Energy from Biogas – International and national activities in „IEA Bioenergy Task 37“

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INTERNATIONAL ACTIVITIES

Task 37 – 13 Participating countries

Austrian Representatives:

Günther Bochmann
Bernhard Drosg

- Austria
- Brazil
- Denmark
- Finland
- France
- Germany
- Ireland
- Korea
- Norway
- Sweden
- Switzerland
- The Netherlands
- United Kingdom

Recent Task Meetings:

2015:

- Uppsala, Sweden
- Berlin, Germany (Input to IEA Bioenergy Conference)

2016:

- Wallingford, UK
- Toowoomba, Australia (Input to Australia Bioenergy Conference)

Topics of the current research programme 2016-2018

- Food Waste Digesteion systems (not industrial by-products)
- Grid injection and greening of the gas grid
- International approaches to sustainable anaerobic digestion
- The role of anaerobic digestion and biogas in the circular economy
- Veracity and Applicability of biomethane potential assay results
- Bio-methane as transport fuel

RECENT PUBLICATIONS

→ see www.iea-biogas.net

A perspective on algal biogas

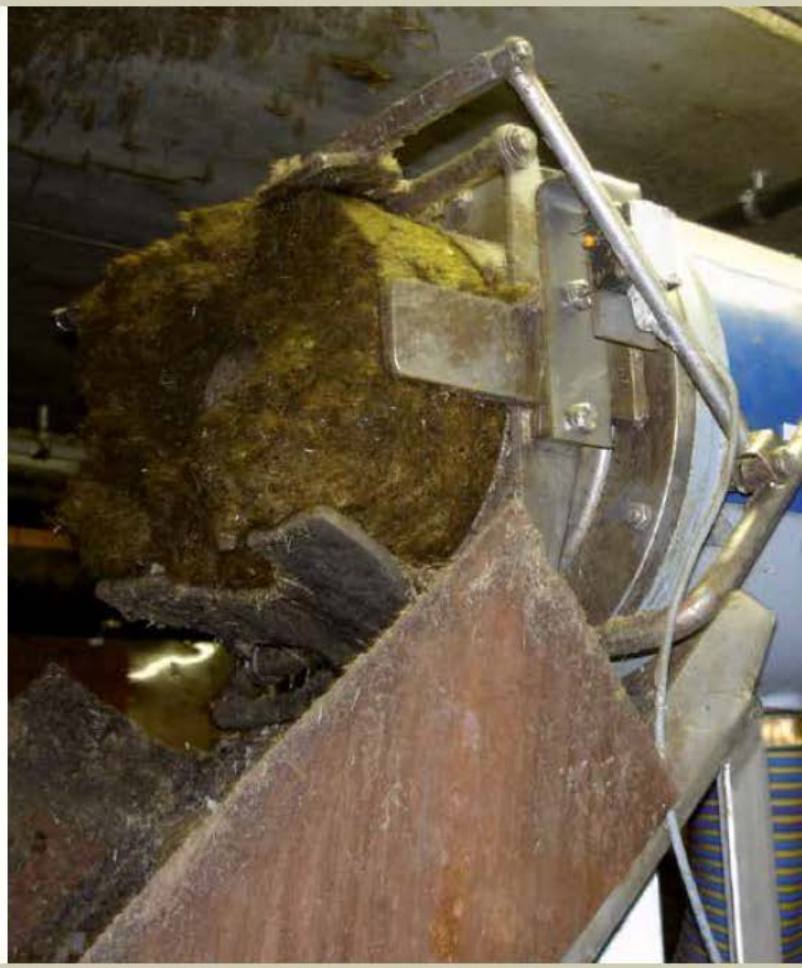
Jerry D MURPHY
Bernhard DROSG
Eoin ALLEN
Jacqueline JERNEY
Ao XIA
Christiane HERRMANN

SUMMARY

Algae are suggested as a biomass source with significant growth rates, which may be cultivated in the ocean (seaweed) or on marginal land (microalgae). Biogas is suggested as a beneficial route to sustainable energy; however the scientific literature on algal biogas is relatively sparse. This report comprises a review of the literature and provides a state of the art in algal biogas and is aimed at an audience of academics and energy policy makers. It was produced by IEA Bioenergy Task 37 which addresses the challenges related to the economic and environmental sustainability of biogas production and utilisation.

Nutrient Recovery by Biogas Digestate Processing

Bernhard Drosg
Werner Fuchs
Teodorita Al Seadi
Michael Madsen
Bernd Linke



SUMMARY

This report reviews various approaches for processing of biogas plant digestate for the purpose of nutrient recovery. It covers both established and emerging technologies and assesses technical performance and where possible economics. Techniques for nutrient recovery from digestate are developing rapidly and aim to improve nutrient management in agriculture and in waste treatment systems.

The report is aimed at biogas plant developers and operators as well as agriculture policy makers and was produced by IEA Bioenergy Task 37. IEA Bioenergy Task 37 addresses challenges related to the economic and environmental sustainability of biogas production and utilisation.

Sustainable biogas production in municipal wastewater treatment plants

Nathalie Bachmann

SUMMARY

This report deals with anaerobic digestion (AD) of sewage sludge, an energy- and nutrient-rich by-product of wastewater treatment plants (WWTP). The objective is to promote sustainable practices and technology, focussing on energy efficiency of biogas production and utilisation. An overview of the AD process in WWTP is given, along with standard energy performances, nutrient recycling and different process options and their impacts. It is not intended as a detailed technical guideline for project managment.

The report is aimed at energy policy and decision makers as well as WWTP operators and was produced by IEA Bioenergy Task 37, an expert working group that addresses challenges related to the economic and environmental sustainability of biogas production and utilisation.

Exploring the viability of small scale anaerobic digesters in livestock farming

Clare Lukehurst
Angela Bywater

SUMMARY

This report explores the viability of small scale anaerobic digestion for livestock farming where there is a need to deal with animal manure and slurry in a manner that minimises the emission of greenhouse gases. Dairy farming for example is dominated by small herds of animals, the slurry from which must be managed efficiently for the farm and to maintain high standards of health in a cost effective manner. AD is an acknowledged technology for farming operations that affords a high standard of manure management, the production of high quality biofertiliser and also the possibility of generating energy for own use as well as export.

The report is aimed at energy policy and decision makers as well as WWTP operators and was produced by IEA Bioenergy Task 37, an expert working group that addresses challenges related to the economic and environmental sustainability of biogas production and utilisation.

IEA Bioenergy Task 37

Country Reports Summary 2015

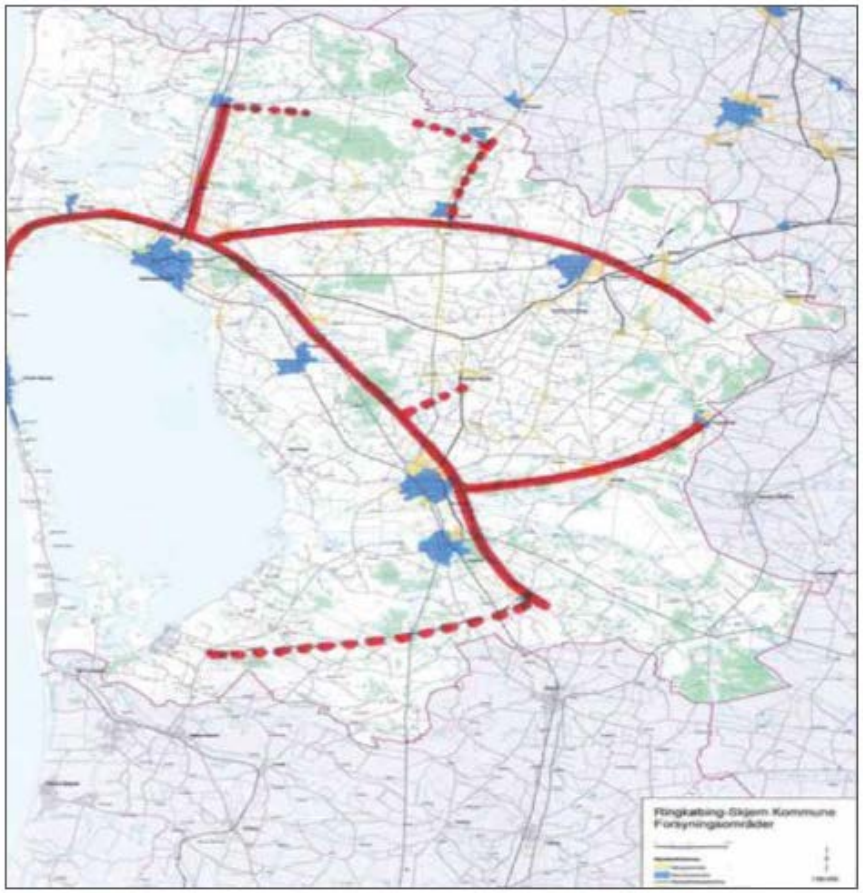
This publication contains a compilation of summaries of country reports from members of IEA Bioenergy Task 37 (Energy from Biogas). The individual country reports include information on the number of biogas plants in operation, biogas production data, how the biogas is utilised, the number of biogas upgrading plants, the number of vehicles using biomethane as fuel, the number of biomethane filling stations, details of financial support schemes in each country and some information on national biogas projects and production facilities. The publication is an annual update and is valid for information collected in 2015.

http://www.iea-biogas.net/

BIOGAS IN SOCIETY
A Case Story from
IEA BIOENERGY TASK 37
"Energy from Biogas"

SOLRØD BIOGAS – A CIRCULAR ECONOMY

PUBLISHED: DECEMBER 2015



RINGKØBING-SKJERN, DENMARK – DECENTRALISED BIOGAS NETWORK MODEL

PUBLISHED: MAY 2015

BIOGAS IN SOCIETY
A Case Story from
IEA BIOENERGY TASK 37
"Energy from Biogas"

REVAQ CERTIFIED WASTEWATER TREATMENT PLANTS IN SWEDEN FOR IMPROVED QUALITY OF RECYCLED DIGESTATE NUTRIENTS

NATIONAL ACTIVITIES

National Dissemination

Home Organisations:

- University of Natural Resources and Life Sciences (BOKU)
- Bioenergy2020+ GmbH (Research Competence Center)

Teaching Activities:

- University of Natural Resources and Life Sciences (BOKU)
- University of Applied Sciences Wiener Neustadt (FH Wiener Neustadt)
- University of Applied Sciences FH Technikum Wien

Research activities and Consulting

- Company Partners:

AAT, ANDRITZ, AGRANA, ARIC, Axiom, BDI Bioenergy, BDI Life Sciences, EVN, Rohkraft, ARGE Kompost und Biogas, IM Polymer, Biomin/Erber AG, GET, ECODUNA, Krajete, Spirit design, MA48 (Biogas Wien), …

- Research Institutions:

BOKU, Bioenergy2020+, TU Wien, TU Graz, AIT, acib, Universität Wien

Initiierung eines internationalen Projektes mit brasilianischem IEA Partner:

Atmove Biogas Innovationszentrum - Infrastruktur für biogasbasierte Mobilität in ländlichen Gebieten Brasiliens

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