



## New Technology and Strategy for a Large and Sustainable Deployment of Second Generation Biofuel in Rural Areas



### BACKGROUND

Existing bioethanol plants are dimensioned large to achieve economies of scale. Such plants require high capital investment and huge amounts of biomass (up to 350 000 t per year) which would ideally be concentrated in small catchment areas (radius 50 km) to make transportation costs affordable.

Preconditions like these make suitable areas scarce.

The BABET-REAL5 Project aims to develop tailor-made solutions applicable to a large number of countries, rural areas and feedstock. This will open up chances for value creation in rural areas in Europe and also worldwide. Furthermore the transport loads are reduced, a benefit for the residents as well as for the environment.

### GOALS

- Development of an integrated and compact solution for the production of second generation (2G) ethanol
- Evaluation of technical, environmental and economic performance of small-scale production plants
- Elaboration of business cases for first-of-a-kind 2G plants in Europe and Latin America

### ACTIVITIES

- Lab and pilot scale (TRL 5) research and innovation on new pre-treatment and bioconversion processes
- Lab and pilot scale research and innovation on the valorisation of by-products through anaerobic digestion
- Evaluation of the techno-economic and environmental performance of industrial ethanol units processing 30 000 t of dry biomass per year
- Identification and selection of lignocellulosic biomass feedstock for business cases in rural areas in France, Germany, Argentina and Uruguay
- Detailed elaboration of business cases for small-scale industrial plants in Europe and Latin America
- Involvement of stakeholders and establishment of a User and Stakeholder Advisory Board (USAB)
- Widespread dissemination and exploitation of results through promotional material, website, videos, publications, workshops, conferences and visits to experimental sites

#### BABET-REAL5 Cooperation

INPT, France (Coordinator)  
AAU, Denmark  
APYGEC, France  
ARTERRIS, France  
CIEMAT, Spain  
CMM, Mexico  
INIA, Uruguay  
INSAT, France  
INTA, Argentina  
LNEG, Portugal  
MAGUIN, France  
OVALIE, France  
SOLAGRO, France  
UNAM, Mexico  
URCA, France  
WIP, Germany

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