Ostfalia
University of
Applied Sciences

Simulation and definition of optimum operating processes and operating consumption of selected system configurations and development of algorithms

Project management: Prof. Dr.-Ing. Lars Kühl

Summary:

The project aims to develop and test a modular controlling and diagnostic system for the mobile and/or fixed-location analysis, assessment and optimisation of the operating behaviour of energy-supply systems in buildings with a high regenerative share.

Controlling and diagnostic modules are to be developed with technical intelligence, enabling functions and operational processes to be controlled automatically. The basis of the evaluation is formed by the specific operating data collected via the modules for the individual components and the overall system. From this, figures for assessing the energy efficiency and function of the overall system can be derived. The modules to be developed should detect systems and process errors and highlight opportunities for improvement. Applicability should be ensured via system integrated wireless measurement technology, and through options for connection to selected control systems for new and existing energy supply systems. The option to carry out regular functional tests of the system technology also allows it to be used as a mobile test tool for technical monitoring and the quality assurance of plant operation.

The diagnostic system can thus be used to implement periodic function and efficiency tests of system technology in buildings. The inspection of technical equipment in buildings, as required by the German Energy Savings Regulation (EnEV), is thus possible for new and existing heat-supply systems.

Funding:	Federal funding Federal Ministry for Economic Affairs and Energy, ZIM cooperation projects
Duration:	2014 – 2016
Funding amount:	€174,560
Organisational unit:	Faculty of Supply Engineering
Research areas:	Intelligent Systems for Energy and Mobility, Renewable Energies and Resource Efficiency

ZIM
Zentrales Innovationsprogramm Mittelstand

Gefördert durch:
Bundesministerium für Wirtschaft und Energie