

HIGHBIO2 2011-2013

Biomass to Energy and Chemicals

Project Aims

- Promote utilization of renewable energy
- Raw materials: forest biomass and residues
- Development of environmentally sustainable technology: Gasification technology
- Production of heat, energy and chemicals
- Promotion of distributed energy model

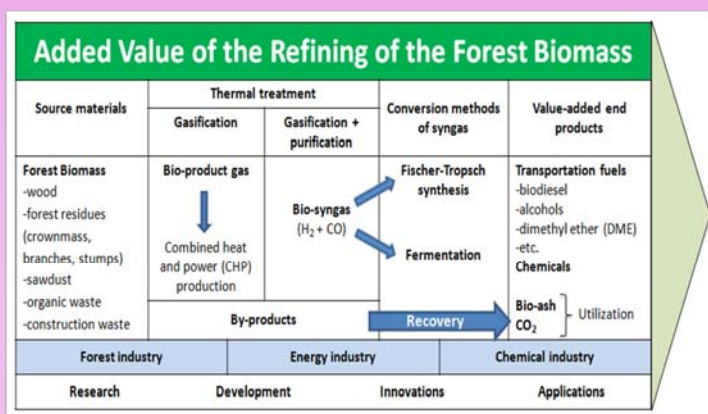


Figure 1. A value chain describing the potential of the forest biomass as a source material for value-added end products.

Expertise of Partners

Finland

- Centria: Small Scale Gasification / Combined Heat and Power production (Gasifier Pilot Plant in Sievi, Finland)
- University of Jyväskylä: Mathematic Models for Gasification (Mass and Energy Balances)
- Chydenius: Catalytic Conversion of Biomass-based Syngas, Fischer Tropsch Synthesis; Analysis of Tar Compounds
- University of Oulu: Characterization of By-products, especially Gasification Bio-Ash, Biodegradation of Cleaning Waters

Sweden

- Luleå University of Technology: Recovery of CO₂ using Ionic Liquids; Simulation Programmes (Aspen Plus)

Research activities

- WP 1 – Optimization of the gasification process
- WP 2 – Purification of syngas
- WP 3 – Utilization of purified syngas and gasification by-products
- WP 4 – Information distribution

Contacts

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Web pages

In Finnish: <http://www.chydenius.fi/tutkimus/soveltava-kemia/projektit/highbio2/highbio2>

In Swedish: <http://www.chydenius.fi/sv/vetenskap/naturvetenskaper/forskning/highbio2>

In English: <http://www.chydenius.fi/en/academic-fields/natural-sciences/research/highbio2>

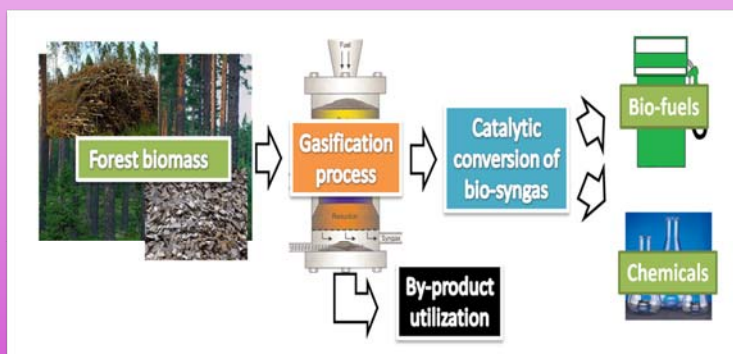


Figure 2. A schematic presentation of the route to produce biofuels and chemicals from biomass-based syngas.

Partners



Funding Agencies

