MiniBioCHP

ERA-NET Bioenergy

MiniBioCHP

FINAL PROJECT WORKSHOP

New micro- and small-scale biomass CHP technologies

2nd of March 2017
Messe Wels, AUSTRIA

organised by:

BIOS BIOENERGIESYSTEME GmbH

in cooperation with

SCOPE OF THE WORKSHOP:

Since for the small electric capacity range so far no technologically sound (in terms of efficiency and reliability) and economically affordable biomass CHP technologies are available, the project aims at the **further development and test of new CHP technologies based on small-scale biomass combustion systems in the electric capacity range between some W and 100 kW**.

The development is based on basic R&D already performed for promising new technologies and aims at the achievement of a technological level within the project which allows a first commercial demonstration after project end.

The main objective of the project is to develop and test **three different CHP concepts in different capacity ranges** which are suitable for different types of small-scale biomass combustion systems. These are

- for pellet stoves: a thermo-electric generator (TEG) concept with a power range of 25 to 50 W_{el},
- for small-scale pellet boilers: a micro-ORC process with a nominal capacity of about 1 kW_{el} as well as
- for larger woodchip and pellet boilers: a micro CHP system based on a high temperature heat exchanger (HT-HE) and an externally fired gas turbine (EFGT) with a capacity range of 50 to 100 kW_{el}.

Within the project workshop relevant results of the ERA-NET project will be presented and discussed. The audience addressed are researchers, stove and boiler manufacturers as well as interested users, energy agencies and public authorities.

Additional information is available on the project webpage www.minibiochp.eu.

WORKSHOP PROGRAMME:

09:30 Introduction ERA-NET project "Small-scale biomass based CHP"
I. Obernberger, BIOS BIOENERGIESYSTEME GmbH (AT)

09:50 New micro-CHP technology for pellet stoves with a thermoelectric generator
G. Weiß, BIOS BIOENERGIESYSTEME GmbH (AT)

10:25 New micro-CHP technology for small-scale pellet boilers with an Organic Rankine Cycle
P. Rossmann, Technologie- und Förderzentrum (DE)
J. Fernengel, Orcan Energy (DE)

11:00 Coffee break

11:30 Small-scale CHP system based on a micro-gas turbine

Overall concept
A. Hjörnhede, SP Technical Research Institute of Sweden (SE)

Numerical modelling and experimental investigation of a high-temperature heat exchanger
P. Bocian, Institute of Power Engineering, Thermal Processes Department (PL)

Ash related issues in indirectly-fired gas turbines with biomass fuels
M. Öhman, Luleå University of Technology, Sweden (SE)

12:15 Discussion, conclusions and outlook
I. Obernberger, BIOS BIOENERGIESYSTEME GmbH (AT)

12:30 End of the workshop

REGISTRATION AND FEE:

The final project workshop is an item on the agenda of the European Pellet conference 2017 in Wels. A registration to this conference is mandatory. Registration fee: 205 € including coffee breaks, European Pellet conference (01. – 02.03.2017) and international trade fare (01.03 – 05.03.2017).

Please register at **www.wsed.at**

World Sustainable Energy Days 2017

The workshop is organised by

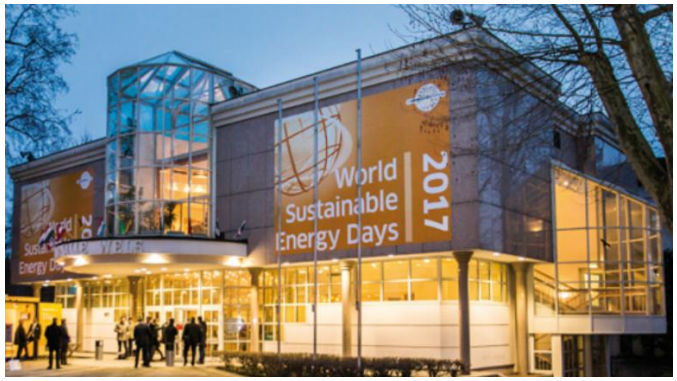
BIOS BIOENERGIESYSTEME GMBH
Hedwig-Katschinka-Straße 4, A-8020 Graz, AUSTRIA
Tel.: +43 316 481300
Email: office@bios-bioenergy.at
www.bios-bioenergy.at

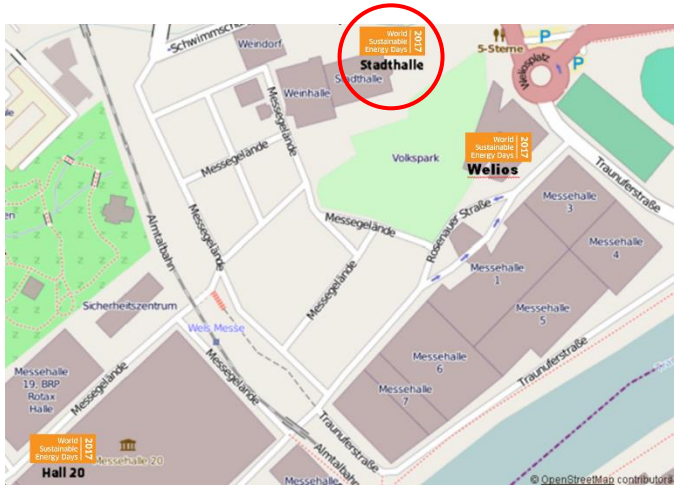
in cooperation with the project partners presented on the first page and the

OÖ Energiesparverband
Landstrasse 45, A-4020 Linz, AUSTRIA
Tel.: +43-732-7720-14380
Email: office@esv.or.at

LOCATION AND MAP:

Stadthalle Wels,
Pollheimerstrasse 1,
4600 Wels; AUSTRIA





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FNR Fachagentur Nachwachsende Rohstoffe e.V.

Swedish Energy Agency