

Urban waste for biomethane grid injection and transport in urban areas

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Report on the national expert consultation meetings on biomethane use in Graz

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1 Introduction

Although in Austria the first biomethane plant started in 2005 the product biomethane was on one hand not well known in the public and on the other hand there was scepticism concerning the quality of the biomethane and the chances of trading of biomethane at the beginning of the UrbanBiogas project.

GEA organised in total 3 national expert consultation meetings. The first and the second one together with another IEE Project (CHPgoesGreen) in the first half of the project and the third one in the last year of the UrbanBiogas project. Most of the barriers about biomethane use mentioned in the first meetings could be solved, the discussion in the third meeting has shown that the acceptance of the local energy suppliers in biomethane exists and there is also a market for biomethane growing up in Austria. Additional to these events also 3 consultation events for CNG-cars/vans for company fleets were organised.

2 National expert consultation meeting on 29.03.2012

This event was organised in cooperation with the IEE-project CHPgoesGreen with the title "Biomasse zur Strom- und Wärmeproduktion" (biomass for producing heat and electricity).

The event took place in Graz on 29.03.2012 with more than 130 participants from national energy providers (gas, electricity and heat), ESCOs, representatives from federal and national institutions, waste management companies, operators of biomass and biogas plants, energy agencies, planners, manufacturers, etc.

It was focussed on one hand on the availability of substrates for green CHP systems and on the other hand on technologies for such CHP-plants. Feed in-tariffs for green electricity were discussed and the barriers for such systems evaluated.

The following barriers for a wider implementation of CHP-plants operated with renewable energies were figured out:

- Available "green" CHP-technologies on the market: not enough products on the market especially in the lower capacity range; specific costs for small units very high
- Availability of biomethane: there is no trading of biomethane on the Austrian market at the moment
- Prices for substrates are not stable: feasibility checks with long term forecasts are difficult
- Feed in tariffs for green electricity: the tariff model in Austria is not so attractive compared with other countries (like Germany); a new law is in the final phase which will be more attractive for grid injection of green electricity



Figure 1: Invitation folder expert consultation meeting on 29.03.2012



Figure 2: Expert consultation meeting on 29.03.2012 (Source: GEA)

3 National expert consultation meeting on 13.11.2012

This event was organised in cooperation with the city of Graz as one of the “Grazer Energiegespräche” (Graz energy talks) and also in combination with the IEE-project CHPgoesGreen. The title was “Strom selbst erzeugen” (“own electricity generation”).

The event took place in Graz on 13.11.2012 with 97 participants. Representatives of the city of Graz (vice mayor), the Styrian government (Styrian Energy Consultant) and the department of environment of the city of Graz opened the workshop about self-power-generation for enterprises. There was a very wide range of participants from local and national energy providers (gas, electricity and heat), ESCOs, planners and manufacturers, representatives from universities and other research centres, from the Styrian Government and in total 6 departments of the city of Graz, etc.

Graz Energy Agency presented CHP technologies with different renewable fuels and presented feasibility studies with a comparison of CHP-systems driven by natural gas with CHP-systems driven with biomethane. The new feed in-tariffs for green electricity in Austria figured out as an attractive model for operating CHP-units with renewable energies like biomethane.

The following findings were summarised:

- There is an essential potential for CHP-systems for enterprises: feasibility studies figured out that an economical operation is possible with the attractive feed-in tariffs
- Biomethane is a very easy and attractive way to produce green electricity: CHP-technology is on the market
- Availability of biomethane – biomethane certificates: there is still no trading of biomethane on the Austrian market but a biomethane registry is going to be build up for Austria
- Feed in tariffs for green electricity: the way from the claim to getting the attractive feed-in tariff is not very transparent for companies right now (waiting periods, yearly quota etc.)

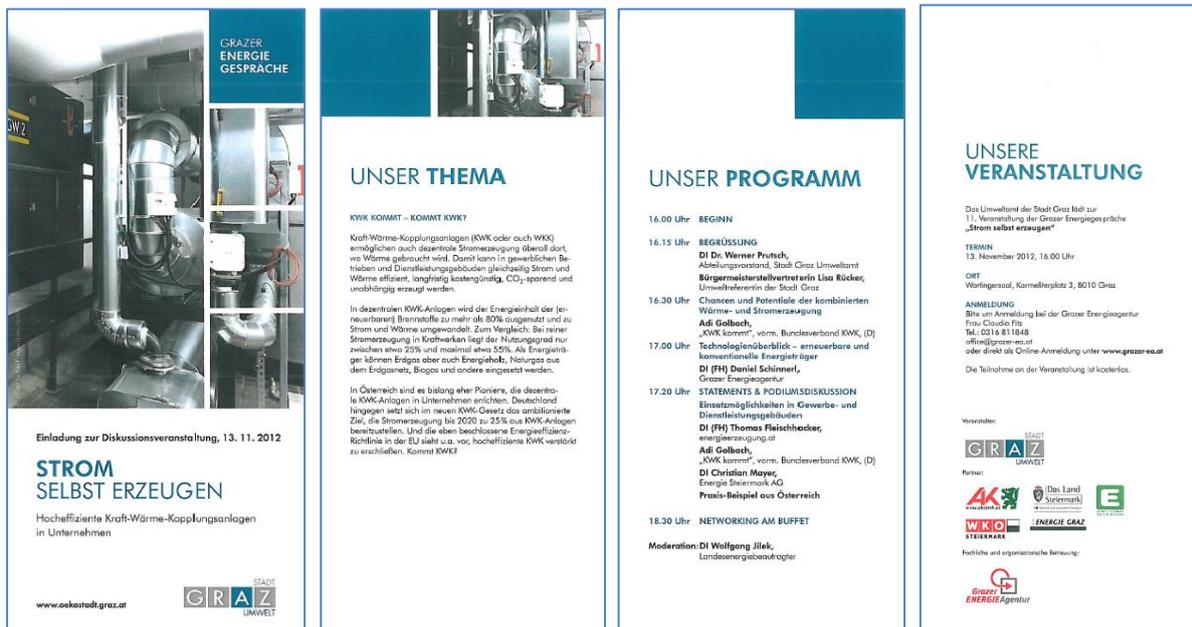


Figure 3: Invitation folder expert consultation meeting on 13.11.2012



Figure 4: Expert consultation meeting on 13.11.2012 (Source: Stadt Graz Umweltamt)

4 National expert consultation meeting on 02.09.2013

The event on 02.09.2013 was in a smaller circle with 8 participants. Representatives of the city of Graz (department of environment), the national energy provider (Energie Steiermark with representative for gas and heat), the local energy provider of the city of Graz (Energie Graz with one representative for the electricity and one for the gas sector) and the Holding Graz. In this meeting the main focus was on attractive models for gas and district heating supply for Graz. The main target was that these resources should be on one hand attractive for the customers but on the other hand the environmental objectives of the city of Graz have to be considered.

The following findings were summarised:

- The generation-mix for the district heating in Graz is good as an essential part comes from very efficient CHP-plants, waste heat and also solar energy but there is a potential to improve this situation. The actual situation for CHPs driven with natural gas and the price level for electricity force towards the use of cheap fuels for electricity production. Using biomethane instead of natural gas for one of the existing CHP-plants could be theoretically possible but at the moment the law for feeding in green electricity doesn't consider such big plants especially when they only run with a small percentage of biomethane compared to their total gas consumption.
- Biomethane is now available on the Austrian market. Energie Steiermark as the local gas provider has the product "Naturgas" in their portfolio.
- Trading of biomethane is possible via the Biomethane registry Austria.
- The subsidies of the city of Graz for gas driven taxis in Graz seem to be not so attractive for the owners for the taxis. At the moment hybrid systems (electricity/diesel) seem to be more attractive. An info-event should be organised.

5 Additional info events for owners of company fleets

5.1 06.11.2013 Styrian Chamber of Commerce - session for mobility (11 participants)

Within the training for energy managers on the Styrian Chamber of Commerce in Graz GEA organised on 06.11.2013 one session for mobility. In this session the potential energy managers (11 participants mainly from enterprises) were trained about efficiency and cost-saving potentials with alternative drive systems. The event focussed on the presentation of available technologies on the market (e-Mobility, gas driven cars and vans, pedelecs, etc.) and their cost saving effect.

5.2 09./10.04.2014 ARBÖ – Austrian automobile club (25 participants)

2 Info events (one in Graz and one in Leoben) for owners of fleets were organised by GEA. The fleet-owners were informed about efficiency and cost-saving potentials with alternative drive systems. Available technologies on the market for e-cars and bikes, gas driven cars and vans, etc. were presented and the cost saving potential analysed.

5.3 April/Mai 2014 Mobility-concept for the fleet owners for one of the largest companies in the city of Graz

At the end of April 2014 GEA got the order for development of a mobility concept for the fleet owner of one of the largest companies in the city of Graz. The whole mobility in the company will be analysed (travel of the employees to the premises, travel in the company's area, travel of sales representatives, managers etc., delivery to the company and from the company to the distributors/customers). The whole range from public transport through pedelecs, CNG cars/vans/trucks, e-Mobility, hybrid-drives, etc. will be considered. A main focus in this company is the green footprint so biomethane as a fuel for CNG-cars will be very important. The development of this concept is still ongoing.

6 Conclusions

GEA organised in total 3 national expert consultation meetings where the main focus was on the promotion of the product biomethane for the use in CHP-plants for producing green electricity and additional 3 info-events for owners of company fleets.

Most of the barriers about biomethane use mentioned in the first meetings could be solved within the project time of UrbanBiogas. The discussions in the last meetings have shown that the acceptance of the local energy suppliers in biomethane exists and there is also a market for biomethane growing up in Austria.

There is a hype in Graz/Austria in the last 1-2 years – especially in the public sector – which focuses on e-mobility. Especially in the info events for the owners of the company fleets GEA tried to be make aware that it is not either gas or electricity, but that it should be gas as well as electricity, as both modes of propulsion have their unique advantages and disadvantages and there are attractive subsidies for biomethane as a fuel for CNG cars/vans.