

Successful Workshop at EUBCE 2017 – bridging the gap between research, demo and industry and strengthening market uptake of bioenergy technologies, 14th June 2017, Stockholm



Bioenergy is currently the most widely used renewable energy source in the world. It constitutes two thirds of Europe’s renewable energy sources with a considerable absolute growth in the last 5 years. However there remains a number of challenges that many advanced and innovative technologies in the bioenergy field approaching market maturity are facing today. These challenges are primarily linked to the lack of opportunities to demonstrate the technology at the appropriate scale – either as pilot or pre-commercial demonstration plant, or first-of-its-kind industrial-size plant.

On 14th June 2017 50 stakeholders from research, industry and governmental organisations took part in the joint Biomass Sustaining the Future (BESTF), ERA-Net Bioenergy and ETIP Bioenergy workshop entitled “Bioenergy – from research to market deployment in a European context”, to address these challenges and discuss how to bridge the gap between research, demonstration projects and industry. This workshop was organised as a side event at the European Biomass Conference (EUBCE) in Stockholm.

The morning session focussed on the results and main highlights of the BESTF projects, followed by a selection of the ERA-Net Bioenergy projects covering a broad spectrum of Technology Readiness Levels (TRL). The project coordinators gave presentations which were followed by a lively discussion with all the speakers. A booklet containing the results so far of the BESTF projects was published prior to the conference.

Added value of the ERA-Net Co-Fund BESTF and ERA-Net Bioenergy

Maria Georgiadou, the Project officer of the BESTF3 ERA-Net Co-Fund commented that the workshop provided a useful insight into how this ERA-Net Co-Fund is supporting the SET Plan objectives. In addition all presenters of the BESTF projects spoke highly of the BESTF instrument. Chris Manson Whitton from Progressive Energy Limited, UK stated that the project, Bio-Substitute Natural Gas would certainly not have achieved what it has done without funding from BESTF. The project could not have been delivered and so the commercial plant would not be under construction. He explained that they are now trying to reach the point where no support is necessary. Jo Ross from the University of York, UK explained that BESTF has made it possible to bring various partners together in the project MSWBH – Production of butanol and hydrogen by fermentation techniques using steam treated municipal waste. The BESTF scheme is allowing evaluation at an industrially relevant scale of the conversion of 3 different waste streams into a range of chemical products. In his view it is important to have some flexibility in the scheme throughout the duration of the project, i.e. to accommodate changes in partners. According to Sonia Heaven from the University of Southampton, UK, it is critical to have a partner from industry on board which is a requirement of the BESTF scheme. Similarly Birgitte Ronnow from Terranol, Denmark said that the CoryFee project (Cost reduction in yeast fermentation for commercial production of cellulosic ethanol) would not have been possible without the funding of BESTF.

When asked about the added value of the ERA-Net Bioenergy scheme all presenters of the ERA-Net projects agreed that the ERA-Net scheme is tremendously beneficial helping to bring different skills across Europe together, offering a degree of flexibility to shape the projects. The main drawback mentioned was the focus on a small number of countries, which will now be taken on board and more focus be given to the outreach of the programme. Mr Obernberger from BIOS Bioenergiesysteme, GmbH, Austria explained that ERA-Net Bioenergy is a very important initiative for international collaboration. He explained that although other European calls are also very helpful, the ERA-Net scheme provides more flexibility. It mobilises expertise from different fields.

Accelerating the market uptake of bioenergy technologies

During the afternoon session BESTF and ERA-Net Bioenergy joined forces with the European Technology and Innovation Platform Bioenergy (ETIP Bioenergy), the European Energy Research Alliance (EERA) Bioenergy Joint Programme, and the European Technology and Innovation Platform Renewable Heating and Cooling (ETIP RHC) to host an interactive session focussing on how to strengthen the market uptake of advanced biofuels and bioenergy under the new Strategic Energy Technology Plan (SET-Plan) Key Action 8 (Renewable fuels and bioenergy). The session kicked off with a presentation from Maria Georgiadou from the European Commission's Directorate-General for Research and Innovation (DG RTD) highlighting the targets of the 2030 Climate and Energy Framework. The considerable reduction of greenhouse gas emissions, a growing share of renewable energies and an increased energy efficiency were emphasised to be key for a low carbon energy system and to achieve energy security within the EU. Research and innovation, as well as competitiveness, were emphasised to establish fundamental instruments in order to develop a range of low-carbon technologies to achieve national and European wide energy targets. The SET-Plan is coordinating research and innovation across Europe and tries to facilitate cooperation among Member States and stakeholders in their ambition to stimulate the market uptake of innovative

technologies. The second presentation was given by Ingvar Landälv, Chair of the ETIP Bioenergy. He explained

the mission of ETIP Bioenergy to represent the unbiased, united, and consolidated view of the biofuels and bioenergy industry in Europe and to accelerate the sustainable deployment of biofuels and bioenergy in the EU. He highlighted that a stable policy framework was crucial for ensuring investment and the successful commercialisation of promising energy technologies. In a third presentation, Juan Carrasco from the European Energy Research Alliance (EERA) Bioenergy Joint Programme stressed that it is important to align research with industry priorities and to develop suitable research programmes on that basis. Eija Alakangas, representing the ETIP RHC, presented parts of the Biomass Technology Roadmap that strives to ensure the market deployment of technically reliable, environmental friendly and cost-competitive biomass-based heating and cooling solutions for different types of consumers in the short term. At the same time, the roadmap sets research priorities that shall help to facilitate market deployment of sustainable technologies.

After the introductory presentations, all speakers were invited to participate in a panel discussion focussing on how to bridge the gap from research to demo and industry and which R&D&I priorities should be set. It was further discussed how the relation between national and EU funding evolves. Two members of the ETIP Bioenergy Advisory Board, Patricia Thornley from the UK SUPERGEN Programme and Jonas Lindmark from Energimyndigheten (SE), joined the panellists and presented their positions. The panel discussion was moderated by Kees Kwant (RVO, the Netherlands).

According to Patricia Thornley the fact that there are too many technical options, coupled with the lack of security concerning the effective gains of certain technologies and innovations may be to blame for the slow implementation process. Key barriers identified to accelerating the market uptake of bioenergy technologies were the planning phase of bioenergy projects and a lack of public acceptability in general. Jonas Lindmark added that in Sweden national policy is quite progressive. He explained that Sweden would represent a good example of long-term planning in the energy sector, taking the introduction of a carbon tax 25 years ago exemplarily. From that time, communities started to go forward and to invest in “green” energy solutions as technology was cheaper than fossil oil and gas. All panellists agreed that a reliable policy framework was of crucial importance for (potential) investors that seek for trust.

Maria Georgiadou emphasised that consumers normally prefer to have cheap energy and that it is the aim of the SET Plan Key Action 8 to find solutions in order to build up an energy system ensuring the supply of all Europeans with an affordable and cost-competitive energy mix.

Looking at bioenergy in an integrated way can also open up opportunities. Juan Carrasco emphasised that there is a need for a technical and economic evaluation and that there is a continual threat of losing investments.

It was emphasised that there are already different instruments on the European level to support first-of-a-kind technologies and to facilitate market uptake, e.g. Horizon2020, InnovFin etc. In answer to the question on how to improve national support schemes and contributions on the European level, one recommendation was that countries could establish a common pot for European projects and that projects could be grouped according to their geographical areas. In addition it was suggested to reach out to SMEs and focus on their needs at local level and to link this to policy makers, just as how SUPERGEN in the UK has been operating. However it was mentioned that it is still difficult to get SMEs on board and that researchers in some cases lack adequate perspectives with respect to the reality of SMEs. The fact that many companies are looking for new export products makes it increasingly necessary to cooperate and look at market potentials. Joint programming across country borders was mentioned as key for associations, groups and research organisations to discuss joint priorities. Long-term regulations and a long-term support structure were identified as crucial in order to ensure investments to build plants.



networks and institutions, but also to learn from one another and to explore ways how to cooperate more effectively. The workshop and the active discussions were a great opportunity to discuss with a wide audience of experts from research, business and governmental institutions on how to shape the future of bioenergy. According to Maria Georgiadou the workshop was a successful event touching upon critical issues in bioenergy/biofuels and trying to create synergies and build capacities among public and private stakeholders. This could serve the SET Plan aims and the Energy Union priorities as well. All in all a successful event.

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