

BUSINESS FIELD

DECENTRALIZED ENERGY MANAGEMENT

THE DIGITALIZATION AND DECENTRALIZATION OF POWER SUPPLY SYSTEMS offer great opportunities for the efficient and flexible use of decentral energy generators and loads. We develop tailor-made energy management solutions to optimize energy production and consumption to enable new business models.

With our software solutions, we help to implement new user-focused approaches going beyond classic energy management concepts for buildings and districts. We focus on integrating new data sources within existing IT systems to improve sector coupling and grid integration.

We support our customers and project partners with automated planning tools to select the optimal decentralized energy system, charging infrastructure and associated energy management systems.

For over 30 years we have been providing our experience and expertise as an applied research and development partner for decentralized energy system solutions.

Concepts and tools for your modern user-oriented energy system

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The Fraunhofer Institute for Energy Economics and Energy System Technology IEE in Kassel researches for the national and international transformation of energy systems.

The Institute emerged from the Energy System Technology branch of Fraunhofer IWES in 2018 and was founded as Institut für Solare Energieversorgungstechnik ISET in Kassel in 1988.

WE ARE YOUR RELIABLE PARTNER FOR THE FOLLOWING QUESTIONS

- Digitization of decentralized energy systems and consumers
- Decentralized energy management in buildings and districts
- Development and design of energy communities, transactive energy platforms and ICT solutions for prosumers
- Electric mobility, charging strategies and business models

WE OFFER

- Business and strategy consulting
- Open source platforms for energy management
- New energy management applications and charge controllers for electric mobility
- Innovative tools for optimizing power-heat storage systems and charging infrastructure
- Reliable demonstrators for energy communities
- Value added services for smart meters



SOLUTIONS FOR USER-ORIENTED ENERGY SYSTEMS

ENERGY CONSULTING AND DIGITALIZATION

- Investment decisions in self-consumption systems and sector coupling
- Monitoring solutions and tools for data-based energy consulting:
 - non-intrusive load monitoring
 - refurbishment measures
- Tools for the optimal design of:
 - decentralized power-heat-storage systems
 - charging infrastructures for households, commercial buildings and industrial buildings

SOCIAL ENERGY MANAGEMENT

- Real-time monitoring and optimization of your own energy consumption
- Personalized feedback on consumption patterns
- Transactive energy platform for enhanced communication with other consumers and energy service providers
- Development and evaluation of energy management applications in buildings
- Tariff and incentive systems for efficient energy consumption



ELECTRIC MOBILITY AND BUSINESS MODELS

- Optimized integration of electromobility in different types of properties
- Development of new charging and energy management algorithms, load and mobility forecasts
- Integration in building control systems and other software systems
- Business models for energy service providers, mobility providers and energy suppliers
- Testing of charge controllers and energy management applications

USER-ORIENTED ENERGY PLATFORMS

- Monitoring and visualization of energy in buildings, districts and communities
- Analytics for smart meter data
- Open source platform for energy management
- Conception, specification and demonstrators of energy management systems
- Concepts for improved grid integration of decentralized energy systems

