

Urban waste for biomethane grid injection and transport in urban areas

Project No: IEE/10/251



***Summary of  
UrbanBiogas national expert  
consultation meetings on  
biomethane use in Portugal***

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UrbanBiogas website: [www.urbanbiogas.eu](http://www.urbanbiogas.eu)

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## **Introduction**

The UrbanBiogas objective is to promote the use of organic urban waste for biogas production in 5 European cities in order to inject biomethane into the natural gas grid and to use it in transport.

The Core of this project is the development of five marketable WtB concepts for five European cities.

IrRADIARE has been active in organizing meetings in the context of national expert consultation meetings.

The national expert consultation meetings allow us to promote biomethane as a reliable substitute of natural gas, identify possibilities to participate in that market and also to understand the law framework in which it is possible to work.

## **1<sup>st</sup> National expert consultation meeting**

### ***Objective***

The 1<sup>st</sup> national expert consultation meeting was held on the 24th of July 2012 with Resitejo.

Resitejo is a waste management company that covers 10 municipalities of the region of MédioTejo21.

At this meeting attended the representatives of the municipalities of Santarém, Chamusca, Tomar, Entroncamento, Mónica Martins from MédioTejo21, Filipe Melo from Resitejo and Marcos Nogueira from IrRADIARE.

### ***Discussion***

On the 24th of July 2012, a meeting was held in Resitejo's installations.

This first meeting allowed a presentation on the Urbanbiogas project and the importance of biomethane to the region either to the waste management company and for the municipalities.

This meeting was organized during the Summer School of Urbanbiogas.

Resitejo is a waste management company that covers the following municipalities: Alcanena, Chamusca, Constância, Entroncamento, Ferreira do Zêzere, Golegã, Santarém, Tomar, Torres Novas and Vila Nova da Barquinha. The waste management system of Resitejo started to operate on May 1999 and it has 1 landfill, 1 sorting centre, 3 units of transfer, 4 centres of transfer, 8 ecocenters, 1201 ecopoints, 298 containers for glass and 34 cooking oil containers.

The meeting started with an introduction by Mónica Martins from MédioTejo21 in what concerns the project and the concepts to be developed which includes the biomethane.

Also, the role of the agency in the project was explained as it represents 15 municipalities and has the purpose of contributing to the better energetic performance of the region, through the development of methodologies that allow its rationalization and simultaneously work towards the full accomplishment of the European targets.

This meeting also allowed to explain the importance of the local support group and to count entities like Resitejo that work in the region and have a word to say on the work done.

Marcos Nogueira also stated that the cooperation with Resitejo in the project would be of major importance as to assist in the development of the concept and to make it according to the Portuguese framework and in particular the municipalities covered by MédioTejo21 (namely considering the amount of waste produced and treated).

## 2<sup>nd</sup> National expert consultation meeting

### **Objective**

The second national expert consultation meeting took place on the 15<sup>th</sup> of February 2013 at Sysadvance. The meeting had the presence of Patrick Bárcia with whom a cooperation was established at the time of Summer School and Marcos Nogueira.

As Sysadvance is a leading player in gas separation and purification technology, this meeting allowed to explore the available technologies to be assessed on the concept.

### **Discussion**

On the 15<sup>th</sup> of February 2013 a meeting was held on Sysadvance's office.

Sysadvance is a company with links and cooperation to University laboratories, experienced in gas separation technologies.

Sysadvance, represented by Patrick Bárcia, stated that Biogas is a renewable and environmentally friendly energy resource that plays an important role in the world energy scenario.

Also, the biogas upgrading lead to pure biomethane. The units produced by Sysadvance, **Methagen**, are high efficiency systems based on PSA technique producing high purity CH<sub>4</sub> ensuring simultaneously recovery rates close to 99%. Some of the benefits of these units are: High added value CH<sub>4</sub> when compared to traditional CHP, Renewable energy source, Low operation Costs, High Purity CH<sub>4</sub>: up to 99%, High Recovery, High Productivity, ECO solution for H<sub>2</sub>S removal, Efficient N<sub>2</sub> removal, ATEX certification, GSM remote control and monitor.

Patrick Bárcia is directly involved in the project of a unit of methagen in Denmark, knowing all the process and technology involved and therefore representing an important partner in the project.

This meeting was important in order to obtain inputs for the technology assessment for the concept.

## 3<sup>rd</sup> National expert consultation meeting

### **Objective**

The 3<sup>rd</sup> national expert consultation meeting took place on the 25<sup>th</sup> of March 2013 between TratoLixo's representative João Lourenço and Marcos Nogueira from IrRADIARE.

This meeting was important to extend the coverage of Urbanbiogas project allowing to get information on a different region than Abrantes and to compare the gathered data in what regards waste collection and sorting.

## **Discussion**

On the 25th of March 2013 a meeting was held at Tratolixo.

Tratolixo has for mission to assure the integrated management of the urban Solid Waste of the Municipalities of Cascais, Mafra, Oeiras and Sintra.

The meeting counted on João Lourenço, representing the company and Marcos Nogueira, from IrRADIARE.

This meeting made available the possibility to present Urbanbiogas purpose and the potential of integrate its objectives not only in Abrantes region but also in the municipalities covered by Tratolixo.

Also, some data was requested in order to be able to compare the region's status on the way towards biogas production and upgrading to biomethane.

## **4<sup>th</sup> National expert consultation meeting**

### **Objective**

The 4<sup>th</sup> national expert consultation meeting took place at APA – Agência Portuguesa do Ambiente (Portuguese environmental protection agency) on the 23<sup>rd</sup> of April 2013.

The meeting was attended by Marcos Nogueira and Sofia Martins, from IrRADIARE and Bruno Simplício and Alexandra Rodrigues from APA.

### **Discussion**

On the 23<sup>rd</sup> of April 2013, a meeting was held at APA - Agência Portuguesa do Ambiente (Portuguese environmental protection agency).

APA has for mission to propose, develop and follow the integrated and participative management of the environmental policies and also of sustainable development together with other sectorial policies. In summary APA aims at contributing to the sustainable development of Portugal with high standards and integrated approaches of public policies.

This meeting counted on the presence of Marcos Nogueira and Sofia Martins, from IrRADIARE and Bruno Simplício with Alexandra Rodrigues representing the Agency.

During the meeting it was possible to exchange notes on the current applicable laws and how they affect the final objectives of Urbanbiogas Project.

The meeting was important in order to present the Urbanbiogas project and concept being developed as APA is the entity responsible for licensing and also has some important data to assess the needed investment in the region.

## **5<sup>th</sup> National expert consultation meeting**

### **Objective**

The 5<sup>th</sup> national expert consultation meeting took place on the context of an event Bioenergia Portugal on the 25<sup>th</sup> May 2013.

There were more than 200 participants at the event.

This meeting was important as it occurred during an exhibition, giving the opportunity to get in touch with people from different countries and with different and important inputs to give, namely on technology assessment.

Marcos Nogueira, from IrRADIARE made a presentation on Urbanbiogas concept at this event.

## Discussion

The final consultation meeting took place on the 25<sup>th</sup> of May 2013.

The event, in which occurred was Bioenergia Portugal (<http://www.bioenergiaportugal.com/index.php?lg=en>) and counted with more than 200 participants.

PROGRAMA ACTIVIDADES PARALELAS. PARALLEL ACTIVITIES PROGRAM

**25.MAIO (sábado)**

**SEMINÁRIO "BIOENERGIA EM MOVIMENTO"  
WORKSHOP "BIOCOMBUSTÍVEIS GASOSOS"**

**10h30.** Os Biocombustíveis Gasosos em Portugal  
- Santino di Bernardino, LNEG – Laboratório Nacional de Energia e Geologia

**10h50.** Valorização Energética de Biogás na Europa  
- Jan Stambasky, EBA – Associação Europeia de Biogás

**11h10.** Valorização Energética de Biogás em Espanha  
- Francisco Repullo Almagro, AEBIG – Associação Espanhola de Biogás

**11h30.** Apresentação do Projecto AGROGAS  
- Fernando Lopez, AGENEX – Agência Extremeña de la Energia  
- Bruna Fonseca, CVR – Centro de Valorização de Resíduos

**12h10.** Apresentação do Projecto URBANBIOGAS  
- Marcos Nogueira, IrRADIARE

**12h30.** Produção Electrolytica de Hidrogénio  
- Luiz Rodriguez, C3I/IPP – Coordenação Interdisciplinar de Investigação e Inovação do Instituto Politécnico de Portalegre

**15h00.** Visita à Unidade de Produção de Biogás da VALNOR

Local dos Seminários/Workshops: Auditório



BIOENERGIA PORTUGAL

Bioenergia Portugal integrates a Bioenergy Technology Exhibition, whose main purpose is promoting business opportunities in the national and international market.

Bioenergia Portugal integrates parallel activities, namely sessions, workshops, technical visits and Business Networking.

The specific event on the 25th of May 2013 integrated visits to biogas plants and sessions with presentation from different and relevant companies in the area, allowing an exchange of ideas and inputs to the Urbanbiogas concept, presented by Marcos Nogueira.