@gastechnology.org](mailto:suresh.babu@gastechnology.org)

**Task 37's** next meeting will be held in Bournemouth, UK on 14 May 2008. It will be a workshop for administrators and potential operators of biogas plants. Contact Art Wellinger  
Email: [arthur.wellinger@novaenergie.ch](mailto:arthur.wellinger@novaenergie.ch)

**Task 38** will hold a workshop 'Transportation Biofuels: For GHG mitigation, energy security or other reasons?' in Salzburg, Austria from 5-6 February 2008. This will be followed by the Task business meeting. Contact Susanne Woess-Gallasch  
Email: [susanne.woess@joanneum.at](mailto:susanne.woess@joanneum.at)

**Task 40** is hosting an expert workshop jointly with the IEA Statistical Unit on 25 February 2008 at IEA HQ in Paris, France. It will focus on the development of meaningful statistics for sustainable bioenergy trade. Contact Richard Sikkema  
Email: [R.Sikkema@uu.nl](mailto:R.Sikkema@uu.nl)

It will also convene a meeting from 27-29 May 2008, as a side event to the World Bioenergy Conference and Exhibition in Jönköping, Sweden. This will include a workshop on 'The effects on trade from expected incentives based on more ambitious political targets and visions.' Contact Bo Hektor  
Email: [bo.hektor@talloil.se](mailto:bo.hektor@talloil.se)

**ExCo61** will be held near Oslo, Norway on 14-16 May 2008.

**ExCo62** will be held near Dubrovnik, Croatia on 14-15 October 2008.

**ExCo63** will be held in The Netherlands in May 2009.

**ExCo64** will be held in Belgium in October 2009.

**ExCo65** will be held in Japan in May 2010.

## Other Events

**6th European Motor Biofuels Forum**  
9-10 January 2008, Rotterdam, The Netherlands  
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Fax: +31 30 6917 394  
Email: [jvisser@europoint.eu](mailto:jvisser@europoint.eu)  
Web: [www.europoint-by.com/events/?biofuels2008](http://www.europoint-by.com/events/?biofuels2008)

**17th Annual Conference of the German Biogas Association**  
15-17 January 2008, Nuremberg, Germany  
Contact: Veronika Kellner  
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Email: [veronika.kellner@nuernbergmesse.de](mailto:veronika.kellner@nuernbergmesse.de)

**Bioenergy for Central Europe**  
16-19 January 2008, Graz, Austria  
Contact: Austrian Biomass Association  
Tel: +43 1 533 07970  
Fax: +43 1 533 079790  
Email: [office@biomasseverband.at](mailto:office@biomasseverband.at)  
Web: [www.biomasseverband.at](http://www.biomasseverband.at)

**World Future Energy Summit**  
21-23 January 2008, Abu Dhabi, UAE  
Contact: Emma Hilditch  
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Email: [E.Hilditch@WFES08.com](mailto:E.Hilditch@WFES08.com)  
Web: [www.wfes08.com/](http://www.wfes08.com/)

**International Congress on 2nd Generation Biofuels**  
23-24 January 2008, Pamplona, Spain  
Contact: Elena Doria  
Tel: +34 948 274 050  
Email: [info@biofuel2g.com](mailto:info@biofuel2g.com)  
Web: [www.biofuel2g.com](http://www.biofuel2g.com)

**2nd European Union Sustainable Energy Week**  
28 January – 1 February 2008, Brussels, Belgium  
Email: [eusew@sustenergy.org](mailto:eusew@sustenergy.org)  
Web: [www.eusew.eu/index.cfm](http://www.eusew.eu/index.cfm)

**European Renewable Energy Policy Workshop**  
30 January 2008, Brussels, Belgium  
Contact: EREC  
Tel: +32 2 546 19 33  
Fax: +32 2 546 19 34  
Web: [www.erec.org/calendar-of-events/event-sites/workshop.html](http://www.erec.org/calendar-of-events/event-sites/workshop.html)

**ENVIETECH 2008**  
31 January - 1 February 2008, Vienna, Austria  
Contact: Dr Roland Ernest Poms, ICC  
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Fax: +43 1 707 7204 0  
Email: [roland.poms@icc.or.at](mailto:roland.poms@icc.or.at)  
Web: [www.icc.or.at](http://www.icc.or.at)

**National Biodiesel Conference & Expo 2008**  
3-6 February 2008, Orlando, Florida  
Web: [www.biodieselconference.org/2008](http://www.biodieselconference.org/2008)

**5th International Biofuels Conference**  
7-8 February 2008, New Delhi, India  
Contact: B Anil Kumar  
Tel: 91 124 4303868  
Fax: 91 124 4303862  
Email: [anil@winrockindia.org](mailto:anil@winrockindia.org)  
Web: [www.winrockindia.org](http://www.winrockindia.org)

**Bioenergy World Europe 2008**  
7-10 February 2008, Verona, Italy  
Contact: Céline Nehmé  
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Fax: +33 384 43 24 03  
Email: [bioenergy-world@bees.biz](mailto:bioenergy-world@bees.biz)  
Web: [www.bioenergy-world.com/europe/2008/](http://www.bioenergy-world.com/europe/2008/)

**Bioenergy Europe 2008. Markets and finance for biofuels and biomass**  
18-19 February 2008, London, UK  
Tel: +44 20 7251 9151  
Fax: +44 20 7251 9161  
Email: [info@environmental-finance.com](mailto:info@environmental-finance.com)  
Web: <http://www.environmental-finance.com/conferences/2007/BioEur08/intro.htm>

**POWER-GEN Renewable Energy & Fuels 2008**  
19-21 February 2008, Las Vegas, USA  
Contact: Michael Eckhart, ACORE  
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Email: [meckhart@acore.org](mailto:meckhart@acore.org)  
Web: [pgr08.events.pennnet.com](http://pgr08.events.pennnet.com)

**13th Annual National Ethanol Conference: Policy & Marketing**  
25-27 February 2008, Orlando, Florida  
Email: [info@ethanolrfa.org](mailto:info@ethanolrfa.org)  
Web: [www.ethanolrfa.org/industry/conference/](http://www.ethanolrfa.org/industry/conference/)

**Washington International Renewable Energy Conference (WIREC) 2008**  
1-7 March 2008, Washington DC, USA  
Contact: Tom Gibson  
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Email: [wirec@acore.org](mailto:wirec@acore.org)  
Web: [www.acore.org/programs/wirec/](http://www.acore.org/programs/wirec/)

**World Sustainable Energy Days**  
5-7 March 2008, Wels, Austria  
Contact: OÖ. Energiesparverband  
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Email: [office@esv.or.at](mailto:office@esv.or.at)  
Web: [www.esv.or.at/esv/index.php?id=217&contUId=0](http://www.esv.or.at/esv/index.php?id=217&contUId=0)

**World Biofuels Markets Congress & Exhibition**  
7-8 March 2007, Brussels, Belgium  
Contact: Green Power Conferences  
Tel: +44 207 801 6333  
Email: [info@greenpowerconferences.com](mailto:info@greenpowerconferences.com)

**8th European Conference on Industrial Furnaces and Boilers**  
25-28 March 2008, Vilamoura, Algarve, Portugal  
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Email: [albino.reis@cenertec.pt](mailto:albino.reis@cenertec.pt)  
Web: [www.cenertec.pt](http://www.cenertec.pt)

**European Climate Conference. Climate Protection & Renewable Energy: Medium and Small Communities Facing the Challenge**  
2-4 April 2008, Rovigo, Italy  
Tel: +49 761 36 892 20  
Fax: +49 761 36 892 29  
Email: [rovigo2008@iclei.org](mailto:rovigo2008@iclei.org)  
Web: [www.iclei.org/rovigo2008](http://www.iclei.org/rovigo2008)

**Ethanol 2008 Australia**  
8-10 April 2008, Sydney, Australia  
Tel: +61 7 3360 7000  
Fax: +61 7 3360 7070  
Email: [ausconferences@bbbiofuels.com](mailto:ausconferences@bbbiofuels.com)

**Biomass '08 Conference & Trade Show**  
15-17 April 2008, Minneapolis, Minnesota, USA  
Web: [www.biomassconference.com](http://www.biomassconference.com)

**30th Annual Symposium on Biotechnology for Fuels and Chemicals**  
4-7 May 2008, New Orleans, Louisiana, USA  
Contact: Christine Lowe  
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Web: [www.slmhq.org/meetings/30symp/index.html](http://www.slmhq.org/meetings/30symp/index.html)

**World Bioenergy Conference & Exhibition**  
27-29 May 2008, Jönköping, Sweden  
Contact: SVEBIO  
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Email: [info@svebio.se](mailto:info@svebio.se)  
Web: [www1.elmia.se/worldbioenergy/](http://www1.elmia.se/worldbioenergy/)

**16th European Biomass Conference and Exhibition: From Research to Industry and Markets**  
2-6 June 2008, FERIA Valencia, Spain  
Email: [biomass.conference@etaflorence.it](mailto:biomass.conference@etaflorence.it)  
Web: [www.conference-biomass.com](http://www.conference-biomass.com)

**Renewable Energy Europe**  
3-5 June 2008, Milan, Italy  
Contact: Asif Ijaz  
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Email: [aijaz@pennwell.com](mailto:aijaz@pennwell.com)  
Web: [ree08.events.pennnet.com](http://ree08.events.pennnet.com)

**Bioenergy Conference & Exhibition 2008**  
3-5 June 2008, Prince George, BC, Canada  
Contact: Cam McAlpine  
Tel: +1 250 961 6611  
Fax: +1 250 764 0533  
Web: [www.bioenergyconference.org](http://www.bioenergyconference.org)

**24th Annual International Fuel Ethanol Workshop & Expo**  
16-19 June 2008, Nashville, Tennessee, USA  
Web: [www.fuelethanolworkshop.com](http://www.fuelethanolworkshop.com)

**Energex**  
6-10 July 2008, Vienna, Austria  
Contact: AIMS  
Tel: +43 1 402 77 55  
Fax: +43 1 402 77 31  
Email: [energex2008@aims-international.com](mailto:energex2008@aims-international.com)  
Web: [www.aims-international.com](http://www.aims-international.com)

**World Renewable Energy Congress X**  
19-25 July 2008, Glasgow, Scotland, UK  
Contact: Prof. Ali Sayigh, WREN  
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## Objectives of IEA Bioenergy

IEA Bioenergy is an international collaborative agreement set up in 1978 by the International Energy Agency (IEA) to improve international cooperation and information exchange between national bioenergy RD&D programmes. IEA Bioenergy aims to accelerate the use of environmentally sound and cost-competitive bioenergy on a sustainable basis, and thereby achieve a substantial contribution to future energy demands.

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Task 29: Socio-economic drivers in  
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Web: [www.Task29.net](http://www.Task29.net)

Task 30: Short rotation crops for bioenergy  
systems  
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Chalmers University of Technology  
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Fax: +46 31 722 3150  
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Web: [www.shortrotationcrops.org](http://www.shortrotationcrops.org)

Task 31: Biomass production for energy from  
sustainable forestry  
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Task 33: Thermal gasification of biomass  
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Task 34: Pyrolysis of biomass  
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Task 36: Integrating energy recovery into  
solid waste management systems  
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Task 37: Energy from biogas and landfill gas  
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Task 38: Greenhouse gas balances of biomass  
and bioenergy systems  
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Task 39: Commercialising 1st and 2nd  
generation liquid biofuels from biomass  
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Task 40: Sustainable international bioenergy  
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Task 42: Biorefineries: co-production of fuels,  
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