

## COMET CENTRE

### BEST – BIOENERGY AND SUSTAINABLE TECHNOLOGIES GMBH

RESEARCH PROGRAMME: [BEST 4.0 – SHAPING THE TRANSITION TO A SUSTAINABLE AND CLIMATE-FRIENDLY BIOECONOMY]

**Main location:** Graz (Styria)

**Other locations:** Vienna (Vienna), Wieselburg (Lower Austria)

**Thematic area:** Energy & environment, digitization / ICT

<https://www.ffg.at/comet/netzwerk>



#### Thematic focuses

- Conversion technologies and process chains for the supply of green gas, green fuels, green carbon and green platform chemicals; residues and waste based biorefineries
- Process analysis and process simulation
- Automation and control of individual processes, plants and systems (incl. superordinate control)
- Planning, optimization and operation of microgrids and regional energy communities
- LCA and LCC of residues- and waste-based value cycles

#### Planned realisation and outcomes

Development of decentral biorefineries; green gas for high temperature applications; green carbon for use in steel industry (reducing agent, foaming, carburization); bioconversion of production residues; demonstration of residues- and waste-based production of syngas (Syngas Platform Vienna); syngas fermentation; FT-products (kerosene, diesel, waxes) and methanol from residues and waste; development of substantially faster simulation tools; digital twins for the optimization and continuous servicing of the operation of thermochemical conversion plants; advanced superordinate control of thermal and thermochemical energy supply plants; development of a holistic, technology neutral platform for planning and optimization of microgrids and regional energy communities

#### History of establishment

BEST is a merger of the preceding **Kplus** centre of competence, Austrian Bioenergy Centre (ABC) founded in 2003, and the **Knet** network of competence RENET Austria (founded in 2000). Since 2008 BEST has been being operated continuously as **COMET K1 Centre**.

## COMET FACTSHEET

### Selected company partners (max. 10):

1. AGRANA Stärke GmbH
2. Aichernig Engineering GmbH
3. FRONIUS INTERNATIONAL GmbH
4. KWB – Kraft und Wärme aus Biomasse GmbH
5. Laakirchen Papier AG
6. Österreichische Vereinigung für das Gas- und Wasserfach (ÖVGW)
7. Primetals Technologies Austria GmbH
8. Syncraft Engineering GmbH
9. voestalpine Stahl Donawitz GmbH
10. Wien Energie GmbH

### Selected scientific partners (max. 5):

1. Vienna University of Technology
2. Graz University of Technology
3. University of Natural Resources and Life Sciences, Vienna
4. Karlsruhe Institute of Technology (Germany)
5. Luleå University of Technology (Sweden)

### Selected international<sup>1</sup> partners (max. 5):

1. BASF SE (Germany)
2. Caphenia GmbH (Germany)
3. Dieffenbacher Energy GmbH (headquarters in Germany)
4. Hansen & Rosenthal GmbH & Co.KG (Germany)
5. Solarbelt FairFuel gGmbH (Germany)

**Duration:** 01.04.2023 - 31.03.2027 (4 years)

**Staff employed at the Centre:** 70 FTE, thereof 60 scientists and technicians

**Management:** DI Dr. Walter Haslinger, Adj. Prof, CEO / CSO  
Ing. Mag. Dr. Roman Schmid, CEO / CFO

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<sup>1</sup> Partners with headquarters outside Austria