ComProSol

Arts Sciences

Combustion of Processed Solid Biofuels

TH Köln

GERSTHAHN, DENNIS | BURSCHE, JAMILE | BEUEL, PATRICK | MOCKENHAUPT, THOMAS | GAESE, DAGMAR | RIEKER, CHRISTIANE



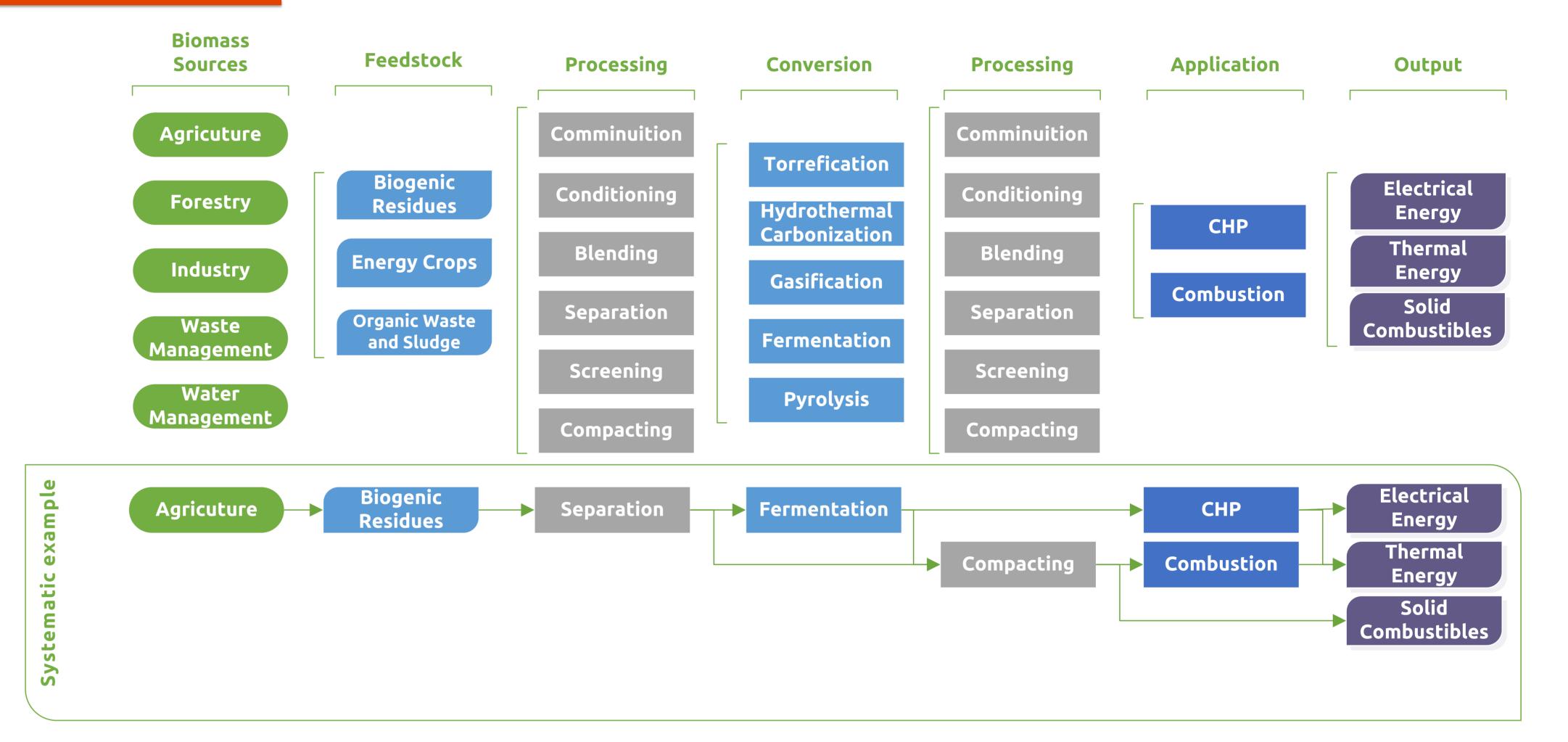
Technology

INTRODUCTION

The mobilisation of currently unused regional biogenic residuals for bioenergy, deemed to be the environmentally most sustainable feedstock. ComProSol primary focus upon qualifying of low-grade substrate such as biogenic residues, waste material and energy crops for further common application. In purpose of the derivation of reliable strategies, the interdisciplinary partners are developing utilization cascades through systematic interconnection of ordinary as far as experimental applications.

OBJECTIVE





STRATEGIES

Methodical corrective measures of ComProSol focus on influencing fuel properties by preconditioning through substrate and additive compound blending, sieving and compacting, and integrating process optimization. Collaboration with other subprojects that deal with bio- or thermal-chemical conversion will provide additional impetus for developing utilization applications.



Feedstock Cadastre

- Regional biomass potential
- Residual and waste material Energy crops from fallow
- land Short rotation coppice



Quality Management

- Auditing of utilizationrelevant characteristics
- Quality determines processing and application for substrate



Process efficiency

- Analyzing of mechanical treatment procedures regarding process effort
- Process optimizing in matters of energy demand and product quality



Blended Compacted Combustibles

 Influencing combustion relevant properties through blending of biomasses and additives



Conditioning of bulk biofuels

- Manipulating undesirable properties
- Optimizing conveying attitude
- Improving conversion characteristics



Demineralization of bladed biomass

- Evaluation of greenfield elutriation and technically emulated ways
- Elimination of slagging and mineral initiated flue gas components

INSTITUTIONAL PARTNERS















Cologne Institute for Renewable Energy Technische Hochschule Köln Betzdorfer Str. 2 50679 Köln

Dennis Gersthahn P +49 221 8275-2411 +49 221 8275-4214 E dennis.gersthahn@th-koeln.de







