

IEA Bioenergy Task 40 Newsletter – August 2010 - Issue 2

Introduction

IEA Bioenergy Task 40 is an international working group under the IEA Bioenergy Implementing agreement. We conduct studies and organize events on various topics related to sustainable international bioenergy trade. Halfway 2010, we look back at a very successful Biomass Power and Trade conference held in Rotterdam on March 11-12th, and are finalizing the preparations for our next workshop in Rome on October 21st 2010 (see for more details below). Also, we published several studies on Opportunities and barriers for international bioenergy trade, an updated overview of bioenergy sustainability certification, and a study on the possibilities of a global Bio-trade Equity Fund. We also gave our website a small make-over, and included a version for handheld devices – check out www.bioenergytrade.org/mobile

To disseminate our work, we have launched this T40 newsletter, and we hope it provides you with useful information. Our intention is to send out two newsletters a year with an overview of recent studies and upcoming events. This is the pdf version of the newsletter, which has probably been forwarded to you or downloaded from the Task 40 website. To subscribe to the newsletter, please go to the Task 40 website www.bioenergytrade.org, and click on the newsletter button on the top-right for further instructions. Also if you have any comments, suggestions or questions, please do not hesitate to contact us. With kind regards,

André Faaij, Peter-Paul Schouwenberg (task leaders) and [Martin Junginger](#) (main editor of the newsletter)

Upcoming Task 40 Workshops and conferences

Joint workshop: International trade of bioenergy commodities: Experiences with certification and setting up sustainable supply chains

EUBIONETIII and IEA Bioenergy Task 40 are jointly organizing a [workshop in Rome](#), Italy on the 21st of October 2010. The aims of this workshop are:

1. To provide an overview of experiences and regarding sustainability certification, including the current status of legislation in the EU and elsewhere.
2. To show concrete case studies of ongoing sustainable international supply chains – both for solid and liquid biomass.
3. To identify and discuss both opportunities to develop sustainable international bioenergy supply chains and identify (policy) barriers to be overcome.

The morning session will mainly focus on ongoing development of sustainability certification systems of solid and liquid bioenergy commodities and effects on international trade. In the afternoon session, we aim to highlight six or seven concrete case studies in which sustainable international supply chains have been set up. The workshop will be free, but registration is mandatory. Speakers include representatives from the European Commission, GBEP, the Brazilian FAPESP bioenergy programme, RFA, Proforest, Api Nova Energia, ISCC, SGS, DONG, and many of the leading academic institutions in Europe.

Joint workshop: Development of torrefaction technologies and impacts on global bioenergy use and international bioenergy trade

IEA Bioenergy Task 32 and Task 40 are jointly organizing a [workshop in Graz](#) on Friday the 28th of January 2011, as a side-event of the [Central European Biomass Conference \(CEBC\), Graz, Austria](#).

Torrefaction is an interesting pre-treatment technology for biomass before pelletisation and/or combustion. It is a thermo-chemical process for the upgrading of biomass that is usually run at temperatures ranging from 200 to more than 300°C under the exclusion of oxygen and at ambient pressure. This workshop will give a comprehensive overview of fundamentals of torrefaction, the main advantages of and the challenges in producing torrefied biomass. Ongoing R&D activities will be shown, demonstration plants under construction or already in operation will be presented and the latest state-of-science in torrefaction will be discussed. Also, the possible implications of commercially available torrefaction technology for international bioenergy trade will be highlighted. Speakers that have confirmed participation include amongst other Michael Wild (EBES AG), Martin Englisch (OFI), Jaap Kiel (ECN), Jan Brouwers (Torr Coal), Ger Ostermeijer (Peterson Control Union Group) and Hubert Röder (Pöyry). The final programme will be available in October 2010.

Other workshops scheduled for 2011

For 2011, two further workshops have been scheduled:

- In February 2011, an activity on biomass trade and power in the Americas is currently planned, most likely in the second half of February 2011 in Atlanta, Georgia.
- Indirect land use change and impacts for biomass production and trade will be on the agenda for a joint workshop with IEA Bioenergy Tasks 38 43, planned for the autumn of 2011 in Brazil.

More details will be published in due time – please keep an eye on the Task 40 website for up-to-date information.

Past events

Biomass power and trade conference - 11-12 March 2010, Rotterdam, The Netherlands

On March 11 and 12 2010, Task 40 supported the [biomass power and trade conference](#), in Rotterdam, the Netherlands. At this conference, decision-makers of biomass industry, regulators, traders and researchers from over 30 countries convened in Rotterdam to obtain industry updates and to exchange ideas and explore collaborations with key stakeholders in the global biomass industry. In a first session, large European electricity producers currently cofiring biomass (Essent, Electrabel and E.On) presented their past experiences and their ambitions for the future. Both Essent and Electrabel are already co-firing (largely-imported) biomass for a number of years, and presented ambitious scenarios for future increase of biomass co-firing for power generation. In a second session, global supply of solid biomass was discussed with speakers from five continents, providing an overview of biomass use and export potential in Australia, the Baltic States, Brazil, China and Canada. Especially in Australia, the Baltics, and Brazil, the large future potential of dedicated energy crops for exports was highlighted. Based on both demand projections and possible future supply, the Port of Rotterdam displayed scenarios regarding a future market in which the European wood pellet demand increased to 130 -200 million tonnes. Roughly 30% of this volume

could be traded and trans-shipped internationally. Other topics discussed during both days included the role of pretreatment technologies such as pyrolysis and torrefaction (and how they could facilitate long-distance trade), the financing requirements for international biopower value chains (and how a biotrade equity fund could bring about such investments), and the interaction of biomass and CO₂-markets. On both days the



ongoing development of sustainability criteria for solid and liquid biomass was heavily discussed, with two speakers from the European Commission and several experts from Germany, the Netherlands and the UK. So far, the European Commission has only defined mandatory sustainability requirements for liquid biomass, and only recommends that individual member countries develop similar voluntary criteria for solid biomass. One of the remarkable outcomes of the discussions was that the major users and traders of solid biomass would support the introduction of EU-wide mandatory sustainability criteria for solid biomass in order to avoid mushrooming of different national systems. The conference was finalized by a session on bio char, including an overview of the current developments of biochar soil sequestration (as an alternative to energy use), the concomitant environmental challenges in biochar production and soil/water applications, and the possibilities to develop new materials from biomass through hydrothermal carbonization. A two hour cruise on the Maas river through the port of Rotterdam provided ample opportunity for networking for the participants. Apart from that, the conference proved a suitable place for business contacts.

All summaries and most presentations of past workshops (up until March 2010) are available online at the Task 40 website www.bioenergytrade.org

Task 40 publications (recently published and forthcoming)

All reports are available for free at the Task 40 website www.bioenergytrade.org

- [Opportunities and barriers for international bioenergy trade](#). The aim of this report was to provide up-to-date overview of what market actors currently perceive as major opportunities and barriers for the current and future development of international bioenergy trade. The work focuses on three internationally traded bioenergy commodities: bioethanol, biodiesel and wood pellets. Data was collected through an internet-based questionnaire, which was completed by 141 respondents. Results show that import tariffs and sustainability criteria are perceived as major barriers for the trade of bioethanol (and to a lesser extend of biodiesel), while logistics are seen as an obstacle mainly for wood pellets. Development of technical standards was deemed more as an opportunity than as a barrier for all three commodities. Phytosanitary measures were not an issue for any of the investigated commodities, but may prevent the trade of other (mainly solid and unrefined) biomass, such as wood chips. Most important drivers were high fossil fuel prices and climate change mitigation policies. Concluding, some barriers for bioenergy trader are commodity specific, and will need specific actions to overcome. As a first step, import tariffs for biofuels could be reduced or abolished, linked to multi-

national trade agreements and harmonization (including provisions on technical standards and sustainability requirements) which might provide the necessary preconditions for further sustained growth of international bioenergy trade. The full report is available for download from the Task 40 website. A shortened version has also been submitted for publication in the journal Energy Policy.

- [Updated overview of bioenergy sustainability certification initiatives](#). The report includes an extensive overview and update on relevant certification initiatives and systems for biomass and bioenergy certification, based on the year of 2009. Examples of included initiatives are the roundtable initiatives (RSB, RTRS, BSI, etc), forestry standards (FSC, PEFC), agricultural standards (SAN, GlobalGAP) and specific voluntary standards for bioenergy (ISCC, NTA8080). Every initiative gives a description of the context, status and organization structure. This is followed by a description of its principles, criteria and indicators. The report is the background document from the paper Dam et al (2010), From the global efforts on certification of bioenergy towards an integrated approach based on sustainable land use planning (submitted to the Journal of Renewable and Sustainable Energy Reviews). This article provides a comparison between the systems, followed by an overview of current bottlenecks, and required activities, to come to a harmonized, efficient system to guarantee the sustainability of biomass and bioenergy.
- [World Bio-trade Equity Fund Study](#). Investing in bioenergy (and especially in bioenergytrade) is not generally well understood in the investment community. The aim of this study was to explore the possibility for the creation of a Bio-trade Equity Fund. Such a fund could be to invest in projects that promote world trade in biomass while yielding a rate of return commensurate with risk. Projects could include: improving ground-based biomass feedstock supply systems, such as advanced chipping systems and inland ships; building biomass conversion plants, such as for pellets, BioOil, 2nd generation ethanol and torrefied wood; and enhancing bio-product transportation systems, such as port improvements, purpose built loaders, and specialized biofuel ships. The study concludes that such a fund could be feasible, and outlines a possible business plan, including the setup of the fund, a time schedule and example projects a fund could invest in. It is anticipated that such a fund could result in meaningful volumes of biomass transported where they are needed most in the next 10 years to achieve renewable fuel targets. It in turn would result in the creation of jobs in developing nations, commercialization of new technologies, and ultimately reduction in worldwide GHG emissions. The study is available for download from the Task 40 website. In case you would like to receive more information, please contact the main author of the study, Doug Bradley

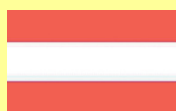
Topics on the Task 40 agenda

Currently, Task 40 is considering to investigate the following topics related to international bioenergy trade in detail:

- Assessment of the current status of torrefaction (technologies, market players, claimed advantages for trade etc.)
- Impact of policies (especially on renewable energy targets and climate policies; following Copenhagen) on trade and markets (supply and demand & structures)
- Current biomass business models (organization/actors/actions) and possibilities to optimize logistics & supplies and value chains
- Market developments in the (Northern Hemisphere) Forest and pulp & paper sectors
- Analyze and compare key certification paths for biomass: CEN, ISCC, ISO

Task leadership and overview of national team leaders

The Task is jointly led and coordinated by André Faaij (Copernicus Institute, Utrecht University) and Peter-Paul Schouwenberg (Nidera Handelscompagnie B.V.). Martin Junginger (Utrecht University) is assisting and logistically supporting the Task. Kees Kwant (AgentschapNL) is Operating Agent for the Task.



Austria
Lukas Kranzl and Julian Matzenberger
Vienna University of Technology
Tel: +43-1-58801 37351
Lukas.Kranzl@tuwien.ac.at



Italy
Alessandro Berti
Api Nòva Energia I.
Tel: +39-06-8493351
Alessandro.berti@apinovaenergia.com

Michael Wild,- EBES AG
Tel: +43-1-879 99 57
wild@ebes.at

Maurizio Cocchi
ETA - Renewable Energies
Tel: +39-055-5002174
Maurizio.cocchi@etaflorence.it



Belgium
Luc Pelkmans, VITO
Tel. +32-14-335830
luc.pelkmans@vito.be



Japan
Shinichi Goto and Mitsu Oguma, AIST
Tel: +81-29-861-7080
goto.s@aist.go.jp & mitsu.oguma@aist.go.jp

Didier Marchal, SPW
Tel : +32-81-335865
Didier.Marchal@spw.wallonie.be



Brazil
Arnaldo Walter and Paulo Dolzan
State University of Campinas
Tel: +55-19-3521-3283
awalter@fem.unicamp.br



The Netherlands
Andre Faaij & Martin Junginger, Utrecht University
Tel: +31-30-2537643
a.p.c.faaij@uu.nl & h.m.junginger@uu.nl

Peter-Paul Schouwenberg,
Nidera Handelscompagnie B.V.
Tel: +31-10-4301636
pschouwenberg@nidera.nl



Denmark
Lars Nikolaisen
Danish Technological Institute
Tel: +45 -7220- 1302
Lars.Nikolaisen@teknologisk.dk



Norway
Øyvind Leistad, Enova
Tel: +47-73-190-430
oyvind.leistad@enova.no

Thomas Bornerup
Verdo Energy
Tel: +45 -4035- 6939
tbo@energiranders.dk

Birger Solberg & Erik Trømborg,
Norwegian University of Life Sciences
Tel: +47-64-965728
erik.tromborg@umb.no



Finland
Tapio Ranta & Jussi Heinimö
Lappeenranta University
of Technology
Tel: +358-5-62111
tapio.ranta@lut.fi & jussi.heinimo@lut.fi



Sweden
Bo Hektor (Representing Svebio)
First Bioenergy AB
Tel +46-8109915
bo.hektor@fbio.se



Germany
Uwe R. Fritsche, Oeko-Institut
Tel +49-6151-8191-24
u.fritsche@oeko.de



United Kingdom
Frank Rosillo-Calle & Jeremy Woods
Imperial College London, CEP
Tel. + 44 - 0- 20 7594 7315
f.rosillo-calle@imperial.ac.uk

Daniela Thrän, DBFZ
Tel. +49- 341- 2434-435
Daniela.Thraen@dbfz.de

Michael Deutmeyer
CHOREN Biomass GmbH
Tel: +49 -40 - 398156 30
Michael.Deutmeyer@choren.com



United States of America
J. Richard Hess, Idaho National Laboratory
Tel: +1- 208-526-0115
JRichard.Hess@inl.gov

Richard Nelson, Kansas State University
Tel: +1 -785-532-4999
RNelson@ksu.edu