

Urban waste for biomethane grid injection and transport in urban areas

Project No: IEE/10/251



***Report on competition event for biogas
plant companies –
04./05.12.2013 St. Pölten***

WP4 – Task 4.4 / D 4.4

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UrbanBiogas website: www.urbanbiogas.eu

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1 Introduction

The stimulating competition event among biogas planners and companies was not possible in Austria in the way as it was originally foreseen in the UrbanBiogas-proposal mainly because of 2 reasons:

- 1.) In Austria a public competition event is not allowed in that status of the project and for this invest-volume as this would be a breach of legal competition rules before public tendering's.
- 2.) Till end of 2013 no decision about a potential plant location was foreseeable. A lot of potential plant-locations were evaluated but figured out as not possible ones. So any publicity before the final decision about the plant location might have resulted in negative effects for the on-going evaluation of the actual plant location.

So there was a definitive "NO" from the consortium of the WtB-plant Graz to such a public competition event.

So instead of a competition event among biogas plant planners and companies bilateral meetings with planners, turn-key plant developers and technology providers were organised by GEA during the Biogas 13 event.

2 Bilateral meetings with planners, turn-key plant developers and technology providers during the Biogas 13 event on 4th and 05th December 2013

The yearly Biogas-events from the Arge Kompost&Biogas are the leading Biogas events in Austria. More than 350 persons participated to the different sessions of the Biogas 13 in St. Pölten and more than 20 exhibitors from the biogas/biomethane sector showed their products. Additionally a large number of planners and turn-key plant developers participated the event.



Figure 1: Exhibition area Biogas 13 (source: Arge Kompost&Biogas, GEA)

GEA arranged individual meetings (mainly bilateral) with planners, turn-key plant developers and technology providers during the Biogas 13 event on 4th and 5th of December 2013. The concept for Graz (see Annex) was discussed with 10 representatives.



Figure 2: Meeting GEA with Reinhard Walk (Rovi Energie AG) (source: Arge Kompost&Biogas)

Competition event – mainly bilateral meetings			
Date	Place	Participants	Participants and follow up contacts
04/05.12.2013	St. Pölten	11 (+ 5 follow up)	Reinhard Walk (Rovi Energie AG/MT Biomethan/Axpo Kompogas) Alexander Luidolt (Planergy) Bernhard Stuermer (Arge Kompost & Biogas) Robert Rothleitner, Lukas Wannasek (Methapower) Georg Mittermeier (Huning Maschinenbau) Rainer Eisler (Franz Eisler und Söhne) Franz Schweitzer (Hörmann Interstall) Roland Kirchmayr (BDI Bioenergy International /entec Biogas) Wolfgang Lehner (ARW GmbH) Ernst Meißner (Grazer Energieagentur) Benjamin Görges (Schmack Carbotech) Michael Krismer (Thöni) Doris Thamer, Erwin Reinharter (Andritz AG) Martin Wellacher (Komptech)

Figure 3: List of participants competition event/bilateral meetings; Biogas 13, St. Pölten

As a follow up of this event the WtB-concept for Graz was discussed with 5 other company-representatives (also mentioned in the list above).

Quite interesting concepts and ideas for the plant in Graz were discussed during the meeting and afterwards. Rovi Energie AG, MT Biomethan, Axpo Kompogas and Methapower also submitted rough concepts and feasibility studies and sent list with reference plants which can be visited. Their concepts and ideas will be considered in the detailed planning for the plant in Graz.

3 Annex – WtB plant Graz – technical data for competition event 04/05.12.2013

Urban Biogas – Waste to Biomethane

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Biogas & Biomethane Production

Competition event 04./05.12.2013



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UrbanBiogas

Planungsdaten

Rohstoffe/ Substrate

Biotonne		t/a	ca. 30% TM
Speisereste		t/a	ca. 20% TM
Überlagerte Lebensmittel		t/a	ca. 20% TM
Altbrot		t/a	ca. 65% TM
Summe	47.500	t/a	

Kalkulation Biogas-Produktion

Estimated potential of organic waste (t/a)	fresh matter (FM)		dry matter (DM)		biogas			methane content
	te	DM%	DM t/a (DM)	te	m ³ FM	m ³ DM	m ³ (FM+DM)	
organic waste from organic waste bins								52%
food waste from restaurants, catering and food industry								52%
expired food from supermarkets and suppliers								52%
old bread from bakeries								52%
total	47.500		16.476		5.277.607	5.277.100		56%

Anlagenkonzept

Technologie:	Naßvergärung
Jährliche Biogasproduktion:	ca. 5,3 m ³ /a (Methangehalt ca. 59%)
Biogasnutzung:	100% Upgrading zu Biomethan
Upgrading Technologie:	PSA? / Aminwäsche? / Membran?
Jährliche Biomethanproduktion:	ca. 3,2 m ³ /a (Methangehalt > 98%)
Biomethannutzung:	Einspeisung ins Erdgasnetz (NE 3)
Betriebsstunden pro Jahr:	Ca. 8.500 h/a
Nutzung Gärrest:	Landwirtschaft
Realisierung:	2014-2016