Speakers of the Workshop

Jan Lam, SNV, Snr. Advisor Biogas, Asia

Felix ter Heegde, SNV, Snr. Advisor Biogas, Africa

Prof. Rabus, Microbiologist, Univ. Oldenburg

Steven von Eije, Energy Delta Institute, NL, En. Analyst

Udo Kulschewski, Head of Lab Education, U Oldenburg

Uwe Schröder, Weltec Biopower, Vechta

Ro Alognon, Ökonomisches Bildungszentrum Oldenburg

Camilo Wilches, Biogas Weser-Ems, Friesoythe

Tuesday, 10th April
Introduction Plant Design and Biochemistry

08:00 Arrival and registration (of external guests)

08:45 Welcome address by PPRE staff member

09:00 Domestic Biogas – Introduction:
Relevance of Biogas for Development;
Felix ter Heegde, SNV

10:00 – 10:30 Coffee Break

10:30 From Biomass to Energy:
The Bio-Chemical Anaerobic Fermentation Process;
Prof. Rabus, Microbiologist, U Oldenburg

12:00- 13:30 Lunch Break

13:30 Practical Implications; Biochemical Processes for Domestic Biogas + discussion
Jan Lam, Felix ter Heegde, Prof. Rabus

15:00-15:30 Coffee Break

15:30 Technical Aspects of Biogas:
Plant Types / Designs and Design Choice Parameters ; Jan Lam, SNV:

17:00 Video: Bio-digester Construction

17:30 Moderated Discussion Day 1

17:45 End of Sessions

19:00 Get Together - dinner at the "Schwan" Restaurant in OL town centre / harbour

Wednesday, 11th April
Sizing, Economics and Environment

9:00 Plant Dimensioning and Design: Main Volumes and Interrelated Plant Dimensioning; Felix ter Heegde

10:30 – 11:00 Coffee Break

11:00 Domestic Biogas Appliances: Design and Performance; Jan Lam

12:00 – 13:30 Lunch Break

13:30 Economic Aspects of Domestic Biogas: Financial and Economic Return Calculations, Subsidy Calculations and Justification
Steven van Eye

15:00 - 15:30 Coffee Break

15:30 Biogas and Global Warming:
Emission Reduction Calculations, Gold Standard Methodology, Value and Marketing of ERs; Felix ter Heegde and Jan Lam

17:00 Moderated Discussion Day 2

17:30 Preparation practical sessions;
Udo Kulschewski

18:00 End of Sessions

Thursday, 12th April
Practical Sessions & Aspects of Soil Usage

09:00 Performance testing of biogas stoves -
Group A/ JL – Group B/ FtH – Energielabor

09:00 Flow and mixing in biodigesters
Group C/ UK – Group D/ EB – W2 1-187

10:30 -10:45 Sorting Break

10:45 Performance testing of biogas stoves
Group C/ JL – Group D/ FtH –
Energielabor W0 0-001

10:45 Flow and mixing in biodigesters
Group A/ UK – Group B/ TB – W2 1-187

12:15- 13:15 Lunch Break

13:15 Summary of practical sessions in the work groups

14:00 Bio Slurry: Qualities, Application, Results;
Jan Lam, SNV

15:00 – 15:15 Group Photo

15:15 – 15:30 Coffee Break

15:30 Silage for Bio-Digester and Effects of Substrates on Soil Fertility; Mass Balance at the Biodigester
Uwe Schröder, Weltec Biopower, Vechta

16:30 Land Grabbing; Soil Endangering Index;
Education teacher of *Ökonomisches Bildungszentrum, Oldenburg*,
Mr. Ro Alognon

17:15 Moderated Discussion Day 3

17:45 **End of Sessions**

Friday, 13th April
Mass Dissemination, Economics

8:45 Urban Waste for Biodigester
Camilo Wilches, Biogas Weser-Ems

9:30 Large Scale Domestic Biogas Dissemination:
Conditions, Programme set-up, SNV Model, Possible Stakeholders and Partners
Felix ter Heegde

11:00 - 11:15 Coffee Break

11:15 Development Through the Market
Biodigester Dissemination Structure and Support Activities; M&E, Quality Control Systems, D-Bases, Training Activities, Present R&D Topics;
Jan Lam

12:45 – 13:45 Lunch Break

13:45 Biogas & Commercialisation: Rationale, Framework, Practical Implications
Felix ter Heegde/Jan Lam

15:15 Recapitulation, Evaluation

15:45 **End of Workshop**

Introduction

This workshop's focus will be on small-scale digesters for **developing countries**, typically run by farmers in rural areas. Topics will range from planning, construction and operation to financing, policy implementation and local market development. Long term experiences of bio-digester programmes in (south-east) Asian countries will be presented by **specialists** from SNV. Improvements in the social, ecological and economical dimension will be discussed. Our experts have been working for more than 20 years in several biogas-programmes tailored to rural areas of developing countries.

Interspersed are lectures from explorative European projects.

Additionally there will be practical sessions on gas cookers and gas lamps which are suitable for operating with biogas.

PPRE / EUREC Study Programmes

The Postgraduate Programme Renewable Energy (PPRE), started 1987, was the first fully-fledged Master Programme in Renewable Energy in Germany and still is one of the very few worldwide. Since 1987 it has seen more than 360 participants from over 70 countries through to their graduation.

The EUREC Master Programme is run by a network of 8 leading European universities and research centres for renewable energy R&D. The students follow this 16 months programme at eight different locations in Europe. Oldenburg University is one out of the four core course providers.

Registration

All participants have to send in the registration form. This can be downloaded from: http://www.ppre.uni-oldenburg.de/51154.html

Registration fee

Registration fees are

450 (60) € (reduced student fee in brackets):

Free of charge: PPRE & EUREC students & alumni of PPRE and EUREC Core Oldenburg.

The fees include the documentation of the presentations (CD / DVD), as well as coffee, tea, soft drinks and cookies during the breaks.

Venue & Information

Venue of the **Biogas Workshop:**

University of Oldenburg
Campus Wechloy
Room W1 0-015
Carl-v.-Ossietzky-Str. 9-11
Oldenburg (Oldb)

Bus number **306** is heading from train station to the Wechloy Campus of the University; Drop of at the terminal bus stop of bus 306

For more information on the workshop or the Postgraduate Programme Renewable Energy, please visit: www.ppre.de

The workshop homepage will be updated regularly. There you will find detailed information on registration, the programme and also on travelling to Oldenburg

Contact

In case of further questions please contact:

Email: biogas-workshop@uni-oldenburg.de

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FAKULTÄT V
MATHEMATIK UND NATURWISSENSCHAFTEN

Biogas Compact Workshop

Biochemistry,
Project Planning
and
Mass Dissemination
for
Domestic Biodigesters
in
Developing Countries

Apr. 10 – Apr.13, 2012
University of Oldenburg, Germany

Final Programme 4.4.2012

Postgraduate Programme Renewable Energy (PPRE)