

# BiomethaneNews

Biogasmax newsletter

November / 2008 - n°2

## The Biogasmax friends

### Meeting on 30th January 2008 in Berne

At its Steering Committee organised in Berne, the day-long meeting of 30th January 2008 was devoted to the Friends of Biogasmax, investors, researchers, petrol and gas companies and engineering companies, from around the whole of Europe (Oslo, Lombardy, England, Germany, Portugal ...).

### Increasing interest for biomethane in the United Kingdom

Whereas the British minister for sustainable consumption and production considers anaerobic digestion to be the best technology for treating waste, British companies involved with gas are trying to obtain a certificate for « green gas ».

### Oslo opts for methanisation of urban waste

The capital of Norway is putting in place a biomethanisation project ending in 2010, giving priority to this technology for the treatment of its organic urban waste as well as for the reduction of greenhouse gases.

## GRID INJECTION OF BIOMETHANE ...

### Following in the footsteps of other European countries, France is planning to inject biomethane into its natural gas grid!

THE URBAN COMMUNITY OF LILLE IS PREPARING TO OBTAIN OFFICIAL AUTHORISATION, WHICH WILL ALLOW OPTIMAL USE OF BIOGAS AND GREATER FLEXIBILITY IN ITS PRODUCTION.

The injection of biomethane fuel in the natural gas distribution grid will mean the removal of one of the current obstacles to the development of biogas. In fact, the difficulty today is to reconcile continuous production of biogas with potentially fluctuating consumption (for example when bus fuel tanks are used). By injecting biomethane into the natural gas grid, this difficulty is removed. The network will then function as local temporary storage and will direct the biomethane towards other local uses.

The Netherlands, Germany, Switzerland, Austria and Sweden have already supported the development of biogas production by authorising its injection into their natural gas grids.

Since 2003, a European directive (2003/55/CE of 26.06.03) has authorised the injection of other gases into the natural gas grid. In the area of renewable energy and reduction of greenhouse gases, some European countries give special status to natural gas and biogas. In Germany, in December 2006, the first biogas installations fed into the national gas grid, which opened up the prospects of the field. Until 2030, Germany predicts enough potential available biogas to supply the grid with 100 billion kWh per year <sup>(1)</sup>.

**Amongst the Biogasmax project partners, Berne (Switzerland) and Stockholm and Gothenburg (Sweden) have also decided on the injection of biogas into their natural gas grid.**

In Gothenburg, since 1999, Göteborg Energi has been injecting a non-purified biogas into the urban grid, which already took gas known as town gas. In 2006 it decided to inject purified biogas into the



Centre for Organic Development, Lille

local natural gas grid. Since 2006 Berne has also connected its system of purifying biogas to the natural gas grid. Improvement in the technologies used means that today the quality and reliability of the system can be guaranteed. In France, legislation is in line with the European directives relating to liberalisation of energy. Transporters and distributors have drawn up and published technical specifications guaranteeing quality of use and integrity of transport infrastructures and gas distribution.

**In September 2008, the French Agency for Health and Safety in the Environment and Workplace (AFSSET), responsible for evaluating the impact of biogas on public health, came to a favourable conclusion at the completion of its health study.<sup>(2)</sup>**

French official authorisation is contained in the framework of the Grenelle Environment Conference (policy days organised in October 2007 concerning the environment and sustainable development) at which it was decided to support methanisation with special regulations and to align support for biogas fuel with that of biogas for electricity.

(1) [www.renewables-made-in-germany.com](http://www.renewables-made-in-germany.com)

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(2) Charles Thiébaud, Minister for the Environment, National Technical Day 07/10/08



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# January 2008

## Lombardy joins Biogasmax!

... Biogasmax  
in brief ...

### How to set up a methanisation project?

*Biomethane used as a fuel creates a virtuous environmental circle: organic waste is treated to produce biogas, which is then used as biofuel to supply the city buses and waste collection vehicles, whilst at the same time reducing greenhouse gases. The production of biomethane therefore becomes part of best practice in urban mobility and management.*

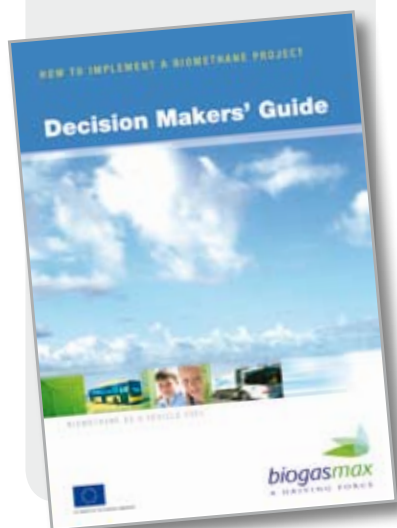
*Biogasmax is a European project which is based essentially on exchange of experience and which is of interest primarily to decision-makers in urban politics.*

*At their half-way point in the project, the partners have been in a position to draw up a specific guide.*

**Aimed at technical personnel as well as elected representatives, the Decision Makers' Guide is a real tool in helping decision making.**

**It provides all the specialist technical definitions and explanations necessary for understanding the procedure. Based on current Biogasmax projects, it suggests a simple and rigorous method for carrying out a biomethane fuel project (objectives, potential, economic models).**

**The « DECISION GUIDE » available to you on [www.biogasmax.eu](http://www.biogasmax.eu)**



AT THE LAST STEERING COMMITTEE IN BERNE AT THE END OF JANUARY 2008, THE BIOGASMAX PARTNERS WERE ABLE TO WELCOME TO THEIR NUMBER THE REGION OF LOMBARDY, WHICH IS ACCELERATING THE DEVELOPMENT OF BIOMETHANE FUEL ON ITS OWN SCALE.

This region of Italy, one of the most highly industrialised and a very large consumer of fuels, has identified natural gas and biomethane as being fuels of the future whilst waiting for the industrial development of hydrogen research.

**As a result, the Lombardy region has already equipped itself with the necessary means: between 2006 and 2007, there were already 24 biomethanisation plants, 80 are under construction and 30 million Euros have already been released by the region to finance biogas production projects.**

Until now, biomethanisation projects have increased due to initiatives by technical experts and local elected representatives who promoted biogas in response to problems managed by local city councils, such as management of urban waste and public transport.

Initial experience shared within Biogasmax shows that the development of a distribution network remains the dominant factor allowing projects to get off the ground.

It is important to note that, today, political decision-makers are taking on the baton when it comes to initiating these kinds of projects.

In fact, even if public transport or the processing of urban waste do not fall under the competence of

the Lombardy region, it is up to the region to make decisions on matters of energy and environmental policy.

It was realised that help with distribution was fundamental to encourage users as much as transport operators or car manufacturers, in order to get away from the "chicken or egg" situation: no cars because no distribution network, no distribution because no production, and no production because no cars to supply!

### Natural gas in all new petrol stations!

Together with this policy, Lombardy has put compulsory and incentive mechanisms in place. So since 2006, all new petrol stations must be able to offer natural gas in order to obtain their operating licence.

Since January 2008, the region has also created an Ecopass, a system for taxing road users and controlling access to the city centre of Milan. The payment is proportional to the level of pollution of the vehicle (for example, zero for natural gas vehicles).

This policy integrates the fundamental idea of access to fuel with its distribution, which affects users as much as transport operators or car manufacturers.

# Evaluation and knowledge transfer

BIOGASMAX AIMS TO DISSEMINATE THE RESULTS AND THE LESSONS LEARNED FROM THE PROJECT ACROSS EUROPE, IN PARTICULAR WITHIN THE COUNTRIES OF EASTERN EUROPE. TWO ORGANISATIONS, TRANSPORT AND TRAVEL RESEARCH (TTR) AND CONVOCO LTD, ARE RESPONSIBLE FOR ORGANISING TRAINING AND AWARENESS SEMINARS TO THIS END.

## Transport & Travel Research Ltd

Since TTR was formed in 1991, we have built a reputation for thoroughness, original thought and value for money. We evaluate and assess key areas of environmental policy, including air quality and environment, freight transport policy, demand management and road user charging, travel plans and travel awareness, transport accessibility and equality, intelligent transport systems, public transport and European projects.

In addition, we provide analyses of data and critical decision criteria, and a range of services in the fields of market and social research, public and stakeholder consultation, project management, policy advice and European bid preparation.

TTR has two distinct roles in the BIOGASMAX project, working within:

### • Evaluation

The overall purpose of this work package is to ensure a common evaluation to assess the contribution of demonstrated measures in improving the technical reliability, cost-effectiveness, environmental and societal benefits of biogas as a vehicle fuel. TTR is leading the data collection on topics of: driver perception and useability of biogas vehicles; public awareness and perception; political awareness and perception; and industry awareness. TTR will undertake an analysis of market expansion factors and track changes over the life-time of the project, in order to explain the contextual factors that will influence the opportunity for expansion of biogas as a vehicle fuel.

### • Training and Transferability Analysis

The overall purpose of this work package is to perform analyses of critical decision criteria that can be translated to other cities that are good candidates for biogas projects, providing decision tools and training to ensure implementation of the lessons learned from other project stakeholders.

Through this, development of biogas solutions in urban environments will be supported, both in countries and cities covered by the BIOGASMAX project and in others, assuring the usefulness of the research carried out.

TTR is responsible for preparing and delivering training events for policy and decision makers across Europe.



The aim is to have a positive impact on the development of efficient biomethane processes that can take advantage of urban waste and water management issues while reducing pollution in the transport sector. Training events have taken place in: Oslo (September 2008); London and Sheffield (October 2008); Further training events are planned, which may include locations in Germany, Belgium, Portugal and Italy.

## Convoco Ltd Sustainable Urban Development

Convoco Ltd. specialises in advanced transportation and energy projects, focusing on the New Member States needs. With EU funding, it promotes the economic and technological development of their cities using new technologies and solutions.

Based in Poznan Poland, Convoco Ltd. manages the project lifecycle (analysis and initiation of ideas, consortium formation, proposal preparation, project management, evaluation, knowledge transfer) as well as international exchange of expertise, knowledge and best practice schemes, helping cities in Eastern Europe to implement advanced solutions for sustainable development.

Convoco addresses European project management and financial procedures, and liaises with European Commission officials. The company has many contacts with European cities and experts for forming project consortia, extensive knowledge of European funding programmes and Commission funding requirements, and international experience in the field of project marketing, events and training.



## ... Biogasmax in brief ...

### Life Cycle Analysis

ADEME and Gaz de France ordered a Life Cycle Analysis (LCA) to study different processes regarding biogas recovery from organic waste methanisation.

This study took four indicators into account: greenhouse effect, acidification, eutrophication and energy. The conclusions, published in September 2007 show that biogas recovery as fuel for buses and household waste collection vehicles is one of the most optimal processes.

To learn more: [www.biogasmax.eu](http://www.biogasmax.eu)

### Biogasmax, a driving partnership

Lille Metropolitan Urban Community has set up a Centre for Organic Development which fuels a hundred city buses and 4 waste collection vehicles with biomethane. The latter are operated by a company called Esterra, which is preparing to convert 70 lorries in its fleet to biogas and natural gas.

These developments require monitoring and precise evaluation lasting a minimum of one year's use of this fuel. Stockholm, the Swedish Biogasmax partner, has already got a lot of experience in biomethane fuel in urban transport. This means that they can benefit the city of Lille with the methodology they have already put in place for evaluating practical experiences of this type.

To learn more: [www.biogasmax.eu](http://www.biogasmax.eu)

### Biomethane, a fuel in search of its French fiscal status

The rise in price of fossil fuels, the increasingly sharp criticisms levelled at agro-fuels (as much for their energy balance as for their environmental and social impact) and the second generation biofuel technology, which is far from being completed, means that biogas is regarded more and more favourably, whether it is seen as a biofuel or as an energy substitute for natural gas. However, until now, the development of this sector has received little support.

Berne, a Biogasmax partner, already benefits from a financial scheme coming under an agreement with the gas distributors; Lille is looking into a fiscal solution with the relevant minister; in England, organisations are trying to obtain authentication for a "green gas" label, so that biogas enjoys the same advantages as green electricity.

On the 12th March 2008, the European Parliament passed a resolution with a very strong majority which aims to support the development of the huge potential of Biogas.

To learn more: [www.biogasmax.eu](http://www.biogasmax.eu)

## Training and transferability workshops



### Three training events completed!

Training events have now taken place in: Oslo, Norway (September 2008); London and Sheffield, UK (October 2008).

In Oslo the training was organised via the Oslo Municipality (as a BIOGASMAX Friend) and hosted by the Waste-to-Energy Agency (EGE) who are developing a Anaerobic Digestion (AD) plant to handle the cities organic waste. A range of participants attended from the Municipality, the Agency, other AD plant operators from Norway and political decision makers.

The Oslo training was supported by Gothenburg and Stockholm, together with their local partners (such as AGA GAS or VK of Vasteras)

Students working with Falköping Municipality and Sweco demonstrated a Toolkit for estimating gas yields from feedstocks, and costs of developing a Biomethane facility. It is planned that this toolkit will be made more widely available through the support of the BIOGASMAX project.

Two training events took place in the UK during early October, organised by TTR in partnership with Cenex (the UK's national centre for low carbon and fuel cell technologies). These events followed a similar format to the Oslo training, with an outline of the theory and current practice for pre-treatment, AD processes, upgrading, distribution and use of biomethane in vehicles to start the day.

Examples from the BIOGASMAX project and sections of the Decision Makers Guide were used for the training curriculum. Cenex presented on UK experience and availability of gas vehicles, and gave training in the use of a Toolkit they have produced (which includes an estimation tool similar to that used in the Oslo event).

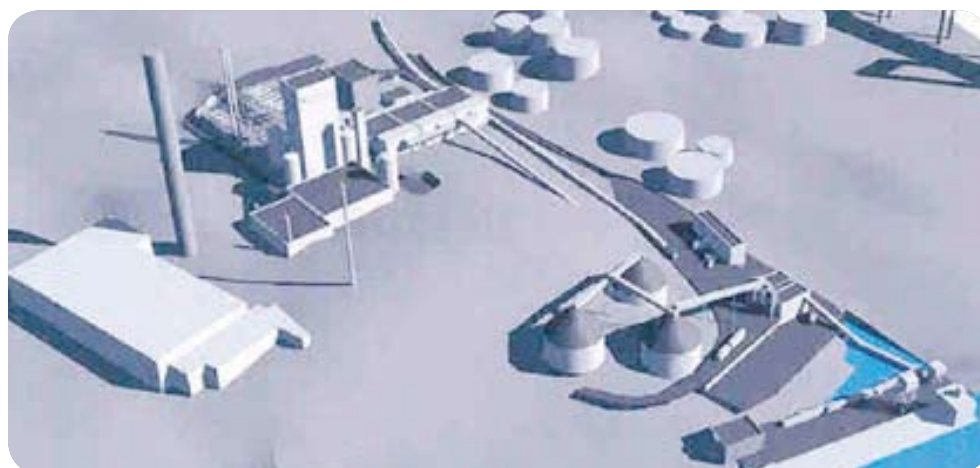
A good range of participants attended, covering many parts of the biomethane pathway and relevant departments of Municipalities.

The three events have been well attended, with over 60 persons receiving training. Future events are in the planning stage, but locations could include Germany, Italy and Portugal.

**If you are interested to know more, or would like to host a similar training event in your own country/city, please contact TTR via the project website**

[www.biogasmax.eu](http://www.biogasmax.eu)

# Gothenburg: gasification of wood waste



GOBIGAS - GÖTEBORG

GOTHENBURG IS CONDUCTING SEVERAL PROJECTS WHICH AIM TO DEVELOP USAGE OF BIOMETHANE, AND IN PARTICULAR BIOGAS. AS A PARTNER IT IS VERY ACTIVE IN THE EXCHANGE OF EXPERIENCE WITHIN BIOGASMAX, AND TODAY IS JOINING GOBIGAS (A GASIFICATION PLANT FOR WOOD WASTE) IN ORDER TO PRODUCE MORE BIOMETHANE.

## A national effort

**Sweden has for a long time been developing in the framework of an ambitious energy and environmental policy (it is aiming for total independence from fossil fuels by 2050).**

Our Swedish partners, Stockholm and Gothenburg, were already well advanced in biomethane fuel projects when they joined the European Biogasmax project. Having made the choice to develop this fuel for all types of vehicles, the most important thing was to increase the production of biogas in order to satisfy the ever-growing demand.

## An innovative local project

**Today, Sweden has the largest gasification plant for wood waste, GoBiGas (Gothenburg Biomass Gasification Plant) in order to cater for an automotive market which is asking to adapt by developing dual fuel techniques (gas and liquid fuel).**

As well as investing in the technical aspects of the idea, Gothenburg is also demonstrating its commitment to the environment by creating the "Gothenburg Prize for Sustainable Development", thereby including the theory in its approach. As



the Nobel Prize committee did not accept the creation of a specific prize for the environment, Gothenburg took the initiative eight years ago.

This year Göran Johansson, President of Gothenburg city council and of the Gothenburg Prize committee, gave this award to the 2007 Nobel Peace Prize winner, Mr Al Gore. This was to honour his unfailing commitment in the face of the climate crisis, for which CO<sub>2</sub> emissions are largely responsible.