

Biomass Supply Issues and Solutions

14 – 16 May 2007
Bregenz, Austria

Study tour - Tuesday, 15th May (whole day), Wednesday, 16th May (half day)

1. Biomass heating plant Rankweil – steep terrain logistics (15th May, morning)

The biomass heating plant in Rankweil went into operation in 2002. In the first stage a biomass boiler of 1.8 MW was installed. Over the following years the district heating grid was continuously enlarged. Meanwhile a second biomass boiler with a capacity of 1 MW has been added as well as an electric filter. Currently 21 public buildings and 70 private homes and businesses are supplied with renewable energy from biomass.

The operator is BWR – Biowärme Rankweil GmbH (Bioheat Rankweil Ltd). BWR is a subsidiary of the Buergergemeinschaft Rankweil-Meiningen, which owns considerable forest areas. During the construction of the plant a forest management concept was developed for the rejuvenation and sustainable harvesting from the forests of the two communities. Through innovative wood harvesting methods the rate of wood supply in both communities has been increased markedly. The complete usage of the harvested wood (for construction and as firewood) allows for an economically justifiable harvest also in less accessible areas. Thus the project enhances the protection function of the forest (prevention of erosion and avalanches and safeguarding water supplies), an integrative approach for which it was awarded the “Energy Globe Austria 2002”.



2. Biomass heating plant Lech – world-famous tourist resort (15th May, afternoon)

The main motivation for the construction of this heating plant was the improvement of the emission situation. Climatic inversion during wintertime – i.e. the heating season – often caused high concentrations of air pollutant emissions in the narrow valley. The choice of the plant location, outside the village centre and at a higher level, as well as the use of the latest filter devices allowed for a remarkable improvement of Lech’s situation regarding air pollution. It had been for this air quality problems and the concentrated location of the buildings in the centre of Lech that the idea for a district heating system emerged.



Construction took place in 1999 in a record time despite difficult circumstances in the high mountain area. Only a minimum of space was allotted to the plant. Hence the building was ideally adapted to the landscape conditions. Meanwhile over 220 buildings are supplied with renewable heat, mainly hotels and other tourist facilities. Formerly these objects consumed approximately 500,000 litres of oil. Today the requirement is met by two biomass boilers with a total installed capacity of 10 MW. They are fuelled with residues from Vorarlberg’s sawmills and chopped wood from the local forests. The required supply is about 65,000 cubic metres per annum.

The biomass heating plant Lech served as an important flagship project, which had a major impact on the development of biomass heating systems in the whole region.

Dinner on behalf of Task 29

3. Biogas power stations Dornbirn-Ilg – birthplace of an “energy farmer” (16th May, morning)

In 2002 the farmer Tobias Ilg started to turn his traditional farm operation into an energy supply business. Apart from several smaller contracting projects (supply of bioenergy to buildings) a biogas power station was installed in 2005, with an electrical peak load supply capacity of 100 kW.

The electricity generated is fed into the electric grid in exchange for the guaranteed feed-in tariff stipulated in the Austrian Green Electricity Act 2006 (Ökostromgesetz 2006). The total amount of electrical energy produced per annum is about 750 MWh. The useful heat available serves for the heating of a nearby workshop and for a wood-drying facility. The plant is fuelled with liquid manure from farms in direct vicinity as well as various silages. Only agricultural substratum is being used.



4. District heating system Dornbirn-Hatlerdorf – urban biomass use (16th May, morning)

In late 2006 the district heating system in Dornbirn's burrough of Hatlerdorf began to operate. The heating plant had been installed in the former stable of Tobias Ilg's farm. Already during the first phase of the project 60 objects were connected to the system instead of the 20 that were originally planned for, thus already reaching the final expansion goal given by the current capacity restrictions.

The power is supplied by two boilers with a total capacity of 1.5 MW. Since the plant is situated in an air-hygienically sensitive area it is equipped with the latest filter technology. It is fuelled mainly by chopped wood from the forests around Dornbirn and residues from the local saw mills. It serves as an example for the possibility of placing a relatively large biomass heating plant in the midst of an urban area.



5. ORC biofuel plant Dornbirn-Stöcken – vegetable power (16th May, morning)

This 3 MW CHP plant, which is owned and operated by Wirkungsgrad Energie Service GmbH, runs on vegetable and cooking oil and fats. As these fuels contain practically no sulphur and possess good ignition and burning properties, the CHP plant emits fewer harmful substances than plants using fossil fuels. Furthermore, vegetable oil and cooking oil are CO₂ neutral sources of energy. The renewable electricity produced is fed into the electric grid, while the heat produced is used for the local heat supply and for the drying of wood chips.



Call for Papers

Contributing papers dealing with any topic connected to the workshop theme are welcomed. Please send the title with author(s) name, affiliation, address, phone, fax and E-mail address, along with the attached workshop response form, to Velimir Segon (vsegon@eihp.hr).

Papers presented during the workshop will be published in a set of workshop proceedings. Instructions about the preparation of papers and deadline information will be distributed with the second announcement.

Presentations

Oral presentations will be 15 minutes plus 10 minutes for questions and discussion. There will be further discussion time at the end of each session. Slide and Powerpoint presentation equipment will be available for oral presentations. Please let the organisers know what you intend to use for your presentation. Poster boards of size 1 x 2 meters will be available and printing and copying facilities will be available during the workshop.

Accommodation and Transport

The workshop will be held in Hotel Schwärzler, Bregenz, Austria (<http://schwaerzler.s-hotels.com/en/schwaerzler/>). Room rates are around €92 single / €148 double (incl. breakfast and tax).

The nearest international airports are Zurich (about 2 hours away) and Munich (about 3 hours away), respectively, from where you find frequent train connections to Bregenz (check www.sbb.ch for arrivals in Zurich or www.db.de for arrivals in Munich). **Please, advise the workshop organisers (see attached response forms) about your flight numbers and arrival/departure times.**

Registration

Please complete and return the attached workshop response form **by 1st March 2007**. Complete registration information will be provided with the second workshop announcement available in April 2007. There will be a small registration fee to cover the cost of bus transportation, meeting facilities, coffee breaks during technical sessions, excursion, social events and publication of workshop proceedings.

Final Announcement

A final workshop announcement, with complete programme of information will be available on the Task 29 website in May 2007, and will also be mailed to those responding positively to the first and second announcement.

Contacts

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IEA Bioenergy

Task 29
Socio-Economic Drivers in Implementing Bioenergy Systems

Biomass Supply Issues and Solutions

14th – 16th May 2007

Bregenz, Austria

Organised by IEA Bioenergy Tasks 29

Workshop Response Form

Please return this form by e-mail or fax, to the address given below, by **1st May 2007**

ENERGY INSTITUTE (attn Mr Velimir Segon)
PP 141, HR-10001 Zagreb, Croatia
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- I can attend the workshop sessions on Monday, 14th May
- I can participate in the 1-day Study Tour I on Wednesday, 15th May
- I can participate in the half-day Study Tour II on Thursday, 16th May
- I can attend the Task 29 business session on Monday, 14th May
- I would like to present a paper during the technical sessions (abstract attached)
- I cannot participate in any of the above events
- Other comments/requests

Name:

Field of work:

Institution:

Address:

Telephone:

Fax:

E-mail: