



IEA Bioenergy

# Task 37

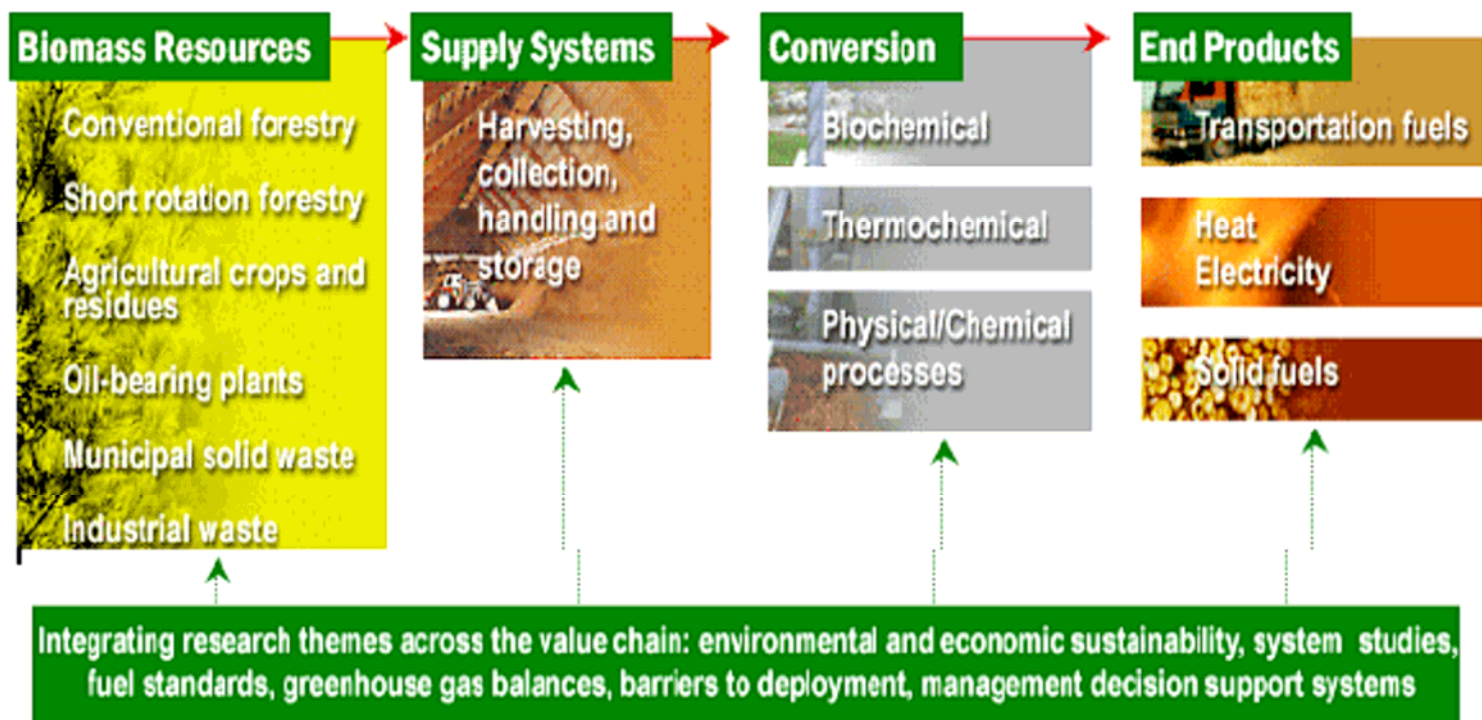
## Energy from Biogas

An Overview

David Baxter



# IEA Bioenergy





## IEA Bioenergy Task 37

### **IEA Bioenergy presently comprises 12 Tasks**

Task 29: Socio-Economic Drivers in Implementing Bioenergy Projects

Task 32: Biomass Combustion and Co-Firing

Task 33: Thermal Gasification of Biomass

Task 34: Pyrolysis of Biomass

Task 36: Integrating Energy Recovery into Solid Waste Management

Task 37: Energy from Biogas

Task 38: Greenhouse Gas Balances of Biomass and Bioenergy Systems

Task 39: Commercialising Liquid Bio-Fuels from Biomass

Task 40: Sustainable International Bioenergy Trade – Securing Supply and Demand

Task 41: Joint Project with the Advanced Motor Fuels Implementing Agreement

Task 42: Biorefineries: Co-Production of Fuels, Chemical, Power and Materials from Biomass

Task 43: Biomass Feedstocks for Energy Markets



## Member countries participating in Task 37: Energy from Biogas

Austria	Bernard Drosch / Günther Bochmann
Brazil	Guilherme Fleury Soares
Canada	Andrew McFarlan
Denmark	Teodorita Al-Seadi
European Commission	David Baxter (Task Leader)
Finland	Jukka Rintala / Annimari Lehtomaki
France	Olivier Théobald / Guillaume Bastide
Germany	Bernd Linke
Ireland	Jerry Murphy
Netherlands	Mathieu Dumont
Norway	Espen Govasmark
Sweden	Anneli Petersson
Switzerland	Nathalie Bachmann
Turkey	Selman Cagman / Volkan Çoban
United Kingdom	Clare Lukehurst





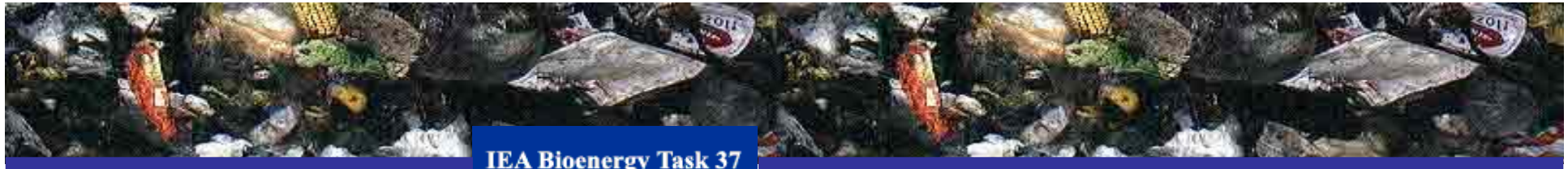
# Objectives

## Technical

collection, verification, exchange and dissemination of information, **promotion of new and improved technologies and products**, stimulating interaction between industry, policy makers and research

## Support to Policy Makers

assistance to local and national governments to understand **biogas technologies and products** and to adopt appropriate industry best practices and standards



## Scope of Biogas Systems

- Agricultural slurries, residues, energy crops (mono-digestion or co-digestion)
- Organic fraction of municipal solid waste biowaste
- Waste water treatment/sewage sludge
- Electricity generation/CHP
- Up-grading - Injection in grid/compression for vehicle fuel



## Key Issues

### Sustainability

energy and cost balances for farm and non-farm  
biogas process pathways, emissions  
related to substrates, gas production, up-  
grading for direct energy production, heat and  
electricity, or injection into the natural gas grid

### Quality

expert support to standards process; main focus  
on pipeline injection (CEN) and digestate use as  
bio-fertiliser





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# Task 37

## Work Programme 2010-2012





## Topics

### Technical and Policy Support:

1. Substrates for biogas production
2. Optimisation of digestion processes
3. Biogas up-grading and pipeline injection
4. Digestate processing and quality
5. Emissions from biogas installations





# Publications

## Biogas from Energy Crop Digestion

Rudolf BRAUN  
Peter WEILAND  
Arthur WELLINGER



## Biogas upgrading technologies – developments and innovations

Anneli PETERSSON  
Arthur WELLINGER

## Utilisation of digestate from biogas plants as biofertiliser

Clare T. LUKEHURST  
Peter FROST  
Teodorita AL. SEADI



## ANIMAL BY-PRODUCTS AND ANAEROBIC DIGESTION

Requirements of the European Regulation (EC) No 1774/2002

SEPTEMBER 2003

Web Address: [www.iea-biogas.net](http://www.iea-biogas.net)

## Work in progress

1. Extension of energy crop report to include additional feedstocks (detailed description of grass digestion)
2. Pre-treatments of feedstocks, including ligno-cellulosic biomass
3. AD process monitoring techniques
4. Economics of small-scale biogas production
5. Digestate quality management
6. Standards for biogas up-grading/Success Stories
7. Emissions monitoring and control
8. Dissemination through contacts with local/national authorities and industry



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All input welcome

All opportunities for dissemination welcome

Thank you for your attention

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