

BioBoost – Biomass based energy intermediates boosting biofuel production

BioBoost is aimed at converting residual biomass into energy carriers for the production of synthetic transportation fuels and chemicals as well as for the generation of electricity and heat. The logistics of these raw materials, fuels and chemicals is a crucial part for the success of the project. Logistikum made a considerable contribution to this project, which was coordinated by Karlsruhe Institute of Technology (KIT).

The BioBoost project concentrates on dry and wet residual biomass and wastes as feedstock for de-central conversion by fast pyrolysis, catalytic pyrolysis and hydrothermal carbonization to the intermediate energy carriers oil, coal or slurry.

Europe is pinning its hopes on energy resources based on residual biomass. Biomass based energy intermediates boosting biofuel production. This project has received funding from the European Union's Seventh Programme for research, technological development and demonstration under grant agreement No 282873.

The project will have duration of three and a half years and be funded by the EU with a total amount of nearly EUR 5.1 million. Six research institutions and seven industrial partners from all parts of the value chain will participate.

The goal of BioBoost is to pave the way for a multi-staged conversion approach from biomass to biofuels and useable chemicals. The project consortium believes that a first regional conversion from the raw material to intermediate materials with higher energy density is the only chance to overcome too high transportation costs. These intermediate materials are then brought to central plants which convert them to the final products. Decentralized conversion of raw material into intermediate energy carriers throughout of Europe requires a highly sophisticated logistics network.

Funded by EU FP7

Duration: January 2012 – June 2015



Apart from complicated and new technological approaches to convert raw materials, the definition of the most appropriate logistics network will be a major challenge in order to be competitive to fossil fuels in the future. Major activities alongside the search for the optimal technical conversion method include:

- the analysis of the economic efficiency of the complete production pathways,
- the investigation of the environmental compatibility and
- the optimization of the transport logistics chains.



With respect to the latter the research team of the University of Applied Sciences Upper Austria is responsible for setting up a holistic logistics model for the biomass collection network. Forming a unique composition, the Logistikum in Steyr closely collaborates with the Heuristic and Evolutionary Algorithms Lab (Heal) at Campus Hagenberg, which deals with meta-heuristics algorithms and simulation based optimization.

www.BioBoost.eu

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