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Planning future biomass to energy facilities on a gis offer/demand basis: a study for Tuscany, Italy

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1CO.9.2 OPTIMA: Optimization of Perennial Grasses for Biomass Production in the Mediterranean Area
S.L. Cosentino, D. Scordia, G. Testa, V. Copani, E. Alexopoulou, M. Christou, A. Monti, W. Zegada-Lizarazu, A.L. Fernando, M.P. Duarte, M.D. Curt, C. Panoutsou, P. Soldatos, C. Porqueddu, J. Gulias, S. Noguees, P. Robson, R. Webster, B. Osborne, S. Sharma, K. Arora, J. Yan, L. Pari, G. Reinhardt, M. Müller-Lindenlauf, A. Mentaberry, D. van den Berg, S. Spapperi, S.S. Varga, P. De Jamblinne

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- 2AO.1.1 Material Flow Analysis of Biogas Systems " An Example of Nitrogen and Sulphur"
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- 2AO.7.4 Catalytic Staged Thermochemical Processing of Wheat Straw for the Production of Furfural, Levoglucosan, Bio-Oil and Biochar in a Biorefinery
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Dr.-Ing. B. Krautkremer
Fraunhofer Institute IWES
Head of Bioenergy System Technology

World Forum on 'Food, Fuel and the Environment: The Bioenergy Challenge' - Monday, 18 June 2012

Agenda

Opening and welcome address

Giovanni De Santi video
Director, Institute for Energy and Transport, European Commission, Joint Research Centre (JRC)

Pierfrancesco Maran video
Councillor for Mobility and Environment, Milan City Council

Anne Glover video
Chief Scientific Adviser to the President, European Commission

Paolo Alli video
Expo Milano 2015

Roundtable discussion: 'How can policy makers guide to a sustainable bioenergy solution?'

Opening - Giovanni De Santi – Chair video, slides
Director, Institute for Energy and Transport, European Commission, Joint Research Centre (JRC)

Hans van Steen video
Head of Unit, DG Energy, European Commission

Humberto Delgado Rosa video
Director DG Climate Change, European Commission

Roberto Formigoni video
Commissioner General, Expo Milano 2015

Stefan Bringezu video
Chair Land Use and Soil Working Group, United Nations Environment Programme/International Resource Panel

Irini Maltsooglou video
Food and Agriculture Organization of the United Nations

Govinda Timilsina video
Development Research Group, The World Bank

Anne Glover video
Chief Scientific Adviser to the President, European Commission

Giovanni De Santi video, slides
Director, Institute for Energy and Transport, European Commission, Joint Research Centre (JRC)

Debate and conclusions video

Afternoon session: 'How can science based evidence provide a solution to the bioenergy challenge?'

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How much land shall we use for fuel, food and nature? Balancing consumption with sustainable supply
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WF02	Biofuel, Food Security and Climate Change - Some Insights from Global Economic Modeling <i>G.R. Timilsina</i>	slides
WF03	Towards a sustainable biofuels sector for Europe <i>D. Kodjak</i>	slides
WF04	Bioenergy: carbon saving, or carbon laundering? <i>A. Brunner</i>	slides
WF05	How to build a virtuous energy system: the case of Rhône-Alpes Region <i>E. Durrant</i>	slides
WF06	Soil C stocks and GHG emissions in the sugarcane agrosystem for ethanol production in Brazil <i>C.E. Cerri</i>	slides
WF07	Global Bioenergy Partnership (GBEP) - Working together for Sustainable Development <i>M. Colangeli</i>	slides
WF08	The links between food, ILUC and carbon debt <i>R. Edwards</i>	slides

Prizes and Awards

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Acceptance Speech delivered by the Linneborn Prize Winner <i>H. Hermann Hofbauer</i> <i>Vienna University of Technology</i>	video
EUBIA Industry Award	2520
Announcement of the Awards for the best Visual Presentations <i>Dr.-Ing. B. Krautkremer</i> <i>Fraunhofer Institute IWES</i> <i>Head of Bioenergy System Technology</i>	video
Delivery of the Awards <i>D. Baxter,</i> <i>Joint Research Centre (JRC)</i> <i>European Commission</i> <i>Coordination of Poster Award</i>	video, slides

Awarded Posters

Biomass feedstock, residues and by-products: *Biogas Digestates as Organic Fertilizer in Different Crop Rotations - The Third Year (1DV.2.64)*

Solid biofuel combustion for large utility: *Biomass Gasification in Subcritical and Supercritical Water with Different Reactor Materials (2BV.2.55)*

Gasification for power, CHP and polygeneration: *Mischantus as an Alternative Biomass Source for Biogas Production (2DV.3.14)*

Industrial biorefineries and bio-products: *The Economic and Technical Cases for Gasification and Pyrolysis Retrofit: The First Stage in Conversion of Forestry Operations to Bio-refineries? (4BV.4.24)*

Standardisation: *Short Rotation Coppice in Italy: Development and Current Situation (5AV.3.24)*

Announcement of EU BC&E Student Awards video
Dr.-Ing. B. Krautkremer
Fraunhofer Institute IWES
Head of Bioenergy System Technology

Delivery of the Awards video, slides
J.-F. Dallemand
Joint Research Centre (JRC)
European Commission
Coordination of EU BC&E Student Awards

Awarded Students

T.K. Kurka: *Location Optimization of Decentralized, Medium-Sized Bioenergy Developments through Spatial Modeling - A Case Study in Scotland (1AO.3.2)*

B. Wirth: *Anaerobic Treatment of Waste Water derived from Hydrothermal Carbonization (2AO.4.3)*

C. Varrone: *Bio-Conversion of Biodiesel-Derived Glycerol into Hydrogen and Ethanol, Using Enriched Activity Sludge: Beyond Second-Generation Biofuels (2BO.1.4)*

D. García-Galindo: *Empirical Indices to Forecast Adverse Effects of Biomass Co-Firing: The Analysis of 200 Full-Scale Experiences (2CO.1.4)*

T.Groth: *The Impact of Policy Support on the Return From Small-Scale Biomass Investments: A Case Study Comparison of Germany, the UK and Denmark (5DO.10.5)*

Parallel Events

Biofuels FlightPath - Workshop on Upstream R&D and Innovation for Biofuels in Aviation - Monday, 18 June 2012

Agenda

BF01 Overview of advanced biofuels for aviation slides
A. Bauen

Session 1: Thermo-chemical Conversion

BF02 The BioTfuel Project slides
L. Bournay

BF03 Technology for the Production of Fully Synthetic Aviation Fuel slides
A. Hull

BF04 Biofuels based on Pyrolysis and Hydrothermal Treated Products - Current Status and Perspectives slides
F. Müller-Langer

BF05 Pyrolysis Oil Flight Path slides
R. Venendaal

BF06 Jet Fuel Production from Ethanol using ABNT Proprietary Catalyst slides
C. Millán Chacartegui

BF07 Production of Long-chain Hydrocarbons from Biobased Alcohols slides
K. Breitzkreuz

Session 2: Microbial Conversion

BF08 Sustainable Jet Fuel not anymore a Dream with PROESA™ slides
R. Di Felice

BF09 Waste and Residuebased Microbial Oils as Feedstock for Paraffinic Fuels slides
P. Koskinen

BF10 Bio-Jetfuel: Gaseous Fermentation enables the use of Sugar as Feedstock instead of Vegetable Oil slides
J.B. Barbaroux

BF11 Yeast based Microbial Oils as a Novel Feedstock for Aviation Fuels slides
C. Görner

Biogas goes Europe and Biowaste to Energy - Tuesday, 19 June 2012

Agenda

BGE01 Overview on European biogas markets and policies slides
A. Wellinger

BGE03 New market opportunities in Europe Cooperation with Eastern Europe slides
E.H. Angelova

BGE04 Key technology trends in agricultural biogas plants slides
A. Haas

BGE05 Recent developments and challenges of biogas in Baltic states slides
I. Dzene

BGE13 Technologies and examples for biowaste utilisation for biogas production slides
P. Bozano Gandolfi

EuroBioRef Workshop: Future Prospects for Biorefineries - Tuesday, 19 June 2012

Agenda

EBR01 EuroBioRef Project Outline slides
M. Christou

EBR02 Biomass production and delivery for biorefineries - EuroBioRef Results on Field Trials slides
M. Christou

EBR04 SP6 - Advanced Catalytic Thermochemical slides
K.D. Panopoulos

Job Opportunities in the Biomass / Bioenergy Sector - Wednesday, 20 June 2012

Agenda

JO01 EBRI - The European Bioenergy Research Institute slides
A. Hornung

JO02 Studying at Straubing Center of Science slides
N. Fröhlich

JO03 IMES: International Master in BioEnergy & Environment slides
F. Martelli

JO04 Marie Curie Exchanges and Opportunities Under the Framework 7 (FP7) Programme slides
P. Knobbs

Biogas Upgrading and Grid Injection - Wednesday, 20 June 2012

Agenda

Session 1: Framework Conditions of Biomethane Production

BU02 Political Targets and Framework Conditions for Biomethane in Europe
D. Baxter slides

Session 2: Technology Overview I

BU06 Biomethane Grid Injection - Connecting Nature's Supply to Natural Gas
A. Baksteen slides

Session 3: Technology Overview II

BU09 Biogas upgrading by Pressure Swing Adsorption (PSA)
A. Schulte-Schulze Berndt slides

BU10 Membrane separation for biogas upgrading
M. Harasek slides

Session 4: Biomethane Utilization

BU11 Trading in Biogas - Opportunities in Specialist Markets
K. Huber slides

BU12 Biomethane as transport fuel
A. Wellinger slides

Biomass and Bioenergy: an Investor's Perspective - Challenges and Opportunities for the Financial Community - Wednesday, 20 June 2012

Agenda

BAB04 Eastern Africa's biggest FSC certified tree grower - a case study of international bio-energy investment
M. Deutmeyer slides

BAB10 Boosting the bio-based economy
H. Waegeman slides

Italian Biomass Forum (in Italian) - Thursday, 21 June 2012

Agenda

Sessione I

IBF04 Sistemi per ottimizzare il recupero della biomassa residuale in ambito forestale
G. Picchi slides

IBF05 Mercato internazionale dei biocombustibili solidi
M. Cocchi slides

IBF07 Biomasse solide: produzione decentralizzata di elettricità e calore
M. Dal Verme slides

IBF08 Bioliquidi e biocarburanti
D. Chiaramonti slides

IBF09	Biogas e Biometano: situazione e prospettive in Italia <i>S. Piccinini</i>	slides
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IBF10	Inquadramento politico-normativo italiano sulle bioenergie <i>S. Mannelli</i>	slides
Bioenergy in Smart Grids - Thursday, 21 June 2012		
Agenda		
BSG02	The Future Role of Bio Energy in Energy Supply Structures, a Vision <i>B. Krautkremer</i>	slides
BSG06	Biogas as a storage solution for the Smart Grid: AlpEnergy project <i>M. Merlo</i>	slides
BSG07	The RegModHarz-Project <i>B. Krautkremer</i>	slides
Workshop on Sampling, Detection and Quantification of Impurities in Gases from Thermochemical Biomass Conversion Process - 'Gas Analysis Workshop' - Thursday, 21 June 2012		
Agenda		
Part I: Off-line sampling and analysis - Guideline (liquid) in comparison with SPA/SPE (solid)		
GA01	Welcome and Introduction <i>Y. Neubauer</i>	slides
Liquid sampling		
GA02	Tar measurement at VUT - Solvent Comparison <i>U. Wolfesberger-Schwabl</i>	slides
GA03	Reflexions on the existing guideline (and EN) about the sampling and analysis of tar matter from product gas, pyrolysis gas and synthesis gas <i>J. Zeisler</i>	slides
Sampling on adsorbents (SPA/SPE)		
GA04	Tar & (SPA) tar analysis <i>T. Lilledahl</i>	slides
GA05	Tar analysis by Solid Phase Adsorption (SPA) associated with Thermal Desorption (TD) and Gas Chromatography (GC) analysis <i>E. Masson, A. Dufour</i>	slides
GA06	Solid Phase Adsorption (SPA) method for tar and sulphur compounds <i>A.J. Grootjes</i>	slides
Part II: Analytical approaches for the characterization of synthesis gases regarding trace elements like sulphur, chlorine, alkali and nitrous species		
GA07	Description of needs (application, parameters, type of task) <i>S. Biollaz</i>	slides
GA08	PSI toolbox regarding trace elements: Alkali, Cl, metals <i>S. Biollaz</i>	slides

GA09	Solid Phase Adsorption (SPA) method for tar and sulphur compounds II <i>A.J. Grootjes</i>	slides
GA10	Analytical methods for LT-CFB Gasifiers <i>H. Egsgaard, Z. Sárossy, J. Ahrenfeldt</i>	slides
GA11	The actual need of a guideline for sampling and analysis of chemical matter (not tars) from product gas, pyrolysis gas and synthesis gas <i>J. Zeisler</i>	slides
	Outcomes <i>Y. Neubauer</i>	

Closing Session and Highlights

Introduction to the Closing Session <i>Dr.-Ing. B. Krautkremer</i> <i>Fraunhofer Institute IWES</i> <i>Head of Bioenergy System Technology</i>	video, slides
Highlights of the 20th EU BC&E <i>J.-F. Dallemand, D. Baxter</i> <i>Joint Research Centre (JRC)</i> <i>European Commission</i>	video, slides
Farewell to the Delegates <i>Dr.-Ing. B. Krautkremer</i> <i>Fraunhofer Institute IWES</i> <i>Head of Bioenergy System Technology</i>	video