Urban waste for biomethane grid injection and transport in urban areas

Project No: IEE/10/251



Report on the competition event for biogas plant companies in Zagreb -Croatia

WP 4 – Task 4.4 / D 4.4

July 2013



Author: Biljana Kulišić, Energy Institute Hrvoje Požar, Croatia

Review: Željko Jurić and Robert Bošnjak, Energy Institute Hrvoje Požar, Croatia

Contact: Biljana Kulišić Energy Institute Hrvoje Požar Savska cesta 163, pp141 10001 Zagreb, Croatia tel:++385 1 6326 169 fax: ++385 1 6040 599 bkulisic@eihp.hr

The UrbanBiogas project (Urban waste for biomethane grid injection and transport in urban areas) is supported by the European Commission in the Intelligent Energy for Europe Programme). The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission are responsible for any use that may be made of the information contained therein. The UrbanBiogas project duration is May 2011 to April 2014 (Contract Number: IEE/10/251).



Co-funded by the Intelligent Energy Europe Programme of the European Union

UrbanBiogas website: www.urbanbiogas.eu

CONTENT

1. INTRODUCTION	4
2. DESCRIPTION OF THE COMPETITION EVENT	8
3. CONCLUSION	11
ANNEX I – AGENDA	12
ANNEX II – MATERIAL FOR PROMOTING THE EVENT	13
ANNEX III – LIST OF PARTICIPANTS	16
ANNEX IV – PHOTO DOCUMENTATION	19

1. Introduction

According to the Task 4.4 Stimulating competition among biogas plant planners and companies, in the framework of the WP4 of the UrbanBiogas project, EIHP has implemented competition event in the City of Zagreb on 10th July 2013.

Namely, according to the Grant Agreement, "in each target city, a dedicated event had to be organised at which national and foreign biogas companies (planners, technology providers, turn-key plant developers, etc.) can present their biogas concept. The objective is on the one hand to collect potential technical solutions for the target cities and on the other hand to show the high biogas potential of the target cities and thus to stimulate competition among biogas plant planners and companies. This will furthermore attract potential biogas plant operators and investors. EIHP, PBA, IRRAOIARE, EKOOOMA, and GEA will organise one event per target city. FRAUNHOFER will help in promoting this event among biogas companies in Germany and Europe and to invite the relevant companies."

The agenda was tailored according to the above cited text in the Task 4.4. The first part was concentrated on presenting the project UrbanBiogas and the main message from the project through the promotional video which was followed by presenting the potential biomethane market in Croatia plus results of Biogas production and Biomethane use concepts for the City of Zagreb. The second part was dedicated for planners, technology providers, turn-key plant developers, etc.). The agenda is presented in the Annex I.

Croatian Chamber of Commerce (HGK) has been invited to be organisational partner as several of its main activities are in the line of the above stated tasks:

- representation of economic interests before economic policy makers is achieved in the form of written materials, opinions on the respective measures or bills, active participation in Government or ministry sessions. This also includes providing parliamentary representatives with materials.
- HGK prepares materials on topical economic issues and refers them to relevant departments as joint proposals of the business community.
- HGK has a task of the improvement of economic co-operation of Croatia with foreign countries

After preliminary consultations, it has been decided that the event will be held at HGK premises and all the material originated from the event will be at free use to the Chamber for further use. On HGK side, Association for Renewable Energy Sources (Mr Krešimir Štih, secretary of the Association), a section from Department for Industry, has been dedicated as an organisational partner for the event. The main task of the Association is to promote utilisation of RES in Croatia which would result with improved conditions for doing business in that sector, development of national industry and associated services as well to create conditions for R&D and application of new technologies together with boosting of employment.



Figure 1 Table with the address at the entrance to the HGK building

EIHP perceives that including HGK in organisation and promotion of the event will have positive outcomes even beyond the scope of this project.

The date for organising the event was set on 10 July 2013.

Audience was reached by sending the invitation for the competition event to the several target audiences:

- 1) EIHP mailing list from biogas related events with emphasis on UrbanBiogas task force members
- 2) Association of Waste Management Companies at HGK
- 3) Association of Towns and Municipalities of the Republic of Croatia
- 4) Association of Counties of the Republic of Croatia
- 5) Network of Regional Development Agencies
- 6) members of NGO DOOR

Invitation was consisted of a phone call to the association to explain in person what the event is about followed by "ready-to-forward" e-mail to inform the association members plus three bilingual documents (annex II):

- explanation of the main purpose of the event
- draft agenda
- registration form

All invitations had closing remark: Join us at facebook at which was the way of promoting the social networks (WP2). Additional presentation of the social networks was during the competition event where Ms Kulišić has several time invited participants to join in at the facebook site of the UrbanBiogas project.

The event was also promoted at the 3rd Biogas Task Force Meeting, Public consultation event, 2nd Biomethane Task Force Meeting plus at the web site of EIHP.



Figure 2 Presentation of the event at the EIHP web site (main site)



Figure 3 Presentation of the event at the EIHP web site (after following the link "for more...")

HGK has also presented the event at its web site and send the invitation to the event to all Association of RES members.

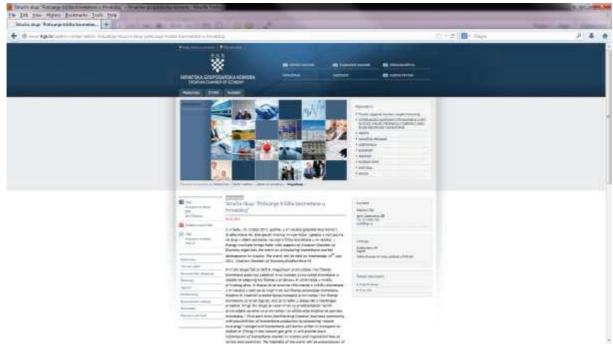


Figure 4 Presentation of the event at the HGK web site

Parallel to the invitation of participants, efforts are made to identify possible planners, technology providers, turn-key plant developers, etc. related to "waste-to-energy" concept. As biomethane market in Croatia is in its earliest phase, not much companies or planners were available.

EIHP has prepared a memo and information to HGK Department for International Relations to invite "waste-to-energy" companies via foreign chambers of commerce or economy sections of embassies present in Croatia (Germany - AHK, Austria - InventAustria, Italy, USA - AmCham, UK - BCCC, Switzerland; Denmark and Sweden).

Fraunhofer Institute provided the support in attracting the companies and has contacted the following companies:

- Malmberg;
- Carbotech
- Haase
- MT-Energie
- Bilfinger E.M.S.
- Axiom
- Ökobit
- Biogas Nord
- EnviTec.

Fraunhofer Institute forwarded national contacts for MT-Energie, Biogas Nord, Kompotech and EnviTec. EIHP has contacted all of them both by phone and e-mail. MT-Energie was not interested as the person in Croatia was on his sick-leave and his German superior at vacations. Biogas Nord; Komptech and EnviTec has confirmed their participation.

In addition, Ms Kulisic has contacted national equipment representatives and "waste-tomanagement" planners that EIHP was aware of:

- company AREX representing BIOGAS SYSTEMS (SE) landfill gas use equipment
- company EKO-TEHPROJEKT DOO: consultation services for "waste-to-energy" concepts
- Croatian company TEHNIX, Donji Kraljevec: biowaste separation technology

A German company FINSTENWALDER UMWELTECHINK (a partner from IEE BiG>East) has been also invited to represent its sanitation equipment, floor scraper and bio-squeeze product (a press for biowaste de-packaging). Unfortunately, they could not afford a person travelling to Croatia due to lots of business engagements.

Finally, 6 companies agreed to participate at the event and were asked to prepare 15 - 20 minutes presentations (please see the Agenda).

80 persons have registered their participation via e-mail registration form and 75 persons actually participated in the event (participation list is provided in the Annex III).

Photo documentation is presented in Annex IV.

2. Description of the Competition Event

The event was hosted jointly by Mr Krešimir Štih (HGK) and Ms Biljana Kulišić (EIHP).

Mr Josip Miličić, assistant to the director of Industry Sector of HGK has welcomed the event and the efforts in opening the new niche market in RES field. The second welcoming speech came from Ms Zdravka Zmajlović, Ministry of Economy of the Republic of Croatia, Energy Division, Section for RES. The last welcoming speech gave Ms Branka Jelavic, the Head of the Department of RES & EE at the Energy Institute Hrvoje Požar. Ms Jelavic also gave short presentation of EIHP's past and current activities in biogas and biomethane field, with special emphasis of current projects under the IEE programme: UrbanBiogas, GreenGasGrids, BiomethaneRegions and BiogasHeat.

In the first presentation, Ms Biljana Kulišić (EIHP) presented **UrbanBiogas project**. She presented project objectives, project partners and other basic information about the project. She gave an overview on performed and expected activities in the implementation of the UrbanBiogas project She explained that the same activities of the project are occurring simultaneously in other 4 targets cities of the project.

The presentation was followed by **UrbanBiogas video** showing the best practice in Waste-to-biomethane concepts.

In the third presentation, Ms Biljana Kulišić (EIHP) presented **Biomethane Market in Croatia** - which was among the first public attempts to assess national potential biomethane market. The main conclusion of the presentation was that the technical potential of biomethane market in Croatia is sufficient to cover

- 5% national natural gas production in 2011
- 4% national natural gas consumption in 2011
- 14% national natural gas imports in 2011
- 94% national obligation of placing energy from renewables in transport (biofuels) by 2020

The drawback for calculating the economic biomethane concept was that biomethane is only mentioned in the national energy strategy only in general terms without specific goals which followed with lack of any supporting scheme for this form of biogas energy. Thus, the economic potential is assumed to be 0-1.14 PJ which gives less contribution to the national target but still allows some investments in the existing environment:

- 1.4% national natural gas production in 2011
- 1% national natural gas consumption in 2011
- 4% national natural gas imports in 2011
- 26% national obligation of placing energy from renewables in transport (biofuels) by 2020

The presentation was extended with the general information of biogas and AD given the fact that the audience was consisted mostly of non-biogas experts and AD is not well known technology for biowaste management in comparison with, say, composting.

At the end of the presentation, Ms Kulišić has suggested that the easiest way how to promote biomethane use in transport is to deliver Ordinance on Supporting Biomethane for Transport for which all legal background is already set and no additional legal documents or amendments are needed.

Mr Robert Bošnjak (EIHP) presented the highlights of the **Biogas and Biomethane Production Concepts (WP4) and Biomethane Use Concept (WP5) for the City of Zagreb**. The main conclusion of the presentation is that, there is sufficient potential in the biowaste of the City of Zagreb to supply 60 SNG busses for the public transport with biomethane. However, the power is not sufficient to have the direct filling stations which implies that "waste-to-energy" concept could be closed by injecting the biomethane in the natural gas grid and having the filling station somewhere else (at the already dedicated locations). He also presented rationale beyond selected upgrading technologies and provided estimations for the upgrading investment and production prices of biomethane - from AD till the injection.

The first section followed by short discussion on the methodology used to calculate the biomethane potential.

Unofficial discussion continued at the coffee break.

The second section stared with companies' presentations of biomethane/biogas production and upgrading equipment from biowaste, listed in alphabetical order.

Mr Boris Predevan presented the **Biogas Systems** - collecting and utilising landfill gas with the emphasis on the untapped potential of about 300 landfills in Croatia.

Mr Srđan Selanec - Barbieri presented his consultation company **EKO-TEHPROJEKT D.O.O.** in "waste-to-energy" field with numerous examples of equipment producers. His main message is that all the equipment is mature with known parameters and the only trick is to choose the right one for the task. He also presented two projects that his company develops for municipal waste management, biowaste fraction use for biogas, for the City of Varaždin and the City of Čakovec.

At the day of the event, Mr Pavle Pavkovic, national representative of **BiogasNord AG** has excused himself via e-mail from the presentation as BiogasNord is in the middle of changing the management board and he was tied up in Germany. However, he promised to send the presentation by the e-mail.

Representatives of **EnviTec Biogas** designated for Croatia are situated in Hungary. is the Country Manager Southeast Europe, EnviTec-Biogas Southeast Europe Ltd., Member of EnviTec-Biogas PLC. Group and he came to the event together with Mr. Sándor Kis managing director of the company. Mr Édes, in agreement with Ms Kulišić, has sent the presentation the day before the event and EIHP has translated it to Croatian. It has been agreed that individual translation will be provided as most of the participants at the event will understand the presentation in Croatian and presenting it in English. Mr Željko Jurić has been translating the event for both representatives of EnviTec. Mr. Édes has presented an example how a biogas plant can be fully run on waste material and serve as a local "biowaste management facility". The example was AGROWATT biogas plant in the City of Kecskemét, Hungary.

KOMPTECH/TEKNOXGROUP's presentation covered three topics:

- a valuable example of Marchfeld biogas plant in Vienna, Austria, that runs on biowaste (biowaste from municipal waste, expired food, waste from catering and food industry and liquid waste).
- waste pulping, shredding, separation, pressing technology
- compression unit, gas conditioning and emergency flare plus CHP for utilising biogas.

Presentation was held jointly by Mr Predrag Stojanović and Mr Teufik Sadović, both arrived from Vrčin, Serbia as TEKNOXGROUP covers numerous subsidiaries and for this particular one (waste, biogas) was closest in Serbia.

Representative(s) of **80** group did not show up without providing explanation.

All presentations are available at the https://www.eihp.hr/hrvatski/projekti/urban_biogas.html.

This section was followed by **discussion** which Mr Štih moderated. EIHP has recorded the discussion and here are the highlights.

Most of the discussion went to the implementation barriers that the new Law on Sustainable Waste Management brings. It is unclear who is actually responsible for biowaste

management - there are roles for Ministries, Fund for Environmental Protection and Energy Efficiency, local governments, waste management companies...

DrSc Viktor Simončič, former assistant to Minister of Environment of the Republic of Croatia has warned that the current waste management system with 11 waste management centres is neither feasible nor economically justified. He highlighted that the waste is a resource not a problem and that finally Croatian government needs to recognise that. He pointed the paradox in the fact that the new Law on Sustainable Waste Management is about to be adopted in mid 2013 whereas first obligation from Landfill Directive (35% of biodegradable waste to be diverted from landfills) is due in 2013 and that local governments and waste management companies are obliged to deliver their plans how to meet that current goal.

Mr Avirović, GPK Čakom d.o.o. (waste management company for the City of Čakovec) added that there is a lot of pressure on waste management companies as they have obligations but not the means to implement those obligations as well. In addition to 350.000 t of biodegradable waste that Croatia needs to "manage" beyond the landfills by end of 2013, there is additional waste sludge that comes from waste water treatment plants that are ambitiously built all around Croatia. That sludge is also not allowed to be landfilled. Existing composting plants do not have the capacity to take the sludge in. At his estimation, some 50-60 biogas plants are needed to solve the problem. He also shared the experience for funding from the und for Environmental Protection and Energy Efficiency.

The event was closed in the timely manner, a little after 13.30.

3. Conclusion

The overall conclusions from the event are that there is certainly a market for biomethane from (bio)waste in Croatia. Finally, national biomethane market size is assessed which indicates significant potential at least in terms of fulfilling the biofuel goal by 2020.

Waste-to-energy concept can be implemented for the City of Zagreb. However, its implementation fully depends on the efforts on the reaching the biowaste potential (waste management) as there is sufficient potential to power the public transport.

Waste-to-energy concept for the City of Zagreb should be tested for each larger city in Croatia, combining existing landfills and both existing and planned waste water treatment plants.

Biogas is poorly described in national legislation (energy strategy) and, consequently, that refers to biomethane even more. There are two umbrella documents under the development that might change the view on both biogas and biomethane: the Law on Renewables and Renewable Energy Action Plan for Croatia.

However, prior to that, it is possible to promote biomethane market via delivering the Ordinance for Promotion of Biomethane in Traffic (biofuel) for which no alterations in any other legal document is needed.

On several occasions it was stressed that the responsible ministries should become aware of the materials presented at the event.

Annex I – Agenda







"Poticanje razvoja tržišta biometana u Hrvatskoj / Stimulating biomethane market development in Croatia"

10. srpnja/July 2013. Hrvatska gospodarska komora*/ Croatian Chamber of Economy* Draškovićeva 45, Zagreb

PROGRAM / PROGRAMME

9 ⁰⁰ - 9 ²⁰	Riječi dobrodošlice Ministarstvo gospodarstva, HGK i EIHP Welcome words Ministry of Economy, Croatian Chamber of Economy and Energy Institute Hrvoje Pozar							
9 ²⁰ - 9 ³⁵	IEE UrbanBiogas projekt/IEE UrbanBiogas project - Biljana Kulišić (EIHP)							
9 ³⁵ - 9 ⁵⁵	Video prezentacija koncepta "iz otpada do energije" / Video presentation "Waste- to-Biomethane" concept							
9 ⁵⁵ - 10 ¹⁰	Tržište biometana u Hrvatskoj / Biomethane market in Croatia - Biljana Kulišić (EIHP)							
10 ¹⁰ - 10 ⁴⁰	Koncept proizvodnje i korištenja biometana za Grad Zagreb / Biomethane production and utilisation concept for City of Zagreb - Robert Bošnjak (EIHP)							
10 ⁴⁰ - 11 ⁰⁰	Stanka za kavu / Coffee break							
11 ⁰⁰ - 13 ⁰⁰	Predstavljanje opreme za proizvodnju bioplina, pročišćivanje biometana iz biorazgradivog otpada / Presentations of biomethane/biogas production and upgrading equipment from biowaste							
	AREX, Samobor: Korištenje deponijskog plina Biogas Nord AG: Proizvodnja bioplina EKO-TEHPROJEKT DOO: Mogućnost prerade komunalnog otpada u bioplin bez prethodnog odvajanja biorazgradive frakcije na izvorima EnviTec Biogas AG: Waste-to-energy techology/Tehnologija dobivanja energije iz otpada KOMPTECH/TEKNOXGROUP: Predtretman biootpada TEHNIX, Donji Kraljevec: Odvajanje biootpada iz mješanog komunalnog otpada							
13 ⁰⁰ - 13 ³⁰	Rasprava i zaključci / Discussion and conclusions							
Pridružite	e nam se na/Join us at: <u>https://www.facebook.com/pages/Urban-Biogas-Waste-to-Biomethane-and-Use-for-Transportation/118232588288154</u>							

d by the triefigent Energy Europe rentine of the European Union

Annex II – Material for promoting the event







" Poticanje razvoja tržišta biometana u Hrvatskoj / Stimulating biomethane market development in Croatia"

> 10. srpnja/July 2013. Hrvatska gospodarska komora/*Croatian Chamber of Economy* Draškovićeva 45, Zagreb

PROGRAM / PROGRAMME (draft)

9 ⁰⁰ - 9 ²⁰	Riječi dobrodošlice/ Welcome words
9 ²⁰ - 9 ³⁵	IEE UrbanBiogas projekt/IEE UrbanBiogas project - Biljana Kulišić (EIHP)
9 ³⁵ - 9 ⁵⁵	Video prezentacija koncepta "iz otpada do energije" / Video presentation "Waste- to-Biomethane" concept
9 ⁵⁵ - 10 ¹⁰	Tržište biometana u Hrvatskoj / Biomethane market in Croatia - Biljana Kulišić (EIHP)
10 ¹⁰ - 10 ⁴⁰	Koncept proizvodnje i korištenja biometana za Grad Zagreb / Biomethane production and utilisation concept for City of Zagreb - Robert Bošnjak (EIHP)
10 ⁴⁰ - 11 ⁰⁰	Stanka za kavu / Coffee break
1100-1300	Tvrtka Arex, Zaprešić: Korištenje deponijskog plina; Tvrtka EKO-TEHPROJEKT DOO: Mogućnost prerade komunalnog otpada u bioplin bez prethodnog odvajanja biorazgradive frakcije na izvorima Tvrtka TEHNIX, Donji Kraljevec: Odvajanje biootpada iz mješanog komunalnog otpada Predstavljanje opreme za proizvodnju bioplina, pročišćivanje biometana iz biorazgradivog otpada / Presentations of biomethane/biogas production and upgrading equipment from biowaste
13 ⁰⁰ - 13 ³⁰	Stanka za ručak /Lunch break
13 ³⁰ - 14 ³⁰	Predstavljanje opreme za proizvodnju bioplina, pročišćivanje biometana iz biorazgradivog otpada / Presentations of biomethane/biogas production and upgrading equipment for biowaste
14 ³⁰ - 15 ⁰⁰	Rasprava i zaključci / Discussion and conclusions
Pridružit	e nam se na/Join us at: https://www.facebook.com/pages/Urban-Biogas-Waste-to-

Pridružite nam se na/Join us at: <u>https://www.facebook.com/pages/Urban-Biogas-Waste-to-</u> Biomethane-and-Use-for-Transportation/118232588288154



Figure 5 Draft Agenda

Poticanje razvoja tržišta biometana u Hrvatskoj/ Stimulating biomethane market development in Croatia

U srijedu, 10. srpnja 2013. godine, u Hrvatskoj gospodarskoj komori, Draškovićeva 45, Energetski institut Hrvoje Požar zajedno s HGK poziva na skup s ciljem poticanja razvoja tržišta biometana u Hrvatskoj. / Energy Institute Hrvoje Požar with support of Croatian Chamber of Economy organises the event on stimulating biomethane market development in Croatia. The event will be held on Wednesday 10th July 2013, Croatian Chamber of Economy, Draškovićeva 45.

Prvi dio skupa želi približiti mogućnosti proizvodnje i korištenja biometana poslovnoj zajednici kroz koncept proizvodnje biometana iz otpada te njegovog korištenja u prijevozu ili utiskivanja u mrežu prirodnog plina. Prikazat će se osnovne informacije o tržištu biometana u Hrvatskoj u nadi da će inspirirati korištenje potencijala biometana. Posebno bi istaknuli predstavljanje koncepta proizvodnje i korištenja biometana za Grad Zagreb, koji je izrađen u sklopu IEE UrbanBiogas projekta. Drugi dio skupa je rezerviran za predstavljanje raznih proizvođača opreme za proizvodnju i pročišćavanje bioplina te uporabu biometana./ First part aims familiarizing Croatian business community with possibilities of biomethane production by promoting "waste-to-energy" concept and biomethane utilisation either in transport as biofuel or filling in the natural gas grid. It will provide basic information of biomethane market in Croatia and inspiration how to utilise that potential. The highlight of the event will be presentation of biomethane production and utilisation concept developed for City of Zagreb, outlined within the IEE UrbanBiogas project. The second part is reserved for presentations of various equipment for biogas production and upgrading as well as utilisation of biomethane.

Skup organizira Energetski institut Hrvoje Požar, uz potporu Hrvatske gospodarske komore i Fraunhofer instituta iz Njemačke u okviru IEE UrbanBiogas projekta./ The event is organized by Energy Institute Hrvoje Požar, with support of Croatian Chamber of Economy and Fraunhofer Institute form Germany, within the framework of IEE UrbanBiogas project.

Cilj IEE UrbanBiogas projekta je promocija proizvodnje bioplina iz biorazgradivog dijela komunalnog otpada, pročišćavanje dobivenog bioplina u biometan te utiskivanje biometana u plinsku mrežu ili korištenje stlačenog biometana u prometu. Projekt se provodi u pet gradova Europe (Zagreb, Hrvatska; Abrantes, Portugal; Graz, Austrija; Gydyna, Poljska; Valmiera, Latvija). Voditelj projekta je njemačka tvrtka WIP Renewable Energies, a hrvatski partneri na projektu su Energetski institut Hrvoje Požar i Zagrebački Holding - Podružnica Čistoća. Detaljne informacije o projektu i izrađene materijale možete naći na internetskoj stranici: http://www.urbanbiogas.eu/./The objective of IEE UrbanBiogas project is promotion of biogas production and upgrading, biomethane grid injection in the natural gas distribution network or usage of compressed biomethane in transport. The project target cities are: Zagreb (Croatia), Abrantes (Portugal), Graz (Austria), Gydyna (Poland) and Valmiera (Latvia). The project coordinator is WIP Renewable Energies, Germany, while Croatian partners on the project are Energy Institute Hrvoje Pozar and Zagreb CH. More detailed information about project together with project deliverables are given on the web page: http://www.urbanbiogas.eu/.

Molimo Vas da potvrdite svoj dolazak do 8. srpnja 2013. te nam dostavite popunjen prijavni obrazac na e-mail: <u>imoric@eihp.hr</u> ili na fax 01/6040-599. Sudjelovanje na skupu se ne naplaćuje, a radni jezici skupa su hrvatski i engleski. Program skupa i prijavni obrazac su u prilogu./ Please, confirm your participation by 8th July 2013, by sending completed registration form on e-mail: imoric@eihp.hr or fax: 01/6040-599. Participation is free of charge. Official languages are Croatian and English. The Agenda of the event and registration form are in the attachment.

Radujemo se Vašem dolasku!/ We look forward to seeing you there!

EIHP UrbanBiogas tim/ EIHP UrbanBiogas team



Figure 6 Additional information about the event

EIHP

		EIHP	
. Stimuliranje investicija u blamet "Poticanje razvoja tr	tan/Scimulating Investme zijita biometana u Hr		
Himitska Dreško	10.07.2013. gaspodarška korvora videna 45. Zagreb		Anton Anton
PRIJAVNI OBRAZI	AC/REGISTRATIO	N FORM	:
The Forestime (None, Summe			
Twitke/Institucije /Company			
Ivanje/Title			
Adress/Address			
TeL/Phone			
E-mail		7-03	
Mallero Vas da popunjeni prijavni obraza e-mail edress kolagice Ivane Morić (mor	e pošaljete do 8. srpnja i teĝarhp.tv) ili na faz (17	2013. gadini ne 60425995,	
Please (V out the registration for -38536040599 for by Bin July 2013.	m and send it to s	inarkekhaltr or	
Radajenu se Vačen dolaskuć' We		rów there?	
Urbaniliogae Energietski itstria			
PridruBte nam se nar/Join us at: https:// Waster.ta-Blamathane and Use for	linnen facebook.com/gag • Transportation/118232	urs/Orban-Brogas: SBRORATSA	
-			7

Figure 7 Registration form

Annex IV – Photo Documentation



Figure 8 Opening the event (Mr Štih)



Figure 9 Mr Miličić (HGK) - Welcoming speech



Figure 10 Ms Zmajlović (MINGO)



Figure 11 Ms Jelavić (EIHP)





21

Figure 12 Ms Kulišić presenting the UrbanBiogas project





Figure 14 Presentation of UrbanBiogas video



Figure 15 Presenting Biomethane Market in Croatia (Ms Kulišić)



Figure 16 Presenting Biogas production and biomethane use for the City of Zagreb (Mr Bošnjak)



Figure 17 Mr Prevendar - AREX



Figure 18 Mr Selanec -Barbieri (EKO-TEHPROJEKT D.O.O.)



Figure 19 Mr Édes (EnviTec Biogas)



Figure 20 Mr Stojanović (KOMPTECH/TEKNOXGROUP)



Figure 21 Mr Sadović (KOMPTECH/TEKNOXGROUP)



Figure 22 Discussion