

The Institute of FutureEnergySystems gGmbH (IZES)

IZES is the associated research institute of the Saarland University of Applied Sciences for Engineering and Economy. Founded in 1999, IZES turned into a non-profit organisation (gGmbH) in 2005 with shareholders as the federal state of Saarland, Saarland University of Applied Sciences, University of Saarland and residential energy companies. The chairman of the IZES gGmbH supervisory board is the Minister for Environment, Energy and Traffic Saarland Dr. Simone Peter. In 2009, the interdisciplinary research group of around 40 employed scientists from engineering, natural, economic, law and social sciences achieved a turnover of about 2.7 million Euros. The main research area is represented by applied research activities towards the development and acceleration of renewable energies, decentralised energy production and distribution, energy efficiency and regional material flow and resource management. Thus, the research activities are organised in four research departments: Material Flow Management / Biomass Utilisation, Energy System Technologies, Energy Industry / Future Markets and Accredited Test Centre for Solar Thermal Systems and Photovoltaic.

The main focus of the department Material Flow Management / Biomass Utilisation, scientific director Prof. Baur and represented by Mr. Wern, is attributed to the application and integration of sustainable material flow and energy management systems into existing economical and regional structures. All activities are lead by the zero emission strategy approach where the intersection of sustainable waste and land use management for a sustainable energetic biomass production and utilisation is chosen. This includes a holistic, target-orientated supervision and control of material flows over the entire life time cycle considering in particular ecological, economical and social aspects. The clients/ commissioners are enterprises, municipalities, the German federal state of Saarland, the German federal ministry for the Environment, Nature Conservation and Nuclear Safety, the German federal ministry of Education and Research, the state of Luxemburg and the European Commission. Further information about IZES link www.izes.de.

Assistant leader of the department Material Flow Management / Biomass Utilisation: Dipl. Forstwirt (TU) Bernhard Wern

Mr Wern is born in 1973. He studied science of forestry at the Technical University of Dresden focusing economy, forestry planning and soil science. Presently, he is working as the assistant leader of the department Material Flow Management/ Biomass Utilisation. Before that, he has been working in a bioenergy planning office in Luxemburg and at the Institute for material flow management (IfaS) in Germany. His key qualifications are



- Technical, administrative project management, team management, fundraising and Coordination of R&D projects and collaboration with European Research Institutes
- Biomass potential studies and structuring of biomass flow schemes, conception and realisation of Renewable Energy Systems and Energy Efficiency Master Plans for municipalities, rural districts and public utility and energy supply companies (countries: Germany, Luxemburg, Ghana, Croatia and Serbia)
- Stakeholders consulting on sustainable use of biomass (e.g. development and assessment of wood cascade)
- Ecological integration of waste and biomass management systems in regional social and economic structures including development and modelling of material flow and waste management scenarios (economical and life cycle assessment)

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