

IEA Bioenergy Agreement 2013-2015 2nd Semi-Annual Task Meeting 2014 November 4th 2014 Karlsruhe

Bioenergy research at KIT

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The Karlsruhe Institute of Technology a unique institution in double mission







Merging of two missions





National Research Center

Three tasks



Research

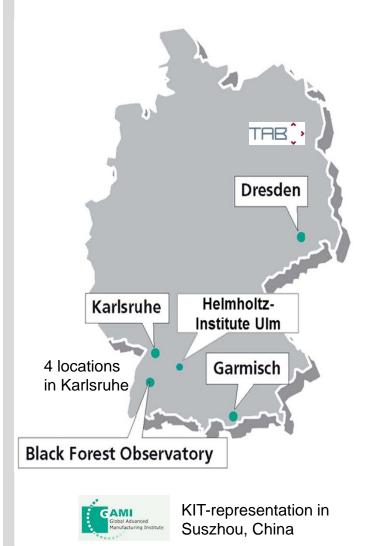


Higher Education Innovation



Facts and Figures of the KIT





Total Budget (incl. 3rd-Party-Funding) 795 Mio. €/ (334)	
Employees	9.500
Energy Researchers	6.000
Doctoral Researchers	3.200
Professors	373
Students	24.500
Disciplinary Areas	5
Institutes	129
KIT Departments	11
Helmholtz-Programs	13
LK II Major Applicanes	3
Technology Transfer	
Invention Disclosure	129
patent applications	52
Spin-offs & Start-Ups	25

KIT offers ideal preconditions for high-qualitywork in our core areas of activity





- Cutting-edge research along the scientific value chain
- Holistic spectrum from fundamental to applied research
- Highly interdisciplinary work in seven KIT-research centers;
 the KIT-Energy Center being the biggest among them



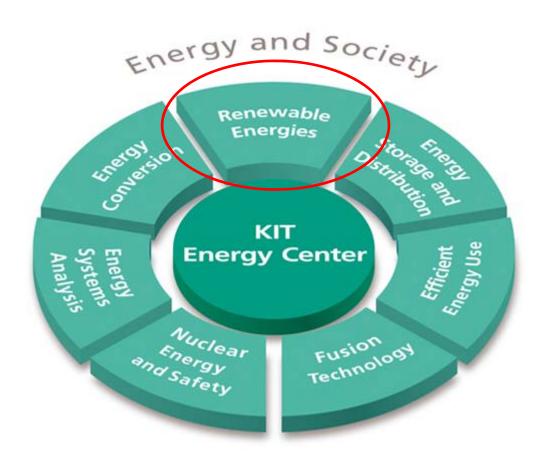
- High-level degrees with several international programs
- Early qualification of students in (large-scale) research labs
- Promotion of doctoral researchers, e.g. Karlsruhe House of Young Scientists



- Management of technology development, prototypes and innovative applications along the value chain
- Several business models for know-how transfer
- Generation of transfer projects in cooperation with partners

Energy Research at KIT





Topic 2: Renewable Energy Technology





- Biomass (BTL)
- Hydrogen from wet biomass
- Geothermal Energy
- Hydropower
- Photovoltaic Systems



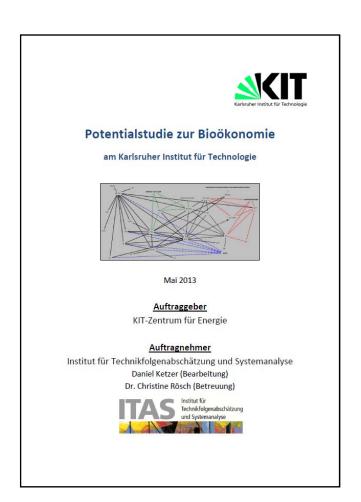


Many activities in Bioeconomy



- Biofuels and chemicals: bioliq
- Oil production from micro algae
- Bio-based chemicals
- Bio-cole from biomass
- Basis technologies
- Analysis of value chains

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Embedded in national strategies



- "National Research Strategy
 BioEconomy 2030" and
 "Political Strategy Bioeconomy"
 of the Federal Government
- Research Strategy
 "Implementing Bioeconomy in the system" of the State
 Government
- **Topic "Bioenergy"** of the Helmholtz-Programm "Renewable Energies"



Integration to large scale facilities: EnergyLab 2.0



- Investigating the interaction of different components of the future energy system
- Large scale research facility on different sites
- Production, storage and distribution of energy
- Bioliq as a central component

