



## Demonstrating large-scale bioethanol production from lignocellulosic feedstocks

### BIOLYFE – GOALS

- Development of novel industrial-scale technologies for lignocellulosic bioethanol production
- Development and demonstration of the hydrolysis and fermentation steps of the lignocellulosic ethanol process at industrial scale
- Construction of an efficient 2nd generation industrial demonstration unit with a capacity of about 40.000 tonEtOH/y lignocellulosic bioethanol and process optimization through extensive testing
- Distribution and use of products under real operational conditions, including installation of a distribution system and use in vehicles
- Assessment of environmental and socio-economic performances

### BACKGROUND

The benefits of second generation biofuels production from lignocellulosic materials are significant. The main advantages include higher per hectare productivities, better GHG (green house gas) performance and avoidance of direct competition with the food market.

In order to make this technology competitive with fossil fuels significant cost reductions and technological developments are needed while the sustainability of the overall process has to be ensured.

### BIOLYFE – ACTIVITIES

- Selection, supply and pretreatment of lignocellulosic feedstock
- Development of enzyme cocktails and improvement of fermentation technology
- Plant design, construction and testing
- Monitoring and optimization of enzyme cocktails and microorganism supply
- Vehicle fleet test programme and creation of a functioning distribution infrastructure
- Integrated sustainability assessment

The BIOLYFE consortium gathers expertise in bioethanol research and industrial biofuel production.

The BIOLYFE project started in January 2010.  
Project duration is 48 months.



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