



18th European Biomass Conference & Exhibition

From Research to Industry and Markets

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Bringing you all the news and highlights from the Conference!

Available Monday to Friday at the registration desk and in the exhibition hall

Highlights from Thursday's plenaries

Valri Lightner of the U.S. Department of Energy gave an enlightening overview of the DoE Bioenergy Program.

She described the scope and objectives of the National Biofuel Action Plan, the outcome of an integrated interdepartmental federal approach that lays out a strategy to meet the targets set forth by the Renewable Fuel Standard. By 2022 the U.S. biofuels production capacity should reach 35 billion gallons per year, with nearly 15 bn of 2nd gen ethanol and other advanced biofuels.

The R&D strategy relies heavily on the development of commercial scale biorefineries as well as on an extensive effort to develop efficient and sustainable feedstock supply. With regard to this, she highlighted the ongoing initiatives in the development of efficient and cost competitive feedstock logistic systems to handle and deliver high tonnages of biomass.

29 integrated biorefinery projects are being supported by the DoE, 12 of which are in pilots and 10 are demo plants. In the demo plants the public support of DoE is geared at having the companies generate data that private funders need when evaluating funding biorefinery projects so that they can be replicated. There are already 5 commercial scale projects where DoE is assisting in the start-up.

Martin Knapp of the Karlsruhe Institute of Technology addressed the growing concerns for land use competition in Germany given the sensitive increase of the cultivation of energy crops for biogas and biofuels in this country.

The area of arable lands used for non food crops has doubled in the last 5 years says Knapp, with energy crops covering over 1.75 million ha in 2009. Long term strategies to avoid dangerous competitions with food crops in the future should be put in place relying on the increase of conversion efficiency of biomass to energy as well as the increase of crop yields.

Eija Alakangas, VTT showed the prospects of bioenergy in new industrial sectors such as food and beverages the ceramic industry, metals, where the current share of

energy from biomass is still quite low, ranging from 0.5 to 11% in those industrial sectors. Food processing and cement industries seem to be the sectors with the greatest potential for bioenergy. However lack of infrastructure, lack of knowledge and insecurity over stable biomass supplies are major bottlenecks that are limiting the bioenergy initiatives in these sectors.



In the 2nd plenary **Sonia Yeh**, UC Davis, opened the session speaking on sustainability requirements for the California Low Carbon Fuel Standard part of California's GHG policy. Currently the LCFS has two requirements minimum GHG savings requirement per biofuels category, and provision to exclude feedstocks from certain lands. A framework for including

sustainability provisions is to be developed by December 2011 and she also discussed some of the key design issues that would need to be included.

Klaus Neumann, Borregard presented his company's work on biorefineries. Borregard have industrial experience in handling biomass along the whole value chain, in particular of interest to the company is pre-treatment development and scaling up of pre-treatment (chemical and enzymatic side). They focus on lignocelluloses through chemical enzymatical and also pyrolysis to produce biomaterials, biochemicals, and biofuels. Biorefining for Borregard offers a sustainable solution for a global challenge and set innovative biorefinery concepts as a priority.

Marina Bruan-Unkhoff, DLR gave an overview on the possible use of alternative aviation fuels, a topic which is being studied and researched more and more with the introduction of a cap on emissions in the aviation sector under the EU ETS in 2013 and aviation companies wanting to reduce their carbon footprint even though the aviation sector is only responsible for 13 % of emissions in the whole mobility sector. The aviation sector itself has undertaken demonstration flights blending biofuels with kerosene, using different feedstocks in each case, coconut & babassu, jatropha, camelina, and algae. For 2nd generation biofuels, jatropha and algae are interesting feedstock. The DLR are involved in two EU funded



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projects, *Alfabird* under FP7 looking at alternative fuels for aircraft development and a tender funded by DG ENER *SWAFEA* on setting out a roadmap for the introduction of alternative fuels and identifying policy measures and further R&D needs of the industry. The DLR are carrying out certain activities on characterization of aviation fuels, measuring emissions, and chemical properties on the engine. She concluded that for alternative jet fuels, algae, waste, and ligno-cellulosic biomass are the most important fuels to be researched at the moment.

The Debate on the EU SET Plan

A debate on the European Industrial Initiatives in the frame of the Strategic Energy Technology Plan (SET-Plan) was Thursday's main plenary event. **Raffaele Liberali** DG RTD, European Commission opened the discussion giving an introduction to the European Industrial Initiatives (EII's) & the European Bioenergy Industrial Initiative. The three pillars of the SET plan are firstly the Roadmaps for the Industrial initiatives being developed with industry, national governments and the EU secondly the European Research Alliance (EERA) involving 10 research associations, creating joint programmes on biomass and thirdly the SETIS which is run by the JRC, is the SET plans information system base. To implement in full the three pillars by 2020 an estimated 50bn euro is necessary in funding, but ultimately finance ministers in Member States will have the decision on what investment will be made in the SET Plan. The aim of the EII's is to give a clear figure to MS to help them make their decision. Opportunities for funding the EII's lie in the revision of the ETS with 50% of revenues from auctioning to be used in energy field, the NER300 and the revision of the framework programme but new resources will be needed for funding.

Giovanni Federigo De Santi, DG JRC, European Commission gave an insight to the audience on the SETIS to assist in the EII's implementation process. Within this a major task of the JRC are the technology maps to include what the EU can expect in the data for technology, show

key challenges and bottleneck. Another task is drawing up the capacity maps showing the investment needs from 2010-2020, what resources we have and expect in the EU and who is investing and where. These are the first initial steps the JRC is doing as if public money is secured to finance the SET Plan, a clear reporting base will also be developed so that key performance indicators of the implementation of the SET plan can be monitored and reviewed in the progress.

Veronique Hervouet, Chair of the European Biofuels Technology Platform added to the session with an overview of the EIBI. The Commission with the industry is working on preparation of calls and refining criteria critical for selection of the project to streamline the process of the EIBI. A call for Proposals to support 5-10 demonstration projects will be launched with the EIBI in November. To



identify these demonstration projects that will form the first part of the EIBI, Hervouet emphasised the challenges to pick winners so to speak in the biofuels technology be it from biological & thermochemical or combinations of these processes. The EBTP has identified seven value chains to contextualise and frame where they identify that reference and demonstration plants on an

industrial scale are there. The overarching idea for the value chains is to correspond to this energy driven biorefinery concept. For the demonstration projects that the EBTP will put forward they will exclude currently deployed technology and outline criteria that make sure the projects are innovative, carry an EU dimension and fulfil sustainability. The projects must fulfil the core criteria to be selected and evaluated. The overall EIBI roadmap sets out a price tag of 8bn for 15-20 projects to be financed and built from 2015, coming in at 500 million euro for one project.

This bulletin is written and edited by **Maurizio Cocchi** and **Eibhilin Manning**. Disclaimer: The opinions expressed in the bulletin are those of the authors, and do not necessarily reflect the views of the Conference ExCo. The bulletin team at the 18th EBCE can be contacted by email at maurizio.cocchi@etaflorence.it and eibhilin.manning@eubia.org