



EUBIA

European Biomass
Industry Association
Rond-Point Schuman, 6
B-1040 Brussels
Tel : +32 2 28 28 420
Fax : +32 2 28 28 424
eubia@eubia.org
www.eubia.org

EUBIA Headoffice

President : Mr. Tord Fjällström
General secretary : Mr. Giuliano Grassi

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Editorial

First of all, we would like to express our best wishes for 2005: Happiness, good times and success!

There is a wide consensus that renewable energies sources will provide a major contribution to climate change mitigation and energy supply in the long term. At present the renewable energies industry is one of the fastest growing sectors in the EU.

Unfortunately, with the exception of the positive example from some countries like: Sweden, Finland, Austria, bioenergy is still at a modest level of deployment, in comparison with its large estimated potential. This is mainly due to:

- the complexity of the bioenergy sector with its wide range of possible schemes and a wide range of required technologies;
- the problem of a stable supply of biomass resources;
- the difficulties of economic competitiveness if side-benefits are not considered.

However with the obligations of the Kyoto-Protocol and the approval of several EC Directives the economic perspectives of bioenergy are improving considerably.

EUBIA has made a particular effort to:

- identify sustainable economic activity by means of innovative bioenergy schemes and industrial complexes based on commercial technologies;
- promote new schemes and technologies, for the production of bioethanol from sugar / starch crops;
- enhance at the time of globalisation the international cooperation between EU, China, the Russian Federation, Brazil, etc. to accelerate the industrial collaboration and the deployment of bioenergy

Best wishes for 2005, and let's take biomass forward!

Dr. Giuliano Grassi
EUBIA General secretary

A cooperation agreement signed between EUBIA and the Federal Agency of Science and Innovations of the Russian Federation



The Federal Agency of Science and Innovations of the Russian Federation and the European Biomass Industry Association intend to improve mutual co-operation

On November 2004, the Federal Agency of Science and Innovations of the Russian Federation and the European Biomass Industry Association pre-signed a Framework Agreement that was officially signed in Venice the 13 January 2005 by Mr. S. Mazurenko, representing the Federal Agency of Science and Innovations of the Russian Federation, and by Mr. Giuliano Grassi the General Secretary of the EUBIA.

Cooperation in Bioenergy with the Russian Federation is considered to be of great relevance for the following reasons:

- The long term theoretical bioenergy potential of the Russian Federation is very impressive and of the order of 30 million bbl/day equivalent to 3 times the present crude-oil production of Saudi Arabia and Russian Federation.
- The Russian Federation which is actually a major producer and exporter of oil and natural gas (~ 550 MTOE/y) could still remain a major producer and exporter of Synthetic biofuels after the depletion of conventional hydrocarbons (expected around the year 2050).
- Even taking into account the significant oil and natural gas industrial infrastructure (logistics, supply and conversion technologies) of the Russian Federation, a time period of 30 years is considered necessary for biofuels as new energy vector, to penetrate 10% of the market, once the technology has reached the commercial level.
- Although The Russian Federation owns a large basis of scientific and technology know-how it will benefit from a wide cooperation in this promising bioenergy sector, especially in the vital sector of synthetic biofuels for transport (bioethanol, biomethanol, biosyngas, biohydrogen, Fisher-Tropsch diesel, DME, etc.).
- The potential total number of new diversified direct and indirect jobs needed for the exploitation of this huge amount of Russian Federation biomass resources is estimated at around 32 million jobs.

This framework agreement between both organisations aims to contribute to the implementation and widening of the scientific technical, industrial cooperation for promoting modern strategies and innovative bioenergy technologies and systems for biomass production, conversion and efficient utilization on the base of equality and mutual benefits; to enhance the exchange of information, to promote application of bioenergy also through technological transfer, to facilitate the networking in sciences, engineering and business.

Major envisaged topics for future action are:

1. Stabilization of humid biomasses or mixtures of any type, by:
 - small/large capacity mechanical drying and pelletisation units;
 - mobile pelletisation units
2. Small capacity efficient multifuels cogeneration units (50-1,000 KWe) in particular fed with solid biomass;
3. Microgas turbine power generators (fed with biofuels);
4. Integrated Bioenergy Complexes for sustainable rural villages development;
5. New industrial process for commercial bioethanol production (low energy reduced investment);
6. Biohydrogen, Biomethanol, BioSynGas, Fisher-Tropsch fuels production from agro-forestry residues;
7. Large scale integration of bioenergy with petro-chemical complexes;
8. New technology for dehydration of synthetic fuels by low cost synthetic absorbing crystals;
9. Biomass charcoal pellets for syderurgical uses (mineral reduction, high quality alloys).

Support activities like joint workshops, conferences, publications are envisaged. A permanent Working Committee will be established for the implementation of the agreement and the development of a cooperation strategy on specific programmes. A first operation of technological transfer and cooperation in the sector of new pelletisation technology, small cogeneration plants is under way with EUBIA SME Members (France, Slovakia, Sweden, Italy).

New Projects

BIOPROS

EUBIA will coordinate 25 partners from 9 countries within the BIOPROS project, a FP6 Collective Research Project, starting in 2 or 3 months. The aim of the project will be to explore the multi-functional potentiality of biomass plantations (also as biofilters) and to search optimised practical solutions for the safe application of wastewater and sludge for irrigation and fertilisation, improving the biomass production of Short-Rotation-Plantations.

The economic situation of European farmers deteriorated constantly during the last decade because of the pressure of increasing costs on agricultural products. In 2003 the agricultural sector was suffering from a 20% reduced income, and an increasing number of farmers had serious economic problems or even abandoned their business. The foreseen decoupling of subsidies from fixed production rates will most certainly lead to further price deteriorations especially for food products and will aggravate the difficult situation for agricultural SMEs. By including the 10 new Member States this development concerns more than 11.9 million agrarian enterprises in the EU25 (most of them SMEs). Instead of price stability, future EU subsidies are meant to strengthen the farmers' role in rural development and fulfilment of quality standards for environment, animal protection and food security. To be competitive, farmers throughout the EU must adapt their business activities in terms of alternative products and general quality requirements.

A huge potential to provide farmers with significant alternative income arises from agricultural production of wooden biomass in so called multifunctional Short-Rotation-Plantations (SRP). In particular SRPs fast growing tree species (currently mainly willows and poplars) can be cultivated under application of wastewater and/or sewage sludge for irrigation and fertilisation. The application of these resources, avoiding water stress, can increase annual yields up to 2 times to about 12-17 t of dry matter/ha/y (FAIR5 CT97-3947, final report). So the income for SRP farmers emerges from both high production of wooden biomass and from biological treatment of the applied "human wastes" by the crops' nutrient and water demand.

Market prices for wooden biomass will rise in parallel with the fast growing biomass demand for wood-chips, wood-pellets for heat & power, liquid biofuels production and other industrial products. However, apart from the economic biomass potential, the main benefit for SRP farmers results from the wastewater and sludge treatment performance in the plantation. The potential of each resource thereby depends on the local treatment situation and local growing soil characteristics. In areas with high connection rates to modern treatment facilities the potential of SRPs arises from its flexibility and adaptation to wastewater or sludge application.

Effluents from wastewater treatment plants can efficiently be used for irrigation, by avoiding direct discharge and providing an additional biological treatment step. Sludge, as a residue from wastewater treatment procedure can be used for SRPs fertilisation. In areas with low access to modern treatment facilities, especially in the dispersed rural regions of the New Member States and Candidate Countries, SRPs will be a low-cost alternative for the construction of cost intensive high standard treatment technologies.



The main objectives of the BIOPROS project is to gain sufficient knowledge by conducting R&D activities about identification of optimal SRP operations, the identification of potential viable markets and related processing technologies, the transfer of knowledge through standards practice and then disseminate the knowledge and results to the IAGs and their SME members. Apart from the analysis of the different regional potentials and the improvement of operational knowledge the project work will mainly focus on full environmental and hygienic SRP compatibility with the existing legislation. R&D results will be

transferred into standards for best SRP practice and further appropriate training and dissemination tools, like SRP guidelines containing general and specific regional aspects. Finally, exploitation activities will lead to business development and continuation after the project. Thus BIOPROS will contribute to promote SRP biomass production by SMEs throughout Europe and abroad improving their economic competitiveness.

BIOSOUTH

This new Altener project started in February this year and gathers 14 partners from 6 European countries. The production and utilisation potential of solid biofuels for heating and cooling applications in southern Europe will be assessed from technical and economic perspectives.



The BIOSOUTH project will last 26 months and its overall budget amounts 943.000 EUR, half of which will be funded by the European Commission. The kick-off meeting has taken place on February 2nd 2005, in Pamplona, the Navarre region capital.

The aim of the project is to carry out a techno-economic assessment of the entire solid biofuel cycle, from the biomass collection to the heating / cooling production in two pilot regions of southern Europe, namely the Navarre region in Spain and Tuscany, both of which have an interesting potential for solid biofuels. The project consortium will ensure that information, knowledge and experiences available in some EU countries where the bio-heating market is more developed (Finland, Sweden, Austria) are properly transferred and adapted to these southern European regions, especially considering the local market conditions and different biomass resources. Barriers for the solid biofuels utilisation will be identified, and a relevant sectoral development strategy will be elaborated and proposed to the local governments that have already shown a great interest in the project.

One particular expected outcome of the Biosouth project is to promote the use of biomass for heat generation and cooling applications in southern Europe, through the definition of stable economical support policies for the regional governments of Navarre and Tuscany. Other significant results will directly derive from the project, such as (i) a contribution to the reduction of carbon dioxide emissions, (ii) a contribution to the creation of new and stable rural employment in the biomass sector and (iii) an increased public awareness about the potential and benefits deriving from the use of the solid biofuels in the target regions.

The project coordinator is the Spanish CENER-CIEMAT Foundation (Renewable Energy National Centre) that was created in 1999. The Foundation supports the renewable energies development through the generation, acquisition and diffusion of high-level scientific and technical knowledge. The Foundation also provides support to the market players and to public institutions regarding technical and legal issues.



EUBIA will actively take part in the project coordination and the dissemination tasks at an European level. Three members of EUBIA are also involved in the project: ETA-Renewable energies (Italy), Energidalen (Sweden) and University of Florence (Italy). ETA-Renewable energies will have a prominent role in the BIOSOUTH project as it will act as general coordinator for all the activities on the Italian side and will co-lead 5 of the eight work packages, including:

evaluation of biofuel resources; harvesting and handling of forest residues; biofuel production and distribution logistics; biomass heating and cooling markets analysis; communication and dissemination of results. Energidalen will be a key partner, heavily involved in the aspects related to the biofuel production technology and the supply logistics. The Energy department of the University of Florence will also participate in a case study concerning the biofuel supply to tourist resorts in mountain areas, as well as to the communication and dissemination of results.

Ongoing projects

PELLETS FOR EUROPE

This Altener project aims at supporting the development of the European pellet market in Europe. EUBIA has been actively involved, providing data on market actors and analysing the critical factors for agricultural pellets penetration and large-scale deployment. One of the latest outcomes of the project is a report on possible strategies to overcome agri-pellet market obstacles.

The report on strategies to overcome agri-pellet market obstacles prepares the way for concrete dialogue and stakeholder meetings. It focuses fully on agri-pellets, as laid down in the project work programme. Two main parts can be identified:



- The first part proposes strategies to promote the pellet market. This is a "Market Promotion Action Plan" based on the expertise and experience gained in the course of the Pellets for Europe project.
- The other part groups a set of specific reports ("Experiences from Northern Europe"; "Strategies for Italy"; "Strategies for Greece"; "Strategies for Spain"), which contains detailed information and knowledge used to formulate market strategies. They provide valuable information for any planned market promotion activities in the targeted countries.

production their market potential is considerable. Yet, the European microturbines market is still in its early stages. Currently, no liquid bio-fuel burning microturbine is operated for commercial application in Europe. However, several installations have been set up for testing and demonstration purposes. Further research is needed to improve their economic and technical performance, especially when using biofuels. High installation and biofuel costs impede bioturbine market take off.



Microturbine manufacturers are interested in developing this biofuel-capability, and several liquid bio-fuel activities are planned. This situation calls for economic and technical improvements. With respect to technical improvements, research efforts are ongoing concerning general efficiency improvements and (in case of liquid biofuels) focusing on the necessary microturbine modifications, due to the different chemical and physical properties of bio-fuels.

The economic attractiveness can be increased by means of financial support on a national and European level.

Furthermore, bio-fuelled microturbines can be considerably more competitive for power output exceeding 100 kWe, because of the high cost of auxiliary equipment, which does not depend on the plant size.

For already existing microturbine units, biogas utilisation shows excellent conditions for profitable and reliable application. The most important advantages that may motivate customers to use microturbines instead of conventional technologies are:

- Capability for very low BTU contents between 30% and 60% methane)
- Extremely low emission rate (<19 ppm NOx)
- Low maintenance costs
- Approximately a 50% longer lifetime in comparison with engine generators
- Low noise and vibration
- Compactness

Most of the current testing activities are carried out on biogas (especially landfill gas and sewage treatment gas). Problems that obstruct microturbine biogas applications concern microturbine equipment parts and lack of experience, while microturbine technology itself proves a stable and reliable performance. Also compressors are a problem because of their price. Today, a considerable installation number in the short-term can be prospected for microturbines running on biogas. Both the economic and technical conditions for biogas microturbines are regarded to be ready for the market and competitive, especially in the green energy generation sector, where extra revenues are paid for renewable fuels utilisation.

Please visit the project web page for more information: <http://www.bioturbine.org/>

LAMNET

LAMNET is a global network of 48 institutions (knowledge centres and SMEs) from 24 countries worldwide conceived by EUBIA and that was set up to face urgent wide needs for improved and regionally adapted bioenergy applications. It is funded by the European Commission in the framework of the specific research and technological development programme 'Confirming the International Role of Community Research'.



Objectives

Building upon the excellent networking opportunities offered by the European Commission's INCO Programme, the LAMNET World Network on Bioenergy succeeded in setting-up a trans-national forum for the promotion of the sustainable use of biomass in Latin America, Europe, China and Africa during the last 3 years.

The purpose of this Global Bioenergy Network is:

- to address worldwide the adequate utilisation of biomass residues and energy crops
- to make use of selected reliable and proven technologies and systems
- to arrive at local, regional, national and international solutions for bioenergy applications
- to contribute to poverty alleviation and sustainable development
- to develop and implement policies for the enhanced utilisation of biomass and bioenergy worldwide.

Partnership

The global bioenergy network LAMNET consists of 48 partners and 150 associate partners from more than 35 countries worldwide with excellent expertise in the field of biomass.

The overall co-ordination of the network is carried out by WIP in partnership with ETA and EUBIA, the European Biomass Industry Association, while the Latin American organisations, Brazilian National Reference Centre on Biomass (CENBIO) and the National University of México (UNAM) act as co-ordination support points on the South- and Central American continent.



Activities

12 LAMNET workshops have been organised in Europe (Amsterdam, Rome), Africa (Durban), Latin America (Brazil, Chile, Mexico, Venezuela) and China (Beijing, Dalian, Guangzhou) stimulating the exchange of knowledge between international bioenergy experts and contributing to the elaboration of worldwide bioenergy strategies and policies as well as the identification of opportunities for international technology co-operation projects.

Efficient dissemination of the results of this project is realised through the establishment of a project web site (www.bioenergy-lamnet.org), the publication of a periodical newsletter and the elaboration of a variety of bioenergy technology leaflets focussing on the identification of relevant bioenergy technologies and systems, selected on the basis of maturity of the technology, cost-effectiveness, simplicity of maintenance, social acceptability and the impact on development.

Results

The following results have been achieved in the framework of the LAMNET World Network on Bioenergy and will be subject to follow-up international cooperation activities:

International Cooperation on Bioenergy Technologies

- Promotion of biomass pelleting technologies in South Africa, Latin America and China for the production of sustainable 'green energy'.
- Support for technology cooperation aiming at improved electricity generation based on sugar cane bagasse (Brazil, South Africa).
- Increased utilisation of bioenergy technologies in China for rural development, environment protection and improved rural energy supply.
- Promotion of biogas applications in Chile and stimulation of international biogas cooperation involving partners from Europe, China and Latin America.
- Support for technology cooperation (Europe-China) aiming at the innovative combined production of bioethanol and BtL- (Biomass to Liquid) Diesel based on Sweet Sorghum.
- Stimulation of international co-operation between developing countries and the EU in the field of bio-fuel production for sustainable transport applications (Cooperation China - Latin America - EU).

Finally, the European Biomass Industry Association, succeeded to WIN the YEAR 2003 ROUND of the European Commission's Campaign for Take-Off (CTO) Award for 'Best Renewable Energy Partnership with Developing Countries'. The CTO Award Ceremony was held in the framework of the 'European Conference for Renewable Energy - Intelligent Policy Options' in Berlin in January 2004.

LAMNET Project Workshop in Viña del Mar, Chile, in the framework of the International Workshop 'Bioenergy for a Sustainable Development'

The aim of this international workshop was to promote and improve the knowledge of bio-energy in Chile and in the world as a key tool for sustainable development, and for contributing to the development of clean technologies and the improvement of the quality of the environment. Additionally, this event provided a forum to discuss policies and regulations related to the use and development of alternative sources of energy in Chile and worldwide.

◆ The presentations of the LAMNET Project Workshop in Viña del Mar can be downloaded from the project website: <http://www.bioenergy-lamnet.org/>

LAMNET Roundtable - Global Network on Bioenergy: 'Biomass for a strategic Energy supply in China'.

The LAMNET Roundtable - Global Network on Bioenergy met in Beijing, China to discuss cooperative efforts in the field of bioenergy between Chinese and European biomass experts. The roundtable brought together top experts to continue the effort to promote schemes for bioenergy strategies and implementations in China.

The secretary of EUBIA has also elaborated six leaflets with the assistance of ETA:

- Refined Bio-Fuels Pellets and Briquettes - characteristics, uses and recent innovative production technologies;
- Microdistillery - for decentralised bioethanol production;
- Modern Bioenergy Village Complex - integrated production of food, animal feed, energy;
- Biomass Gas Generators to supply Low pollution Cooking Fuels;
- Biofuels for Transport;
- Sweet Sorghum - one of the best world food-feed-energy crop.

These leaflets have been distributed worldwide (China, Russian Federation, Brazil, Chile, Mexico, South Africa, etc.).

◆ The presentations of the LAMNET roundtable in Beijing can be downloaded from the project website: <http://www.bioenergy-lamnet.org/>

Recently submitted proposals



EUBIA is a key partner for bio-energy projects due to its recognized expertise, its international orientation and the numerous worldwide contacts it has developed for a decade. EUBIA was invited to participate in many proposals under the last FP6 call on December 8th 2004. The following is a short overview of 6 project proposals:

PLASORGEX

Coordinator: ETA - Renewable Energies (<http://www.etaflorence.it>)

This ambitious proposal aims to establish a global platform of expertise for the sustainable, cost-competitive production of bioethanol and other biofuels from sweet sorghum in Europe and worldwide in view of their future commercial production. The exploitation of particular varieties of sweet sorghum, presenting a specific high economic value, anticipate a production cost in Europe for bioethanol of about 250 €/t. This STREP proposal involves 15 partners from 11 countries, among which Brazil, China and the Russian Federation.

RESTMAC

Coordinator: EREC (<http://www.erec-renewables.org>)

This proposal deals with the market creation for renewable energy technologies, through EU RES technology targeted marketing campaign. This SSA proposal gathers 12 partners, among which leading EU renewable energy associations (EPIA, EUBIA, ESHA, EGEC, AEBIOM, EUREC Agency and EWEA).

EMINENT2

Coordinator: TNO - Netherlands Organisation for Applied Scientific Research (<http://www2.tno.nl/>)

The strategic objective of EMINENT is to strengthen the European industry and policy institutions by establishing and operating a network that assesses results from science and technology research for the purpose of enhancing and accelerating the market introduction of energy technologies. This SSA groups together 15 partners from 14 countries.

BIOPLANT

Coordinator: Chalex Research (<http://www.chalex.co.uk>)

This proposal aims to examine the current science and technological trends of biogas plants (BPs) from conception, through design/manufacture, and operational management. This CA proposal gathers 26 partners from 12 countries.

LIGA-BI

Coordinator: Energy Centre Bratislava (<http://www.ecb.sk>)

This proposal is focused on the promotion and dissemination of biogas small-scale CHP technologies, including bio-microturbines. This SSA gathers 13 partners from 10 countries.

RESMAN

Coordinator: EnergySys Ltd (<http://www.energysys.com.pl/>)

The main objective of this proposal is to improve the overall effectiveness of the transition towards renewable energy systems, through a rationalisation of the system management practices - including optimisation of the technological mix on a local and national levels, consequently making the renewable energy policy goals more achievable. This SSA involves 10 partners from 9 countries.

COMBIFUEL

Coordinator: WIP - Renewable Energies

The objective of this proposal is to demonstrate the technical and economic feasibility of a unique combined production of bio-ethanol and BtL (Biomass-to-Liquid) Diesel using biomass, i.e. sweet sorghum, as a feedstock. This demonstration of innovative technologies in the field of liquid biofuels through the collaboration of European and Chinese partners will have a large impact on the future development of an enforced bilateral Sino-European technology transfer. This STREP proposal involves 9 partners from 5 countries.

Political lobbying in the bio-energy sector

In its drive to promote key European policies affecting the deployment of the bio-energy sector, EUBIA has provided a contribution for the involved in the elaboration of two EC key directive proposals for approval by the European Parliament and the European Council of Ministers.

EREC's Position Paper on the future of support systems for RES-e

With this Position Paper EREC and its Members, the European renewable energy industry, trade and research associations, wish to make their opinion public about the evaluation later this year of the Directive on the promotion of electricity from renewable energy sources, adopted in 2001. In brief, the paper touches upon the following:

Point one emphasizes that effective competition in the conventional power market is a precondition for harmonizing support mechanisms for power from renewable energy sources. EREC has published a separate briefing on the topic, which identifies a true "myth of effective competition in conventional power markets" (for more information see www.erec-renewables.org). The European renewable energy industry therefore thinks that it is too early to harmonise support mechanisms for renewables electricity. However, the Position Paper demonstrates the consensus that exists within the sector about setting mandatory national targets for 2010, which would be appropriate and lead to more efforts in all Member States.

Fourthly, a further recommendation to the Commission is to remove administrative barriers in the Member States. The fifth point aims at strengthening and harmonizing the rules on grid access for and transition of renewable electricity, in favour of renewable energy technologies. Finally, the sector calls for technological diversity and the raising of public awareness.

The paper continues focusing on the above-mentioned topics, however it also recommends, among others, that local and regional benefits and public acceptance be encouraged. If you wish to find out more about the Position of the European renewable energy industry, trade and research associations and their specific point of view on support systems for RES-e, please go to www.erec-renewables.org

Time for action in the RES- heating and cooling sector

Together with its members EREC started already last year to place the question of RES heating and cooling on the political agenda in Europe. During the last years renewables policy in Europe was focussed mainly on electricity and bio fuels, while the heating and cooling sector was neglected. Existing legislation is only in force for RES-E and bio fuels. But if the Union wants to fulfil its White Paper target of doubling the share of the renewable contribution to total primary energy consumption from 6% in 1997 to 12% in 2010, additional effort is needed, especially in this sector.

Therefore EREC strongly urges European policy makers to implement legislation in the missing and so far neglected area of renewable heating and cooling.

Thanks to a lot of efforts from EREC and its individual members, starting with a first common declaration, which was published at the Berlin conference for renewable energy beginning of 2004 and constant policy work thereafter, the issue is now a hot topic in Europe.

Still a lot of efforts will be needed during the coming months, but it seems that more and more European politicians now want to work towards a common framework for RES heating and cooling. Read more about this topic in the next EUBIA newsletter!

EUBIA international presence

EU - China Energy and Environment Programme

EUBIA has been promoting a wide cooperation activity in bioenergy with China (Ministry of Agriculture and Ministry of Science and Technology) through the China Association for Rural Energy Industry (CAREI) since 1994.

Although China has reached self-sufficiency in food production, it has no large perspectives for cultivating energy crops in agricultural lands (the agricultural land, 90 million ha, is only ½ of that of the EU-25 countries) due to its huge population (3 times the EU population) and food production needs.

On the contrary, there is a large amount of agroforestry residues and wastes (200 MTOE/y) which are not utilised and that could be profitably converted into clean energy, in particular biofuels for transport and decentralised cogeneration in remote districts (30 million people have not access to power supply).

A second large possibility for large-scale production of bioethanol for transport could derive from a partial substitution of 30 million ha at present cultivated with corn with sweet sorghum (special varieties developed in China: 5 t/ha grains - 7 ½ t/ha sugar - 14.5 d.t/ha lignocellulosics). 10 million ha of substitution could produce a 40 mio m³ of bioethanol/year and larger amount of lignocellulosic biomass (+50%) with a similar amount of grains.

Taking into account the present energy content of China and its future evolution (quadruple economic increase by 2020 with a huge expected energy increase; coal from 1.4 to 3 billion t/y), the first law on renewable energy that should come in force at the end of 2005 for promoting Renewable Energies to 10% contribution by 2020 (from the present 1%), the EU which now has the leadership in this sector could play an important role for cooperation. EUBIA in particular could play some roles in the sectors of heat production, bioethanol production from sweet sorghum, decentralised cogeneration, synthetic biofuels.

Apart from providing a contribution (as partner) to two LAMNET Meetings, EUBIA was invited by the EC to participate in "EU-China Workshop on Liquid Biofuels, 4-5 November 2004" and a second workshop "EU-China Energy & Environmental Programme, 23-24 November 2004".

The main conclusion of the first workshop identified the following R&D areas for future EC-China Cooperation activity:

- Lignocellulosic hydrolysis processes for bioethanol production;
- New biodiesel technology;
- Efficient energy crops (i.e. sweet sorghum, sweet potatoes) appear the best crops for bioethanol production in the EU and China;
- Fisher Tropsh technology for transport biofuels;
- Advanced gasification and fast pyrolysis liquefaction.

The conclusion of the second workshop (directed by EUBIA) identified the bioenergy topics of major interest for future common EU-China Cooperation activity:

- Stabilisation of humid biomass resources (pelletisation most important);
- Biogas production from wastes;
- Heat/cool production;
- Cogeneration (small capacity);
- Bioethanol from sweet sorghum;
- Synthetic biofuels development.

New web site to be launched

As part of the institutional strengthening process, a new web site will soon be launched. Under a brand new design, you will be able to find more information, and an intranet will be set up for our members to have access to lots of updated insights on bio-energy and funding opportunities. A forum will also be created in the intranet to foster the information exchange and the cooperation opportunities. Stay tuned!