



KIT Energy Center

Energy for Tomorrow

PROJECTS AND INITIATIVES

■ Helmholtz Programs and Initiatives

Energy System Design, Materials and Technologies for the Energy Transition; Nuclear Waste Management, Safety and Radiation Research and Fusion; plus the joint initiative “Energy System 2050” and the Helmholtz Energy Transition Roadmap (HETR).

■ Energy Lab 2.0

Smart platform to analyse the interaction of components of future energy systems, linking producers, storage systems and consumers.

■ Three Kopernikus Projects

ENSURE: developing and testing efficient and viable grid structures combining centralised and decentralised energy supply. The two other projects are Power2X and SynErgie.

■ FPS KA Energie

Karlsruhe Energy Research Partnership, addressing the four main topics of grids, storage systems, mobility and data.

■ Enabling Net Zero (ENZo)

The KIT Graduate School ENZo supports doctoral researchers to discover an interdisciplinary approach to the future energy system.

■ Technology Transfer

Business partners interested in energy technologies are brought together with appropriate cooperation partners at the KIT.

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Research – Education – Innovation

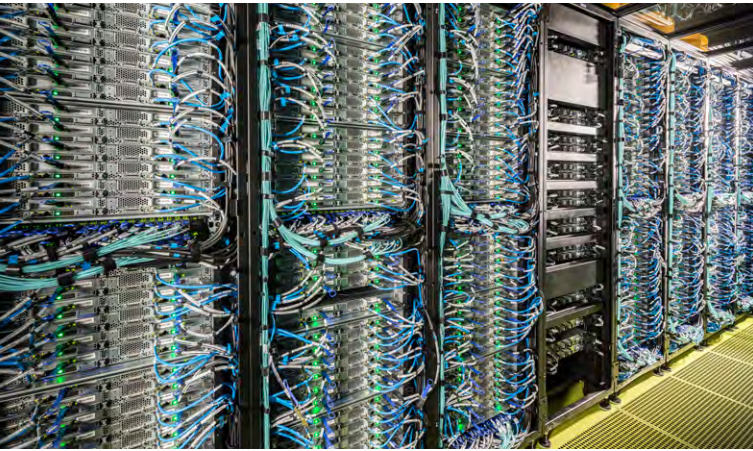


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KIT ENERGY CENTER

Karlsruhe Institute of Technology (KIT) – the research university in the Helmholtz Association – combines research, education and innovation at the highest scientific level.

As one of Europe's largest energy research institutions, the KIT Energy Center pools the energy research activities of KIT as well as renowned cooperation partners and acts as a competent contact to politics, economy and society.



JOINTLY SHAPING THE ENERGY TRANSITION

The KIT Energy Center comprises 60 institutes of KIT. With 1.800 scientists and technical staff and an annual budget of 250 million Euro it follows an interdisciplinary approach to shape the transition towards a sustainable energy system in Germany.

The KIT Energy Center engages in international cooperation and promotes young scientists.

OUR TOPICS

KIT's energy research focuses on the development of an overall concept for the energy mix of the future with competences in engineering, economics, natural and social sciences. The activities are clustered in five topics.

■ Energy Supply

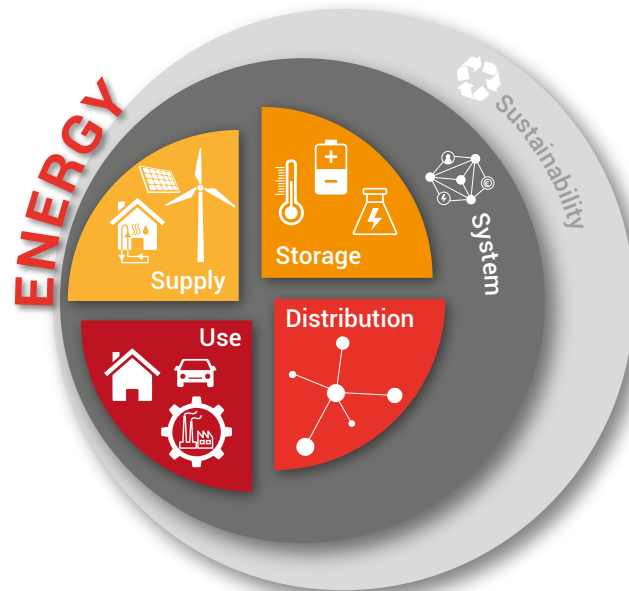
Technologies for all types of conversion of energy resources into end-user energy e. g. Renewable Energy, Combustion, Fusion Technology.

■ Energy Storage

The strongly volatile produced and distributed energy must be stored efficiently. Solutions for energy storage on the basis of batteries, hydrogen and other chemical compounds.

■ Energy Distribution

Innovative technologies for efficient grid structures and components for the distribution of energy.



■ Energy Use

Use of any kind of energy / energy carriers in several transformation steps to provide end-use fuels, electricity or heat for final consumption. Achieving high efficiency is an inherent objective including the provision of final energy services.

■ System & Sustainability

New technologies are evaluated, modeled and simulated, including new smart control and management concepts. The different aspects of sustainability are thereby addressed.