Institut für Energie und Kreislaufwirtschaft

Institute Profile

The aim of the Institute is the development of ecologically and economically reasonable technical solutions for the energy and environmental sector, industry and service sector.

The Institute focuses on projects on reuse, recycling and the cycle management of materials.

- Applied research and development for closed cycle management and environmental protection
- Development, accompaniment and implementation of practical experiments
- Life cycle assessment studies and efficiency analysis
- Consultation, analyses, expert reports, project management
- Organisation of seminars and conferences
- Further education

Institut für Energie und Kreislaufwirtschaft
an der Hochschule Bremen GmbH
(Institute for Energy, Recycling and Environmental Protection at Bremen University of Applied Sciences)
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Objective

Public Private Partnership in the field of science: The Institute for Energy, Recycling and Environmental Protection is supported by two partners from industry, (Nehlsen AG, Diersch & Schröder GmbH & Co. KG) and the City University of Applied Sciences of Bremen.
The Institute, founded in 2000, develops ecologically and economically useful solution concepts for concrete questions in recycling technology and environmental protection. It serves as a transfer point between science and industry.

Applied Research and Development

The chief task of the Institute is the development of processes and concepts to enable the recycling and cycle management of substances, the efficient use of raw materials as well as the purification of waters, sludge, solid waste and exhaust air. The Institute creates expert reports and acts as a consultant to companies, associations and public corporations.
The Institute carries out measures for further education and organizes conferences in the field of recycling and environmental protection. Many of the projects were, and are, carried out in cooperation with companies, universities and colleges throughout the Federal Republic of Germany. Contacts exist to partners in both European and non-European countries through international projects.

Linking of Research and Teaching

Science and industry are dependent on each other, in order for creative ideas to be turned into practical solutions. The Institute serves as a bridge between science and industry so that, on the one hand, more knowledge can be gained and made available to others and, on the other hand, the needs and requirements of those who work in the field can be taken into account in research and training. By integrating undergraduate students and students about to take their degrees into application-applied research and development projects, we ensure that they are involved in research at an early stage and thereby support a practice-oriented training

National and international project management

Since its foundation the institute has carried out various national and international projects in Africa, Asia, Oceania and Europe in the areas „Recycling and waste management“, with various partners from science and industry from Vietnam, Cambodia, Thailand, Laos, Papua New Guinea, India, Mauritius, Angola, Sierra Leone, Albania, Greece, Estonia, England und Germany.

Projects (selection)

- "SmartRecycling – AI and robotics for a sustainable circular economy" https://www.smartrecycling-projekt.de

- „RecycleWind 2.0 – self-learning and resilient recycling network for wind turbines"
  https://www.iekrw.de/en/recyclewind-en

- „SHARC – EnEff:Bremerhaven – Smart Harbor-Application Renewable-Integration Concept"
  www.sharc-project.de/en/projekt/

- „KuWert – Vessel-based treatment of plastics for the implementation of value chains in less developed countries and to avoid plastic input into the environment, particularly marine ecosystems"
  www.kuwert.hs-bremen.de/index_en.htm

- „CODWAP – Collaborative curriculum Development on Waste management in Africa and Pacific region"
  https://www.iekrw.de/codwap-en/

- „INVENT – Integrated waste management modules for different courses of graduate Studies" - Innovative education modules and tools for the environmental sector, particularly in integrated waste management, in different courses of study at institutions of higher education, designed to enhance competence in the environmental area and increase utilisation of renewable energy
  https://www.iekrw.de/invent-en/

- „RENEW" - Development of practice oriented guidelines for the preparation of feasibility studies on the production of renewable energy for organic waste and biomass by biogas plants and biomass combustion plants, with an applied example for Phu Quoc/S.R. Vietnam
  https://www.iekrw.de/renew-en/

  „BiWaRE" - Development of an integrated 'decision support system' for the application of renewable energy technologies from organic substrates with applied examples from Vietnam and Thailand - implementation through networked experience of technology and training
  https://www.iekrw.de/biware-en/

- further projects can be found at https://www.iekrw.de/en/