



# ENERGY SYSTEM MANAGEMENT AND TECHNOLOGY INTEGRATION | EMT





## PROFILE

Die Arbeitsgruppe Advanced Thermal Management besitzt ein vertieftes Verständnis in den Bereichen der hochgenauen sowie rückführbaren thermischen und infrarot-optischen Modellierung, Charakterisierung und Materialentwicklung. Dies bildet die notwendige Grundlage für ein innovatives und effizientes thermisches Management von Prozessen und Produkten zur Erhöhung von Energie- und Klimateffizienz.

**>> Sustainable energy system solutions  
for municipal and industrial  
transformation<<**

# SERVICES

Modeling and analyzing real systems with complex mechanisms of action in the energy environment

## Core competencies of the working group

- Development of decarbonization and transformation strategies
- Examination and implementation of decentralized energy systems and self-consumption strategies
- Development of sustainable concepts for electrification, heat, and mobility
- Management and evaluation of loads, flexibility, and storage
- Development of innovative services and business models
- Examination of the acceptance and integration of technologies

## Training offerings for companies, associations, and municipalities:

- Electricity, gas, and heat economy
- Electricity markets and prices
- Renewable energy technologies and technological learning
- Renewable energy policies and funding instruments
- Evaluation of energy-related investments (e.g., according to DIN EN 17463 VALERI)



## Interdisciplinary toolbox:

- Energy system modeling and simulations
- Cost-effectiveness and payback calculations
- Market analyses and scenario development
- Stakeholder analyses, surveys, and interviews
- Meta-analyses and literature studies



## ABOUT US

The Center for Applied Energy Research e.V. (CAE) is a non-profit research institute and aims with its research and development activities to transfer ideas into practice in cooperation with commercial enterprises and other research partners and thus to make the greatest possible contribution to a sustainable, CO<sub>2</sub> emission-free and economical energy system. The CAE acts as a bridge between basic research and market-oriented development.

# CENTER FOR APPLIED ENERGY RESEARCH

## Energy System Management and Technology Integration

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