The aim of the project "Pellets@las" is to provide technical and market information for pellet market actors across Europe. The following newsletter describes some of the progress and results of the project so far.

First of all we are pleased to welcome you to our second pellets@las newsletter. Every six months this electronic newsletter will be distributed informing the pellet actors and stakeholders about the project's progress and about the situation on the pellet markets in the EU 27. In total six newsletters will be provided. All actors interested in receiving this newsletter can register online on the project website (www.pelletsatlas.info)

Introduction to Pellets@las

Pellets@las is the successor to the previous project - Pellets for Europe which ran from June 2003 to April 2006. Pellets@las has inherited the website and database from this project and will update and improve it over the next two years. It contains information on all pellet actors, studies on pellets markets, statistics and best practices. Pellets for Europe aimed to provide technical and market information for pellet market actors and to promote pellet technologies across Europe. The main aim for this European project was to support the development of the European pellet market. Another aim was to contribute to an increased use of high quality fuel pellets for energy purposes in Europe in order to secure energy supplies and decrease greenhouse gas emissions. Additional targets were to stimulate new markets in Southern Europe where the pellet market is still in its infancy and to take advantage of the wood and agricultural residues not already utilised there.

Pellets for Europe found a lot of its success based around conferences and workshops. For example, the European Pellet Conference, held in Wels, Austria both in 2004 and 2005, attracted over 600 visitors from the whole of Europe each year. Conclusions drawn then emphasised that continued research and support was needed for the pellet market in Europe.

Pellets from biomass resources have the potential for a major contribution to several European energy policy tasks, such as security of supply and CO₂ mitigation. The market for fuel pellets is currently booming in Europe due to increasing fossil fuel prices, environmental concerns and obligations. However, pellet markets across Europe are characterised by heterogeneous development stages. In parallel, inconsistencies occur regarding the available pellet qualities. Still, the main barrier for market expansion is the lack of information on the state of the pellet market which affects all market actors.
Objectives

The general aim of PELLETS@LAS (IEE Project) is to develop and promote transparency on the European fuel pellets market. This is done to facilitate pellet trade and to remove market barriers which are mainly information gaps but also local supply bottlenecks, production surpluses and uncertainties in quality assurance management. Moreover, it will contribute to the implementation of future European legislation which is currently hindered by a lack of market confidence and attitudes rather than costs. The provision of detailed pellet market data, such as current prices, available quantities and qualities to all pellet actors in Europe will contribute largely to overcome market barriers. The permanent availability of such information within a real-time European Pellets Atlas will lower trade obstacles, support market participation and finally increase the energetic utilisation of pellets. Furthermore, guidelines and road-maps can be produced as decision making tools for creating an up-to-date and reliable information source which can be elaborated timely and efficiently. Furthermore, pre-feasibility studies on the implementation of Mixed Biomass Pellet (MBP) projects shall promote this embryonic market.

Description of the work

The core of the proposed action is a data and information collection in all EU 27+2 (Switzerland, Norway) countries from wood and MBP producers, traders and consumers. For the data collection a consistent methodology is elaborated. The data is up-dated quarterly and will comprise current regional prices, available qualities and quantities, the locations of stakeholders as well as an investigation on logistic systems. Moreover, pellet imports from outside the EU are assessed. During the course of the data collection an easy to update and rapid monitoring system will be established in order to ensure permanent data recording, even after termination of the proposed action. In order to support the utilisation of MBP, pre-feasibility studies on MBP production, logistics and combustion will be elaborated in four European countries (Poland, Slovak Republic, Greece and Germany). The resulting data will mainly be disseminated via the internet platform of the European Pellet Centre containing graphic interfaces and thus functioning as a Pellets Atlas. Further dissemination tools will include regular newsletters, a final seminar and brochure, several telephone hotlines, conferences and press releases.

Expected results

The core of PELLETS@LAS is data and information collection in all EU 27+2 (Switzerland, Norway) countries from wood and mixed biomass pellet producers, traders and consumers.

- A web-based information platform on important fuel pellet market data, such as: production and available quantities and qualities and regularly up-dated regional sales prices.
- Recording and evaluation of the acceptance and implementation of CEN quality standards.
- A database on logistic management from which a transportation chain model will be derived.
- Four pre-feasibility studies for mixed biomass pellet (MBP) utilisation in Poland, Slovakia, Greece and Germany.
- A handbook in five European languages (English, French, Italian, Polish, Danish) on the general use of pellets.
- Six workshops (in the UK, France, The Netherlands, Poland, Greece and Hungary) in order to promote the energetic utilisation of pellets.
Development of 2nd generation pellets in the Netherlands: torrefied pellets

In November 2007, a consortium of three Dutch organizations (Econcern, the Energy research Centre of the Netherlands (ECN) and Chemfo have signed a memory of understanding to build a new type of biomass plant, that will produce ‘second-generation’ pellets. For these pellets, the feedstock will be torrefied, and processed into torrefied pellets, BO2pelletsTM, as labelled by the consortium, which is currently working on the first commercial torrefaction plant. As a second Dutch initiative, The Hague-based Topell has announced it will produce torrefied pellets, using a Torbed® reactor system developed by Polow energy systems in The Netherlands.

Torrefaction is a thermal pre-treatment technology carried out at atmospheric pressure in the absence of oxygen. It occurs between 200-300°C where a solid, uniform product with a very low moisture content and a high calorific value is produced. During the process, about 10% of the energy value of the original biomass is lost, at less than 75% of the original weight. Especially on long-distance transportation chains, the additional investments and losses in energy during the pretreatment process may be (more than) recovered due to the higher energy density, and subsequent lower transportation costs. For example, Topell claims that typically, their pellets have an energy density of 18 - 20 GJ/m³ versus 10 - 11 GJ/m³ for conventional wood pellets. In comparison, Uslu et al. (see below) estimate that torrefied pellets may have an energy density of 20.4-22.7 GJ/tonne, compared to 17-18 GJ/tonne for conventional pellets. It is considered a key technology to process a large variety of different feedstocks (such as wood chips and agricultural residues) into a high-energy density pellet. The current 1st generation wood pellets have a limited energy density, require indoor storage and cause/lead to difficulties with pulverization. Claims are that these limitations are all solved for torrified pellets, which are hydrophobic and can thus be stored outside, and milled together with coal in standard hammer mills.

Other applications of torrefied pellets may be use in dedicated biomass plants, or in small-scale pellet boilers for residential space heating.

They also have high potential as a feedstock for gasification-based production of transportation fuels.

For more information, please see:

- http://www.nom.nl/ng01/index.jsp?articleid=27653 (in Dutch)
- http://www.topell.nl/index.htm

Production of Pellets-Slovakia

A plant for pellet production has been built and started operation in October 2004 in Northwest Slovakia in Kysucky Lieskovec (14 km from Zilina). The plant is now in full operation.

- Investment costs: about 3.5 million €
- Technology: Technology line - Drevoindustria Mechanik, Slovakia
- Pellet mill: CPM Europe, Netherland
- Raw material: sawdust, 20 000 tons annually
- Production of pellets: 12 000 tons annually
- Hourly production: 2 - 3 tons

The pellet production plant ensures also the following activities:

- Collection of wood waste residuals in the form of wet and dry sawdust
- Technological processing of sawdust to wood pellets in standard quality
- Packing, storing and sales of pellets
- Distribution of pellets to boiler rooms
- Central management of 44 boiler rooms operated by BIOMASA
Boiler rooms operated by Biomasa consume 5,000 tons of pellets annually. 7,000 tons is intended for domestic market and export.

Sawdust collection logistics is targeted above all to producers with high quality sawdust and continuous and reliable supply. Sawdust is collected by own transport system (two container trucks) from the nearby region.

Distribution channels for pellets are different and gather all possible distribution methods.

Pellets for sales in domestic market and export are packed in big-bags of 1,000 kg and sacks of 15 kg. In some cases, they are marketed in Slovakia also in bulk and transported by own tank truck.

Up to now the pellets are exported mainly to Italy, Czech Republic, Poland, Denmark and Austria.

Pellets for biomass boiler rooms operated by BIOMASA are distributed by tank truck.

Construction of pellet plant together with reconstruction of 44 boiler rooms combusting fossil fuels into pellet-firing ones (in scale from small boilers in private houses to 2,5 MW) has been the cardinal project of BIOMASA. The Project presents complex solutions for the implementation of biomass heating and establishment of the market with wood pellets in Slovakia.

**WOOD PELLETS**

**Parameters:**
- Density: 650 kg.m$^{-3}$
- Shape: cylindrical
- Diameter: 6 and 8 mm
- Length: 10 - 40 mm
- Water content: up to 10 %
- Ash content: up to 0.7 %
- Heating capacity: min 17.5 GJ.t$^{-1}$ or 4.8 kWh.kg$^{-1}$
- Made of spruce and abies sawdust

Our pellets comply with quality requirements defined for the market. Based on analyses, pellets fulfil the EU norm (under preparation).

**Pellets delivery:**
- Packed: BIG-BAGS (1,000 kg) and BAGS (15 kg); In bulk (tank truck)
- Price offer will be sent upon request. Order form can be found on [www.biomasa.sk](http://www.biomasa.sk).

BIOMASA, Association of Legal Entities is a non-profit organization joining municipalities, schools and health care institutions. The aim of the association is to participate in the process regarding the use of renewable energy sources, through the information dissemination and implementation of the new environmentally friendly technologies powered by biomass. The association was founded in 1999 and since that time it is the leader in biomass utilization in Slovakia.

BIOMASA activities:
- pellets production and sales
- reconstruction of boiler-rooms into biomass ones
- installation and operation of pellet-fired boilers
- production and sales of heat
- sales of pellet boilers and stoves
- biomass promotion in local market
- consulting and information activities
- project development and implementation

**BIOMASA**

BIOMASA, Association of Legal Entities
023 34 Kysucky Lieskovec, 743 Slovak Republic
biomasa@biomasa.sk
www.biomasa.sk

**Phyllis Database Dissemination Education and Standardisation (PHYDADES)**

The Project PHYDADES (Phyllis Database Dissemination Education and Standardisation) is an IEEA project started in January 2007 coordinated by Energy Research Centre of the Netherlands. This project is providing a new database of biomass fuels, based on the existing PHYLLIS database, only composed of reliable data. PHYDADES also provides workshops and on-the-job training in the use of standardised analysis methods. Reliable, public information and the use of internationally accepted standard methods are
essential for a rapid growth in the use and trade of biomass fuels.

Besides biomass fuel analyses done according to standardised methods, the new database will contain ash analyses and calculation tools. Partners of the PHYDADES consortium will contribute their (public) data and they will request industry to submit their data as well. The database will be publicly accessible and free of charge.

Education in the use of standards is done by means of a) workshops and b) on-the-job-training. The workshops (in English and local languages) are aimed at countries where the use of standards is not yet common practice. On-the-job-training is offered to people working in laboratories of the New Member States and Southern Europe. A website with access to the new database and other relevant information will be an important tool in the educational part of PHYDADES.

**Expected and/or achieved results**
- New database with biomass fuel and ash compositions, all measured according to standardised methods
- Workshops with teaching materials for education in the use of standardised analysis methods
- People trained in the use of standardised methods
- Widespread use of standardised analyses in biomass fuel trade
- Reliable information on biomass fuels for buyers, sellers, equipment manufacturers, teachers, legislators, etc.

*For further information please visit the website: www.phydades.info*

**UK Pellet Production Hotting Up**

There was a buzz in the air at the Pellet Fuel Production Workshop organised as part of the Pellets@las project on the 22nd November. The event in Milton Keynes in the UK was organised by the National Energy Foundation (NEF), the Pellets@las partner responsible for co-ordination in the UK and Ireland. Such is the interest in the UK in pellet production and markets the workshop was at maximum capacity with over 70 delegates attending delegates, who included existing and prospective, plant owners and operators, equipment suppliers, investors, consultants, academic researchers, sawmill owners, wood recyclers and agricultural enterprises heard a number of speakers and participated in lively question and answer sessions in which many issues were discussed. Delegates also enjoyed ample opportunities for networking, always important for anyone considering entering the wood pellet production industry.

The day started off with Sandra Hayes of NEF giving an overview of the pellet market on the basis of the data collected through the Pellets@las project. Currently, NEF are aware of approximately 10 pellet producers in the UK, with the two largest, Welsh Biofuels and Balcas in Northern Ireland having a pellet capacity of up to 50,000 tonnes per year. In total UK pellet production capacity was in the region of 134,000 tonnes per year, but this is due to the anticipated substantial increase during 2008 with new pellet production expected from Clifford Jones Timber in North Wales (30,000 tonnes) and Puffin Pellets in Scotland (25,000 tonnes). In addition a number of existing plants are expected to substantially increase their production e.g. Arbuthnott Wood Pellets in Scotland (15,000 tonnes) and Express Fuels in Wales (up to 50,000 tonnes by the end of the year).

An overview of Pellet Technology & Uses was given by Gavin Gulliver Goodall of 3G Energi. He expressed concern about pellet quality (there is currently no UK pellet standard) and how a consumer would be able to identify a good quality pellet as even those that meet the criteria in the technical standards set out in CEN TC335 can look very different. He also suggested that pellets would not be able to compete with gas as a form of heating in the UK, given that gas is relatively cheap in the UK at around 3.6p a kWh. To compete with that pellets would have to cost less than £120 a tonne including VAT and delivery, a price not likely to be achieved in the UK, especially if relatively small quantities of bagged pellets are purchased. Others argue that areas not supplied by the gas network (most urban areas apart from in Northern Ireland) or those with environmental concerns are the main focus for the residential pellet market.
Next was Mr Charles Mamo of the Renewable Fuel Co. (UK) Ltd who spoke of his experience as a new pellet producer in the UK. He started his plant in 2004 and it took 18 months before production started. Having exchanged the life of a jeweller with that of a pellet producer Charles was keen to emphasise that making pellets was an art, not a science and that he certainly didn’t switch careers for the money!

Fred Dumbleton told delegates about the mobile pellet plant built near Retford in Nottinghamshire owned by Biojoule. With their 10,000 t/year containerised plant, Biojoule aim to make it viable to produce pellets from smaller local biomass resources. With fully automated remote controls the plant which has a footprint of 50m x 20m can work 24 hours a day (with minimal on site labour costs) and its own generator, the mobile pellet plant really does offer a flexible solution for those with a relatively small biomass resource at a remote location.

Dr Mike Carver of BICAL argued that energy crops will lead the way if the EU’s targets on the use of biomass use by 2030 are to be met, on the basis that the potential resource from energy crops is much higher than that of wood from forest resources. BICAL plants and harvest its own miscanthus rhizomes and has agreements with a number of other farmers to grow the crop. Presently BICAL manufactures 25,000 tonnes per year of compressed miscanthus cubes in Staffordshire which are then co-fired in power stations such as DRAX. By burning miscanthus rather than coal, DRAX will save around 2 million tonnes of CO2 by 2009.

Next Steve Arnold of Andritz Sprout talked about choosing a pellet press. He disclosed that Andritz had installed 100 pellet presses worldwide this year (with 3 in the UK). In the UK there was a higher interest in pelleting energy crops than in the rest of Europe. He estimated that the amount of energy required to produce a tonne of pellets was 80kWh with the cost of running the press around £8 to £10 (not including the cost of the raw material).

Gideon Richards of Consulting with a Purpose and Chair of PTI/17 (UK Mirror Committee for CEN TC335 Solid Biofuels & TC343 Solid Recovered Fuels) amongst other roles emphasised the importance of pellet quality and standards. As part of his presentation he outlined the typical feedstock for high grade pellets i.e. single species feedstock; 12 –14% moisture; 3 to 5mm particle size (for a 6-8mm pellet), no or virtually no bark, contaminant free and a trackable and traceable feedstock. He also made the point that pellets had to be fit for purpose the quality requirement for pellets was totally dependent on the appliance or plant the pellets are to be used in, with the highest quality pellets being needed for room space heaters.

CEN TC335 is a technical specification and provides a way in which solid biofuels, including pellets can be consistently described e.g. as to moisture content, ash content etc. It is proposed that the system of technical specification which is in the process of being development will become a full European Standard and be published by 2010 (and adopted by the UK). In the meantime there is not an adopted UK pellet standard.

The next speaker was Len Taylor of BTH (UK) Ltd who spoke about the bagging options for pellets. He described four bagging options; manual filling (costing around £30,000 and filling 14 to 15 bags a minute; automatic filling machine with bag placer and the very impressive flat (with a capacity of 1800 bags/hour) and tubular foil machines. He also
showed a video clip of palletising systems which showed how bags could be stacked on pallets and shrink wrapped to give stability.

The next speaker was Paula Keelagher of Balcas Timber Ltd who spoke about marketing wood pellets and outlined the experience of Balcas in Ireland and their plans for expansion at Invergordon in Scotland during 2009 with a 100,000 tonne pellet plant (and associated wood fuelled 8MWe CHP plant) which will use 12 tonnes of sawdust and 10 tonnes of wood chip per hour. Balcas sell their brites pellets in 10kg bags and have 1900 residential customers (serviced by 100 outlets) and 50 commercial customers. Due to logistical problems Balcas had to make the decision in December 06 not to take on any more new customers. However, these logistical problems had now been resolved by increasing the number of lorries on the road, reducing lead times from 7 weeks to 1 or 2.

Balcas operate an internet ordering service for their customers and require all customers to complete a pre-ordering checklist to ensure that there are no problems during delivery of their pellets. Invoices are printed off by the delivery drivers on delivery. Balcas developed their own pellet store as no suitable pellet store was available to customers when Balcas first started producing pellets. The minimum bulk delivery by Balcas is 3 tonnes at a cost of £118 per tonne delivered. Prices have only increased once in 2 years, price stability being one of the factors Balcas consider key to market growth.

Balcas supply pellets across both the north and south of Ireland. They now supply the 9 southern most counties by a distribution centre at Cork. To ensure security of supply (another key factor to developing a pellets market), Balcas also have imported pellets from Germany available at Cork.

Last to speak was John Young of the Energy Crops Company. He pointed out that the pellet market in Ireland had been helped by a more generous grant programme for would be consumers than was available in the rest of the UK and that the number of consumers had helped to keep pellet costs down in Ireland. On pellet logistics generally he pointed some of the difficulties in distributing pellets, namely that they were a relatively cheap commodity (a 20 mt tanker full of petrol had a payload of £18,000, but the same tanker full of pellets had a payload of £3000) and required delivery vehicles designed for the job (which cost substantial sums - £120,000 plus an 18 month wait).

A number of other issues were discussed by way of questions. Namely, that the average domestic customer in the UK would consume around 6 tonnes of pellets a year. This would require two deliveries a year as most domestic pellet stores would hold 4 to 5 tonnes. A producer making 3 tonnes an hour of pellets would need a secure customer base. A producer making 1 tonne an hour could survive with the right customer based.

By the end of the day the delegates at the Pellet Fuel Production Workshop went away with a lot of information and much to ponder. Making pellets, a renewable fuel is a worthwhile thing to do, but there are many hurdles and difficulties to overcome before one can be sure of producing a good quality pellet without incurring excessive cost. In addition, the market, in mainland UK at least, is still small. This however, should change as UK Government policies promoting the use of renewable energy start to bite and more properties are converted or built to make use of biomass energy.

International Pellet Trade-17th June 2008 (Netherlands).

Within the framework of the Pellets@las project, on June 17th 2008, a workshop is planned on international pellet trade in Utrecht, the Netherlands. The aim of the workshop is to identify current bottlenecks and opportunities for international pellet trade. As a main topic, the developments of intercontinental pellet trade volumes will be highlighted, especially imports from North America, but also increasingly from other parts of the world. These will be compared to inter-European trade as investigated by the Pellets@las project. The effect of further increasing pellet imports on the European pellet market will be discussed. Also the role of the Netherlands as intercontinental pellet hub, the implementation of European quality standards and the role of sustainability criteria for wood pellets and their impact of trade are further potential topics for the workshop.
To enable a fruitful debate, a limited number of about 20 international pellet traders, large-scale users and other experts will be invited, including members of IEA Bioenergy Task 40. More details and the final programme will be published during spring 2008 on the Pellets@las homepage. For more information, please contact: Richard Sikkema (r.sikkema@uu.nl) or Martin Junginger (h.m.junginger@uu.nl)

**Upcoming Pellets Workshop-25 June 2008, Poland**

Pellets productions on Polish market exceeds 350,000 tonnes, and only 10% of that is destined for national consumers, two more installations will be put into operation soon, which will produce pellets from rape straw. An important annual event, PelletExpo fair in Bydgoszcz, will take place from 24-26 June 2008. On 25th June a workshop for pellets producers, traders and major consumers will be organised by BAPE. It will focus on the increase in pellets consumption in Poland, establishing a distribution network and market development for MBP. For more information http://www.ctpik.com.pl


A new Italian normative on solid biofuels characterization of wood logs, briquettes and chips has entered into force in Italy in November 2007. The norm UNI/TS.11264:2007 fixes principles univocal in order to concur an easy characterisation of the firewood, briquettes and chips, considering technical, economical and environmental aspects. Based on the method defined in the UNI CEN/TS 14961, which characterises the biofuels (firewood to burn, briquettes and chips) by means of the individuation of qualitative categories in function of the origin of the raw material and of the physical development for MBP. For more information http://www.ctpik.com.pl

For further information please visit the website: www.uni.com

http://webstore.uni.com/unistore/public/search products

**Gain Full Access to the Largest Pellets Market Data Online**

"What quantity of pellets is currently traded in the EU-27?"
"What is the pellet production capacity of the EU member states?"
"Which EU country consumes the biggest quantity of pellets and which country produces the most pellets?"

These are some of the topical questions that the biomass industry deals with on a daily basis. Updated information is difficult to locate as demand increases and the market changes, answers to these questions would make life a lot easier and certainly would help companies with future decisions in investing the biomass pellets market in the EU.

With a new feature added to the pellets@las website these questions can be answered. **Pellets@las** is a platform where information regarding the European pellets market data can be found and updated. The "Full access" market data section on the Pellet@las website will host up-to-date information in one comprehensive and interactive map. To view the interactive map please follow the link: http://www.pelletcentre.info/cms/site.asp?p=5418.
What is Full Access?

Full access provides registered users with all available pellets market data. Registered users will be able to view, add to and update all the data recorded. The restricted version is available to the public, but continuously hides data which is newer than two months. Companies who contribute to this interactive data map will gain full access to the most up-to-date interactive data map on the pellets market in the EU. Get more information on how to register today at Full access info!

Pellets@las is a project co-funded by the European Commission, and aims to develop and promote transparency in the European fuel pellets market. This goal is set in order to facilitate the pellets trade and to remove market barriers, such as information gaps, and also to assist in solving local supply bottlenecks, production surpluses and uncertainties in quality assurance management.

Future Activity – Outlook for the first half of 2008

During this new year 2008, the data collection will continue through a questionnaire which can be sent out to pellet producers, traders and large retailers. It will be a detailed questionnaire which will form the core data collection for the project. In January 2008 the first questionnaire will be sent out to stakeholders and every 3 months after that. A report of the main data will be offered to those who complete the questionnaire 2 months before it is released to the public.

Weblinks

Pellets@las website: www.pelletsatlas.info.
Composition of biomass and waste website: www.phyllis.nl.
Phydades project, website: www.phydades.info.
European Committee for Standardization (CEN): http://www.cen.eu/cenorm/homepage.htm

Events

16th to 19th January 2008
Central European Biomass Conference 2008. Graz (Austria)
The Central European Biomass Conference 2008 aims at providing an up-to-date overview of the latest political, economic and technological developments in the field of bioenergy (heat, electricity and transportation fuels). A special focus lies thereby on the biomass raw material supply out from forestry and agriculture – a topic that, facing the enormous biomass boom, poses to be a big challenge as well as a big chance for the central European area.

26th of January 2008
First International Pellet forum Verona (Italy)
PROGETTO FUOCO 2008. The aim that we are trying to achieve with the first International Forum on Pellet, is to shed light on the Italian market also through a comparison with other European and international markets and to encourage an operative and profitable information and opinion exchange between operators at different levels, in order to reach, in a shared and engaged way, a common reinforced market strategy.
29 to 30 of January 2008-01-17
PELLETS-08 Annual conference of Svebio-and the Swedish pellet-actors.
This time the conference is organised at Hotel Sodra Berget in Sundsvall with a study visit to SCA BioNorr AB I Harnosand, Sweden’s largest pellet production plant. The themes in the program are:
- Market update.
- New large actors.
- New methods on the residential market.
- Gender issues in the pellet business.
- New production technology.
- How Sweden is affected by the positive pellet development in Europe.
A detailed program and on-line registration form are available on the conference homepage at http://www.svebio.se/?p=1168. This series of pellet conferences has been arranged annually since 1993 - now for the first time with simultaneous translation to English.

5th to 7th of March 2008
European Pellets Forum. Wels (Austria).
The conference offers information about Pellets markets around the globe - technology trends - strategies and programmes. For more information please visit: www.wsed.at

13th to 16th of March 2008
New Energy Husum (Germany)
NEW ENERGY is a north German trade fair for showing products and services related to renewable energy use. NEW ENERGY is Schleswig-Holstein’s central platform for presenting the state’s special strengths in this business sector and also aims to provide support for companies operating in the region http://www.new-energy-husum.de

3 to 5 of June 2008
Third International BioEnergy Conference & Exhibition, Prince George (Canada)
Conference will begin with a forum discussing the issues and opportunities in the global wood pellet industry. Main themes will include: policy influences on the development of a bioenergy economy; a sustainable bioeconomy; technologies, energy and transportation issues; and the challenges and opportunities in future directions. There will be a forests and resources exhibition as well as options on taking industry tours.

24 to 26 June 2008 PelletExpo fair in Bydgoszcz (Poland)
It will focus on the increase in pellets consumption in Poland, establishing a distribution network and market development for MBP

2-6 June 2008, Valencia (Spain).
an unrivaled event that will provide an excellent opportunity for networking in the emerging biomass sector. Scientists, industry, suppliers, applicants, funding bodies and decision makers are all invited to Spain, a country that has recognised the importance of renewable energy and is promoting it on a large scale, having fully committed to the generation of clean energy and the reduction of CO2 emissions. For further information please visit the conference website: www.conference-biomass.com

19 to 25 of July 2008
World Renewable Energy Congress X & Exhibition Glasgow (UK)
Organized by the World Renewable Energy Congress, this is the tenth in a series of major forums for international networking across the various sectors associated with renewable energy. Enables policy makers, researchers, economists, manufacturers, environmentalists and financiers, amongst other interested parties, participate in discussion and dialogue through formal and informal sessions. Details: Congress Secretariat, Ali Sayigh, PO Box 362, Brighton BN2 1YH, UK. Fax: +44-1273-625768. Email: asayigh@netcomuk.co.uk On the Web: www.wrenuk.co.uk or/ www.wrecuk.co.uk