

Deutsches Biomasseforschungszentrum

gemeinnützige GmbH



DBFZ Expertise for Climate, Energy and Mobility Solutions in HE CL5 2026

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GREENET Brokerage Event for HE CL5 2026 calls | 14 January 2026

DBFZ in Brief



The DBFZ is a **federal research institute** which focusses on the **integrated energetic and material use of biomass**. Sole shareholder is the **Federal Republic of Germany**, represented by the **Federal Ministry of Agriculture, Food and Regional Identity (BMLEH)**.



applied
research &
development
on biomass



~55
memberships in
(scientific)
advisory boards &
working groups

272
Employees
(as of 31.12.2025)



~120
research projects (per year)

~26 M EUR
financial volume
(in 2025)

~130
industrial cooperation
partners (per year)



Biomass to material cycles & energy systems



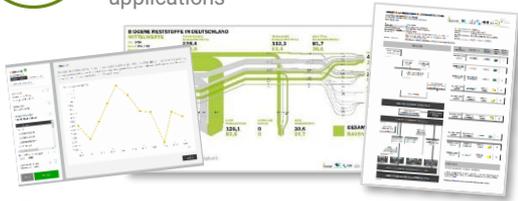
Sustainability assessment

LCA, LCC, SLCA and method development



DBFZ Resource Database

Development of data science applications



Scenario analysis

Bioeconomy strategies and indicators



Regional biomass potentials

Resource monitoring and remote sensing



Knowledge transfer

Stakeholder engagement and science communication

A wide range of services and the use of professional tools complement our research. DBFZ also develops knowledge transfer formats and modern media products to communicate research results, and directly integrates stakeholder perspectives into its R&D activities.



Barcamp stakeholder workshop, DBFZ/ Leipzig



Thermochemical processes

Fuel conditioning lab

UPSCALING

Combustion technical centre



Image sources: © DBFZ, Jan Gutzeit, Jürgen Lösel

Biochemical processes

Biogas lab

UPSCALING

Research biogas plant



Biorefineries process scaling and integration

Hydrothermal processes

0.5-L-reactors as a starting point

unique reaction calorimeter (0.5 L)

multi-batch set-up with reactors ranging from 0.5-2 L

continuous approaches with flow tube reactor

up-scaling in a 10-L autoclave

100-L autoclave for larger product quantities

500-L autoclave with even better stirring

Gasification & synthesis gas processes

Laboratory gasifier (Batch, fuel and process investigation)

Methanation module (Catalytic, pilot scale)

Separation technologies & process design

Process simulation (Aspen plus, Super pro Designer)

Renewable fuels for transport

Hydrogen H_2

Feedstocks: Pyrolysis oil, HTL, Biocrude

Products: Renewable fuels

Hydrotreatment plant

Temperature, Pressure, Time, Type and quantity of catalysts

Complemented by analytics laboratory for feedstocks, intermediates and products

R&D infrastructure and equipment

Pilot plant for renewable methane



Our contribution to following calls



HORIZON-CL5-2026-04-Two-Stage-D3-02: Next generation of renewable energy technologies: *a) Integrated assessment of technologies in terms of sustainability, reliability, robustness, etc., using a Multicriteria Decision Analysis (MCDA) goal tree developed at DBFZ, including multidisciplinary assessment and KPIs. (b) Systems analysis of technologies, portfolios, or value chains using SWOT/TOWS, PESTEL, including regional-level evaluations. (c) Multicriteria analysis with a focus on technologies and economics. (d) Prescreening process validation in the Biorefinery lab and Pilot plant SBG. // e) Hardware-in-the-loop test bench for control and hydraulic concepts in hybrid systems; f) Provision of facilities at DBFZ as pilot (wood chip boiler, dual-gas boiler, heat pump, PV, CHP)*



HORIZON-CL5-2026-11-D3-04: De-risking renewable fuel technologies through transnational pre-commercial procurement of renewable fuel industrial value chains: *Various facilities and pilot plants, as well as expandable modules for the production of advanced liquid biofuels/renewable fuels complemented by techno-economic assessment of value chains.*



HORIZON-CL5-2026-09-D2-01: Producing battery-grade materials for electrodes through sustainable processing and refining of raw materials or developing bio-based materials: *a) Thermochemical production of high purity biochar and bio SiC precursors, b) Comprehensive material characterization, c) Process optimisation and sustainability assessment using energy and mass balances, d) Application oriented integration of engineered biochars and bio SiC in advanced material systems.*



HORIZON-CL5-2026-11-D3-05: Demonstration of solid biofuel supply and conversion to high efficiency large scale CHP from fully sustainable regional value chains: *a) Chemical and energy carrier-specific biomass analyses, processing concepts, b) Analysis of material flows and utilisation paths of biogenic resources; mobilisation strategies for biomass and value chains.*



HORIZON-CL5-2026-09-D4-01: Researching the technical, social & economic factors impacting the energy performance of Smart Buildings: *Assessing barriers and enablers for energy efficiency and providing practical stakeholder guidance.*



HORIZON-CL5-2026-09-D4-03: Advanced data platforms to integrate whole life carbon in building information tools, assessments, and certification: *Sustainability assessment of different energy biomass options; Method development and standardisation in the field of sustainability assessment, e.g. in the fields of Life Cycle Assessment (LCA), Life Cycle Costing (LCC) and Social Level of Sustainability (SLCA).*

HORIZON-CL5-2026-09-D4-08: Full-scale demonstration of heat upgrade solutions in industrial processes: *Theoretical preliminary studies on biogenic and hybrid concepts for industrial process heat supply (reference project MoBioInd: [LINK](#)).*

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