

BIONIC



Sustainable Biofuels in the Community

e-Newsletter - Third issue - January 2010

**Identifying biofuels opportunities and user needs in 5 European communities
Establishing sustainable regional biofuels networks to increase the take-up of
biofuels in the transport sector.**



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News from North West England (UK)

LANCASHIRE

Lancashire County Council reviews the Biofuel Sector

Lancashire County Council has recently completed a review of the issues concerning biofuels initiatives in the UK and the impacts on development of the Lancashire Biofuel sector.

Biofuel production and distribution in the UK can be broken down into three main groups, crop based fuel derivatives, waste cooking oil derivatives and Biogas derivatives. Although it is clear that crop based production facilities are already producing significant volumes of fuel in the UK, the potential for waste oils and biogas is more complex due to a combination of high input prices and an adverse regulatory regime.

Crop based fuel derivatives are the largest group with a number of significant projects under construction. An example of this is the wheat based Abengoa plant presently under construction at Immingham. The majority of crop derived fuel is presently produced from imported crop. Most UK facilities are currently producing biodiesel however a number of the larger projects in development aim to target bioethanol.

- Waste cooking oil derivatives or fuel's derived from cooking oil provides the second largest supply. Companies such as Argent Energy based in Motherwell, are producing 44,000 tonnes of biofuel per annum. Expansion of this sector has been restricted due to the rapid rise in waste oil values in 2008.
- Biogas derivatives is the least developed sector but holds the most potential. At present the Renewable Obligation Certificates can only be generated against electricity production. As a result there is no incentive for the use of biogas as a vehicle fuel.

The production of biofuels has created strong debate regarding the benefits or impacts of transport fuel production. Identifying all the variables which result in social, environmental, and economic impacts is complex and "Best Practice" perceptions are not always in agreement. Carbon reduction and sustainability are the key issues relating to biofuels and the Renewable Fuels Agency (RFA) requires producers to report against environmental and social sustainability standards. The RFA Carbon & Sustainability Guidance Part 1 & Part 2 provides the information on meeting qualifying standards.

From October 2008 the UK Government's Renewable Fuel Agency publishes a quarterly report on the performance of RTFO obligated companies (suppliers) against two key RTFO targets. The first relates to carbon, the second to the extent to which the companies meet Qualifying Environmental Standards (QES). The report does not include biofuel processors that are not involved with distribution and will only supply their products to blenders and fuel distributors. It does however include two companies that supply unprocessed oil as a fuel. Historically, engines required conversion and a dual tank system was often necessary. More recent models do not always require this. One company supplies pure oil in the form of rapeseed oil, with the other company using UCO as straight vegetable oil from supermarket outlets.

It is understood the development of the Lancashire Biofuel sector will be dependent on market prices linked to financial and regulatory incentives tied to the development of the sector. UK biofuel policy covers a broad range of

interventions from financial incentives, capital funding and positive regulatory controls. The principle UK policy intervention is associated with fiscal incentives associated with fuel duty and the Road Transport Fuel Obligations (RTFO). Unfortunately both these interventions may be affected as the fuel duty incentive expires in March 2010. The RTFO programme is also failing to deliver benefits as the RTFO certificates, designed to be worth 15p per litre are now valueless due to government's cuts in the RTFO target combined with a legislative error that excluded imported blended fuel.

A number of capital grant incentives exist and these range between capital funding for plants and infrastructure. Although funding is available, without a viable fiscal incentive take up these funds has been low.

The regulatory framework for the biofuels sector is complex. The national planning policy guidance is split between different PPS's as the sector is both a renewable energy and waste industry. There are few specific policies at both a national, regional and sub regional level specific to biofuels. Planning applications will fall under either renewable, general industrial or waste planning. There are further regulatory controls associated with waste permitting and environmental health legislation. In summary both the regulatory and funding incentives are in place but without the required financial incentives the industry will continue to operate in an uncertain environment.

MERSEYSIDE

Public awareness surveys carried out in Liverpool

Merseytravel have undertaken public awareness surveys to establish the level of knowledge and interest in biofuels in Liverpool. The surveys were conducted over two days in the centre of Liverpool.

The surveys indicate that people recognise the environmental benefit of using sustainably produced biofuels but are unsure of where they can buy them, and which ones are suitable for their vehicles. We will use the results to plan key messages for 2010 to help people to get more information about biofuels in our area.

Biofuels and business

Merseytravel have attended several business related events in recent months and have presented to key groups such as the Liverpool Chamber of Commerce, the Merseyside Transport Partnership's Transport Health and Environment Forum and the Lancashire Climate Change Partnership. These groups provide access to key decision makers in the region helping to raise the profile of BIONIC with policy makers.

ECOTravel Bureau website enhanced

Merseytravel have enhanced the successful ECOTravel Bureau website (www.ecotravel.org.uk) to include information on sustainable biofuels and the BIONIC project. The Bureau provides free and impartial information and advice to both the public and business communities on Merseyside with regards to reduced emissions vehicles and fuels. The popularity of the Bureau website has increased every year since its launch in 2004 and is expected to receive in excess of 170,000 hits in 2009. The website is a legacy of CATCH, a part EC funded project which ended in 2005 which demonstrates Merseytravel's long standing commitment to promoting less environmentally damaging transport options.

BIONIC in the media

Merseytravel are working with local media to promote the work of the project. The local paper, the Liverpool Echo has launched an environmental website and supplement which will include information about BIONIC. The Liverpool Echo is the biggest selling newspaper on Merseyside and has the second largest circulation of any evening newspaper outside London making them an ideal conduit.

For more info, please contact: andrew.leadbetter@merseytravel.gov.uk (Merseyside) or Maira.Mortimer@lancashire.gov.uk (Lancashire)

News from region Värmland (Sweden)

Days of biogas



Dancing around an apple basket, graffiti, a garbage truck and a racing car powered on biogas were some of the things that could be seen in the market square in Karlstad when BIONIC Sweden and Karlstad municipality arranged a "biogas party". There were also several biogas cars dealers from Karlstad who displayed cars at the event. Energy Agency office and Karlstad municipality invited passers-by to join the event and take part in the "apple core throwing contest". The aim of contest was to throw an apple core the furthest to highlight the types of waste that could be used to produce biogas. In one corner of the square a graffiti painting was produced to show the lifecycle of biogas in artwork from the cow to food leftovers into biogas. Dancers from Dance in Värmland also performed a dance in the Market square reflecting a biogas theme and there was an opportunity for the public to test drive biogas cars of different brands.

Biogas Seminar

While the market square was filled with activities a seminar on biogas took place inside the City Hotel. 50 key figures from the local region and the Swedish Government were invited to attend the seminar put together by the Swedish Gas Association and Biogas West. During the seminar two questions were primarily being asked; how can more people run on biogas when there are few filling stations and how can there be more filling stations when few cars run on biogas? The general opinion of the seminar was that the public should pioneer the drive for this development, as in the situation in Karlstad municipality who have now started their own biogas production.



The days following the seminar shoppers were able to take a closer look at different biogas cars at the Bergvik shopping centre.

Black liquor fuel from pulp mills



The Energy Agency office invited Patrik Löwnertz from the company Chemrec to talk about the pilot plant for production of bio fuels of black liquor in Piteå. The black liquor plant produces bio fuel DME from the Smurfit Kappa paper mill in Piteå. Patrik Löwnertz VP Marketing & Sales, described Chemrec's technology of how black liquor is formed when wood chips are heated into a pulp to approximately 25 people who came to learn about the process and production of DME biofuel. Black liquor is fired in recovery boilers to produce electricity and heat while cooking chemicals are recovered. Chemrec takes a small portion of black liquor from the pilot plant mill in Piteå and conve

verts it into a gas that can then be refined into fuel. Chemrec is currently supported by the EU Energy Agency and Volvo Trucks for reviewing and trialing this process.

Värmland's first biogas filling station

In May 2009 Värmland's first filling station for biogas was installed in Karlstad. Värmland now has the ability to provide biogas refuelling. The opening to Värmland's first filling station for biogas was cut under the supervision of Hans Ferner, president of OK Värmland, who owns the station, as well as representatives from the AGA Gas, who supply the biogas. First in the queue at the filling station was Ake Pettersson Frykberg (mp), Chairman Karlstad Energy, in one of Karlstad Energy newly purchased rubbish trucks powered by biogas.



Biogas upgrading plant in Karlstad

Although Biogas is currently delivered from Trollhättan (170km from Karlstad) to the first filling station in Värmland, within a year Karlstad Municipality will be able to utilise locally produced biogas from the sewage plant of Sjöstadverket. This will make the journey from source to filling station and then vehicle much shorter. The gas produced at the Sjöstadverket today is used for heating in the district-heating system. OK Värmland and Karlstad Energy are both participants in the BIONIC project.

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News from Ploiesti (Romania)



Biodiesel Case Study

As part of the BIONIC programme, the Petroleum and Gas University of Ploiesti (UPG) in partnership with City Hall of Ploiesti (PMP) and Local public transportation company (RATP) commenced a study investigating Biodiesel behaviour within a bus engine. The bus was named BIOBUS and it was designed with the BIONIC logo, along with PMP, UPG and sponsor's (S.C. Prio Biocombustibili Lehliu) badges. Information explaining what Biodiesel means for the community of Ploiesti was also highlighted on the bus.

500 booklets were printed detailing more information regarding the BIONIC project and the advantages of Biodiesel. The booklets were distributed to travellers by voluntary students from UPG Ploiesti.

The starting day of the BIOBUS study was the 5th of June 2009 (Environment International Day). The BIOBUS was fuelled with a mixture of 25% Biodiesel and 75% Diesel gasoil and the test period was 50 days when the bus covered around 2000 km. During the test period further experimental tests were carried out in order to characterise the behaviour of Biodiesel within the bus engine. For this, the fuel (Biodiesel, Diesel gasoil and the mixture B25) and the exhaust gas (CO₂, CO, NO_x, SO_x, O₂ and Particulate Matters) were analysed. During the same time more technical observations of the engine workings, the combustion temperature, the filling system and the fuel cleaning system (filters) were reviewed. General observations of the BIOBUS are being maintained to observe the after-use Biodiesel effects.



The study shows that the Biodiesel has a very high environmental impact, greenhouse gas emissions diminished, sulphur oxides decreased and poly aromatic hydrocarbons reduced the mutagenic effects of exhaust gas emissions. The social study highlighted great support for Biodiesel as people understood that biofuels could protect their life. The action was very well appreciated by the local and national newspapers and by citizens of Ploiesti region.

EXPO PETRO-GAS

Between 28th -3rd October 2009 Bucharest held the 8th edition of EXPO PETRO GAS (www.expopetrogas.ro). EXPO PETRO GAS is the only event of this field in Romania and one of the most important in Central and Eastern Europe, considering that Romania enjoys a strategic position in the future energy configuration of Europe. With each edition, EXPO PETRO GAS reflects the latest developments and methods for saving energy available on the domestic market, as well as showing the interest of large international companies with respect to investments made in the energy field.

The specialized technical exhibition event is organised every two years and has managed to create its own identity. A large number of specialists visiting the fair added to the satisfaction ratio of the exhibiting companies.

83 companies from 7 countries gathered at the event which attracted more than 12,000 visitors and specialists from surrounding countries and from abroad. Petroleum and Gas University of Ploiesti was present with more scientifically research projects and one of them was BIONIC programme which promotes Biofuels in the community (http://www.adevarul.ro/locale/ploiesti/UPG-Petro-Expo-Gas-pentru_0_143386063.html).

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News from Cantabria (Spain)

Bioethanol Production Facility In Torrelavega

On October 21st, Torrelavega's City Council approved the operative project which authorised the company Sniace Biofuels to build the bioethanol production facility in the city. The City Council released the licence to carry out modifications in the initial project as well as the licence to build a bioethanol plant. Construction work is due to start as soon as Sniace Biofuels receives the documentation from the City Council. The total investment has been estimated at more than 100 million Euros, and it will be expected to create 90 direct jobs.

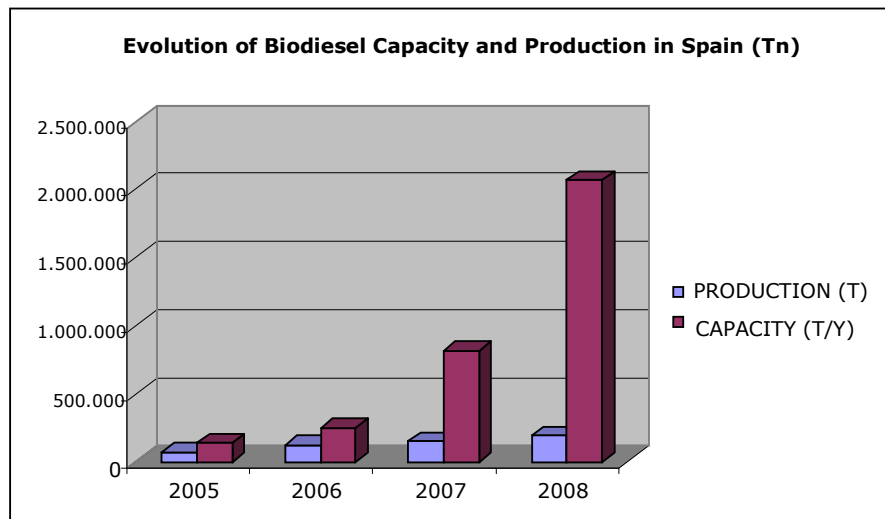
After six years of official procedures which include environmental authorisations required by regional and local administrations, the bioethanol plant seems to be shortly implemented. The facility will have a production capacity of 100.000 tons of bioethanol annually. The raw material supply has been guaranteed through a contract signed by the company with the agricultural cooperative Agropal which will provide 1.050.000 tons of cereal during the next seven years.

In 2008 the regional government conceded a subsidy of 1.425.000 Euros to Sniace Biofuels in order to promote the construction of the plant.

2008 Data Show Critical Situation For Biodiesel Production In Spain.

The Spanish Biodiesel sector is currently in a critical situation due to over half of production facilities now being at standstill after a total expenditure of over 600 million euros. The plants which have not stopped working are currently under their productive capacity. In 2008 the production/capacity ratio dropped to 9%, which is incompatible with the viability or even the survival of the national biodiesel sector. Imports of subsidized biofuels from America (US dumping) and other countries, which achieved a market share of 71% in 2008 (51% in 2007), have been the main cause for the current situation.

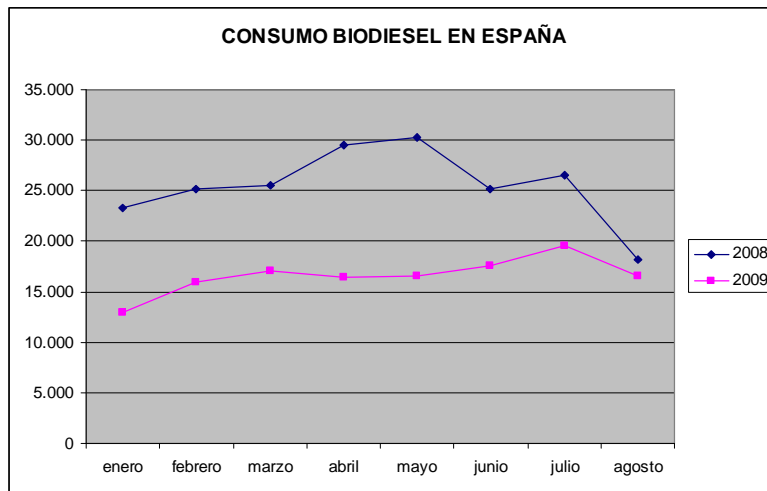
	2005	2006	2007	2008
Production (T)	71.469	124.577	148.777	191.261
Capacity (T/Y)	141.500	248.310	815.190	2.070.020



Source: APPA 2009

Biofuel consumption in Spain shows downward trend

Recent data released by the APPA (Spanish Association of renewable energy producers) shows that biofuel consumption has increased in Spain. These increments are considered to be a consequence of new Spanish regulation which forces fuel producers to increase the minimum quantity of biofuel in ordinary fuels (petrol and gasoil). In reality, however, consumption of products considered and commercialised as biofuels, is showing a worrying decline as presented in the following graphic.



Source: CORESORES

New campaigns call biofuels into question

Important NGO's and media groups have recently released press notes and articles questioning the suitability of biofuels due to the impact they produce on food prices and the environment in non-developed countries.

Greenpeace, for instance, links the imports of palm oil to the decrease of Indonesia's forestation. Manos Unidas, NGO, connected to the Catholic Church in Spain, binds biofuel production to the destruction of food crops in poor areas of Africa and South America. Other sources link actions against climate change, and specifically agrofuels, to money laundry activities from sectors such as drug trafficking or international terrorism.

The BIONIC project aims to help address some of these concerns, by looking at the potential for using locally produced sustainable biofuels.

France Imposes Sanctions For Biofuel Blends

Spanish freight trucks have been inspected and sanctioned in France due to excess biofuel quantity in the blend of gasoil. According to the Spanish Transport Confederation (CETM), French Authorities have established limits for biofuel proportion in blends of commercialised fuels. As a result some Spanish drivers have been sanctioned in France and this information has been passed to the Spanish Ministry of Industry requesting an immediate solution.

For more information, please contact: bionic@cantabriasii.org

BIONIC Project Leader



BIONIC Project Partners



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