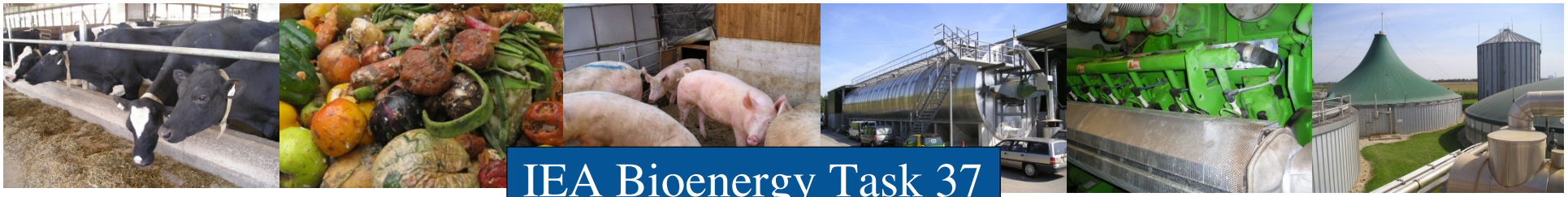


IEA Bioenergy Task 37

IEA Bioenergy Task 37
Energy from Biogas

An Overview

David Baxter

iea Energy Technology Network

IEA Bioenergy

International Energy Agency (IEA)

Founded in response to 1973/4 oil crisis by OECD

28 Member Countries

Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan , Republic of Korea, Luxembourg, The Netherlands, New Zealand, Norway (*participates in the Agency under a special Agreement since 1974*), Poland, Portugal , Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States

4 Main Focus Areas

Energy security

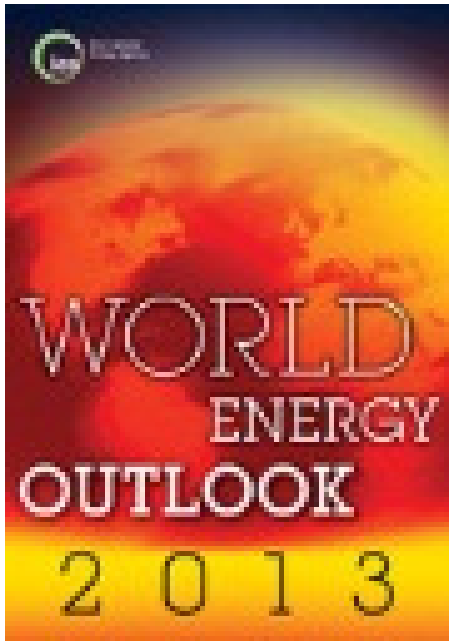
Economic development

Environmental awareness

Engagement worldwide

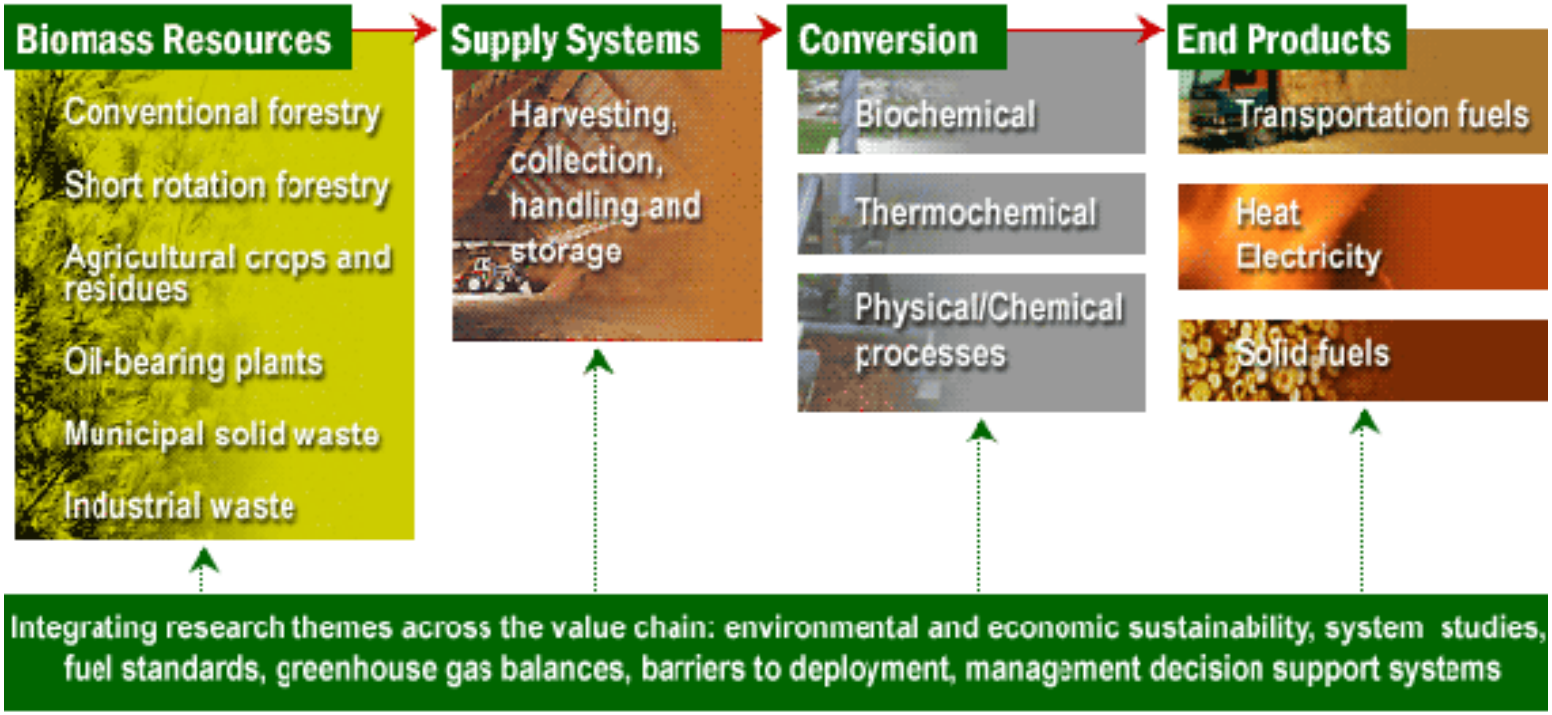
http://www.iea.org/

iea Energy Technology Network



http://www.iea.org/

Set up in 1978 by IEA



www.ieabioenergy.com

Set up in 1978 by IEA

Member Countries

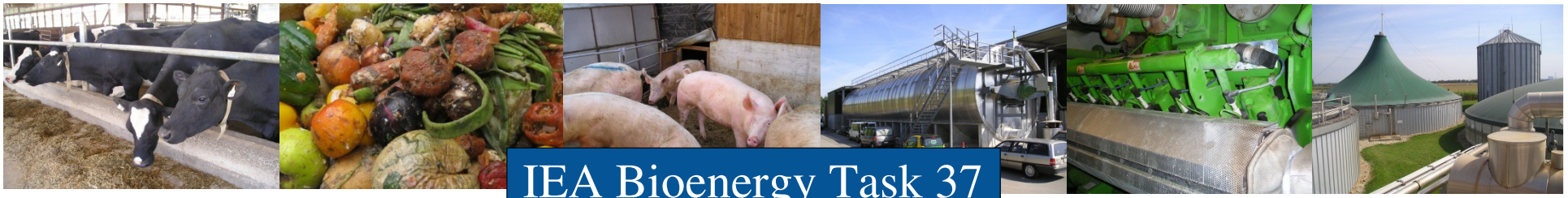
Australia
Austria
Belgium
Brazil
Canada
Croatia
Denmark
European Commission
Finland
France
Germany
Ireland
Italy
Japan
Korea
Netherlands
New Zealand
Norway
South Africa
Sweden
Switzerland
United Kingdom
USA

http://www.ieabioenergy.com/

IEA Bioenergy

IEA Bioenergy presently has 10 Tasks

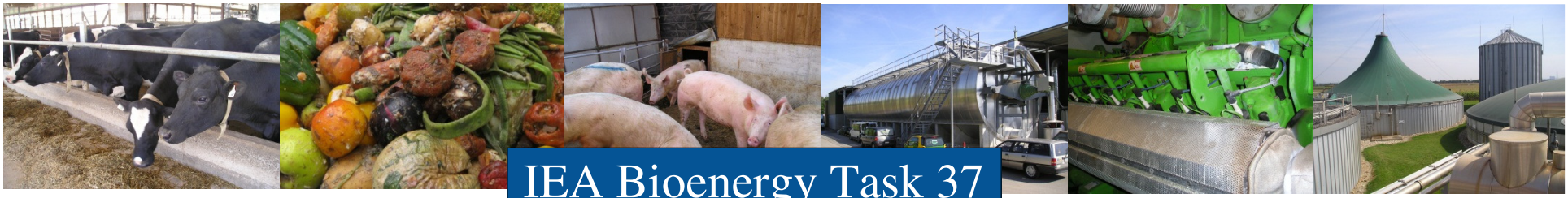
Task 32: Biomass Combustion and Co-Firing
Task 33: Thermal Gasification of Biomass
Task 34: Pyrolysis of Biomass
Task 36: Integrating Energy Recovery into Solid Waste Management
Task 37: Energy from Biogas
Task 38: Climate Change Impacts of Biomass and Bioenergy Systems
Task 39: Commercialisation of Conventional and Advanced Liquid Biofuels from Biomass
Task 40: Sustainable Bioenergy Markets and International Trade: Securing Supply and Demand
Task 42: Biorefineries: Sustainable Processing of Biomass into a Spectrum of Marketable Biobased Products and Bioenergy
Task 43: Biomass Feedstocks for Energy Markets



IEA Bioenergy Task 37

Member countries participating in Task 37

Austria	Bernard Drosg / Günther Bochmann
Brazil	Cícero Jayme Bley
Denmark	Teodorita Al-Seadi
European Commission	David Baxter (Task Leader)
Finland	Jukka Rintala
France	Olivier Théobald / Guillaume Bastide
Germany	Bernd Linke
Ireland	Jerry Murphy
Korea	Ho Kang
Netherlands	Mathieu Dumont
Norway	Roald Sørheim
Sweden	Tobias Persson / Mattias Svensson
Switzerland	Nathalie Bachmann
United Kingdom	Clare Lukehurst / Charles Banks



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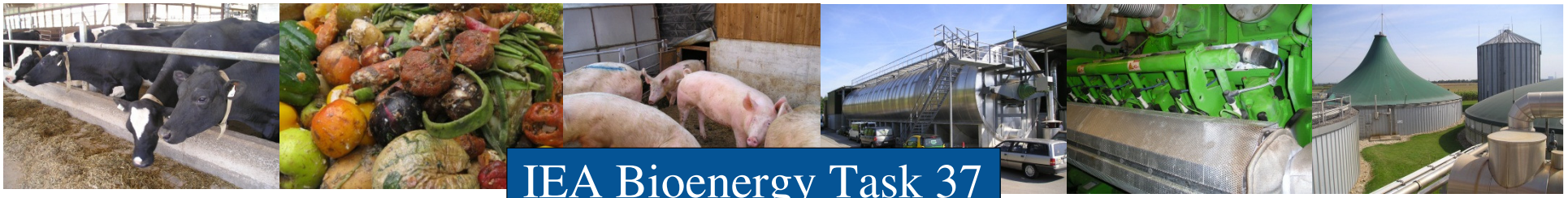
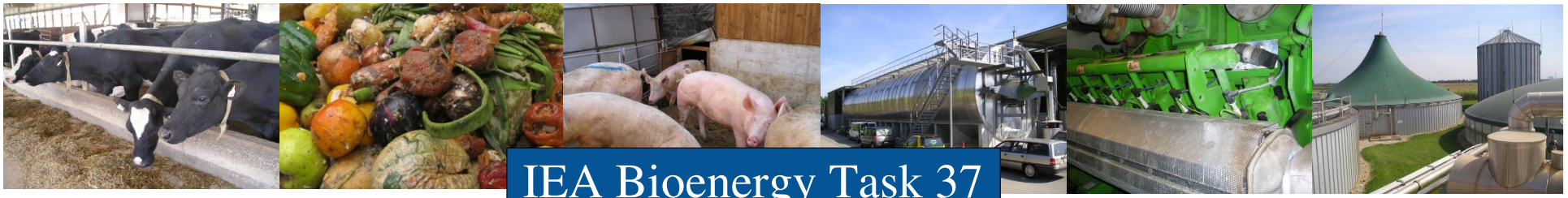
Task 37
Work Programme 2013-2015



Scope of Task 37 Studies

- Agricultural slurries, crops & crop residues
- Organic fraction of municipal solid waste
- Waste water treatment/sewage sludge

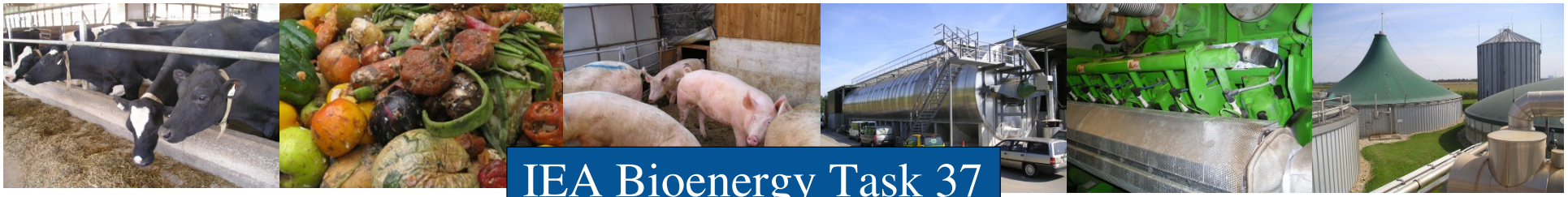
- Heat, electricity generation & CHP
- Up-grading to biomethane - Injection into grid/compression for vehicle fuel



IEA Bioenergy Task 37

Work in progress

1. Pre-treatments of feedstocks (published 02-2014)
2. AD process monitoring techniques (published 12-2013)
3. Economics of small-scale biogas production (06-2014)
4. Source separation of food waste (published 11-2013)
5. Digestate up-grading techniques (2015)
6. AD of algae (2014)
7. Biogas up-grading (grid injection)
8. Biomethane use as a vehicle fuel (2015)
9. Emissions monitoring and control (including LCA) (2015)
10. AD of sewage sludge (2014)
11. Success Stories (successful biogas implementation)



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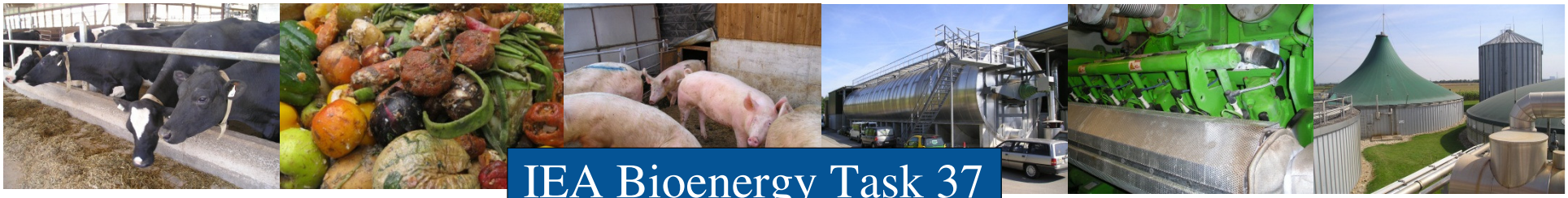
Publications

Web Address: www.iea-biogas.net



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Publications

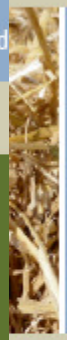
Process monitoring in biogas plants

Bernhard

Source separation of MSW

An overview of the source separation and separate collection of the digestible fraction of household waste, and of other similar wastes from municipalities, aimed to be used as feedstock for anaerobic digestion in biogas plants

Teodorita Al Seadi
Nia Owen
Hanna Hellström
Ho Kang



Pretreatment of feedstock for enhanced biogas production

Lucy F.R. MONTGOMERY
Günther BOCHMANN

Web Address: www.iea-biogas.net

LEMVIG BIOGAS

AN EXAMPLE OF SUCCESSFUL CENTRALIZED CO-DIGESTION IN DENMARK

PUBLISHED: FEBRUARY 2013

ECONOMIC SUSTAINABILITY OF MANURE BASED CENTRALISED CO-DIGESTION

GOOD LEADERSHIP MAKES A DIFFERENCE

RIBE BIOGAS A/S DENMARK

PUBLISHED: MAY 2012

BIOGAS PIPELINE FOR LOCAL HEAT AND POWER PRODUCTION IN A RESIDENTIAL AREA ZEEWOLDE, NL

PUBLISHED: OCTOBER 2011

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

NUTRIENT RECOVERY FROM DIGESTATE AND BIOGAS UTILISATION BY UP-GRADING AND GRID INJECTION

INWIL SWITZERLAND

IEA Bioenergy Task 37

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

PIONEERING BIOGAS FARMING IN CENTRAL FINLAND

FARM SCALE BIOGAS PLANT PRODUCES VEHICLE FUEL, HEAT, ELECTRICITY AND BIO-FERTILIZER

PUBLISHED: FEBRUARY 2012

Web Address: www.iea-biogas.net

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

LINKO GAS

A REFERENCE PLANT FOR CENTRALIZED CO-DIGESTION OF ANIMAL MANURE AND DIGESTIBLE WASTES IN DENMARK

PUBLISHED: NOVEMBER 2013

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

BRUCK AN DER LEITHA (AUSTRIA)

MEMBRANE UP-GRADING OF BIOGAS TO BIOMETHANE FOR GRID INJECTION

PUBLISHED: APRIL 2013

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

BIO-ENERGY IN FAMILY FARMING

A NEW SUSTAINABLE PERSPECTIVE FOR THE RURAL SECTOR IN BRAZIL

PUBLISHED: SEPTEMBER 2013

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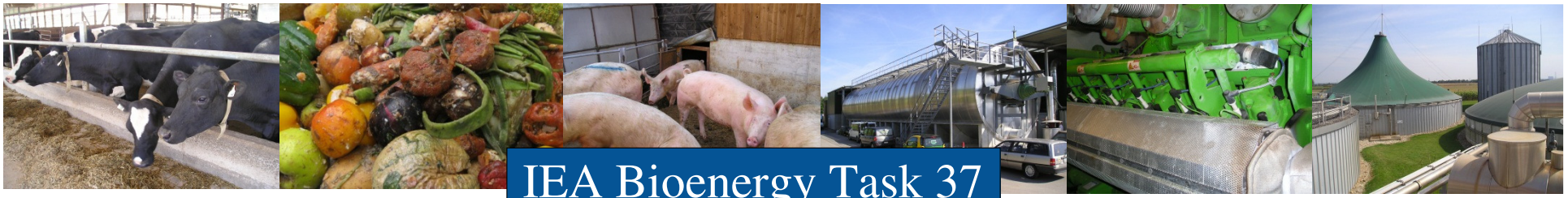
BIOGAS IN SOCIETY
A Case Story from
IEA BIOENERGY TASK 37
"Energy from Biogas"

THE FIRST ORGANIC BIOGAS PLANT IN DENMARK

DEMONSTRATION PROJECT AT BORDING ORGANIC FARM

PUBLISHED: JUNE 2013

Web Address: www.iea-biogas.net



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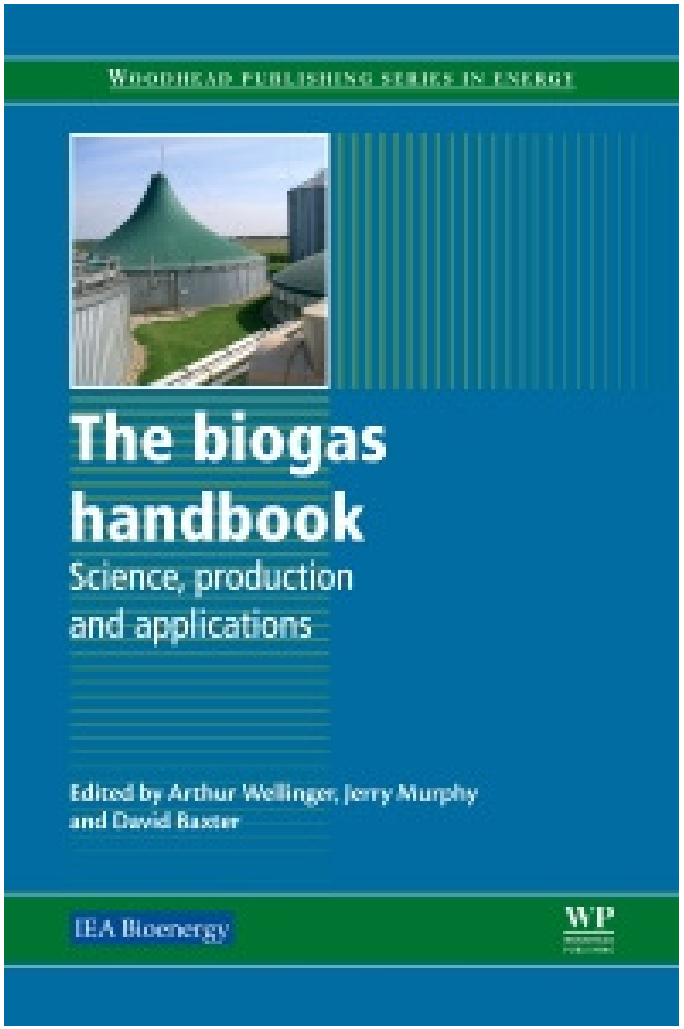
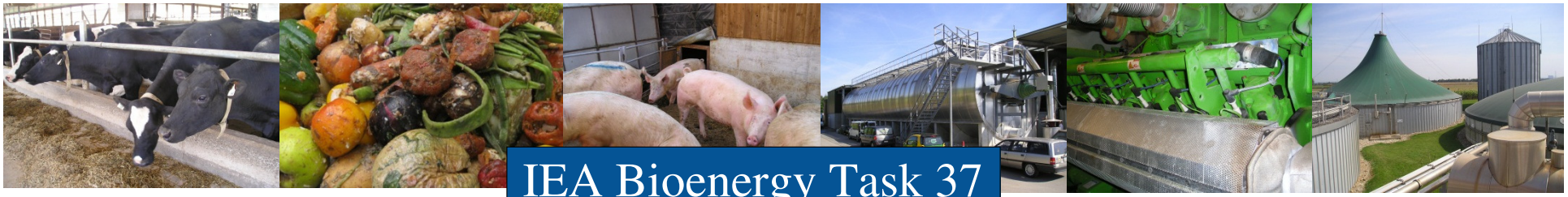
The Biogas Handbook
Science, production
And applications

2013

http://www.woodheadpublishing.com/en/book.aspx?bookID=2576





IEA Bioenergy Task 37

All input welcome

All opportunities for dissemination welcome

Thank you for your attention

www.iea-biogas.net

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