



UBIMET



ProKlim

Optimisation of Energy Efficiency of automated indoor climate systems by using weather forecasts

Using current weather information, such as outdoor temperature, to control heating and air conditioning in buildings has become standard procedure in building services engineering. However, only few facilities also use weather forecasts for controlling the indoor climate, even though this can help existing systems optimise their energy efficiency and consequently save energy and reduce CO₂ emissions relatively easily and inexpensively.

Together with the Austrian Institute of Technology, UBIMET analyses the basic energy savings potential for buildings in commercial use by including weather forecasts as a variable. The savings potential will be separated into savings with reference to forecast quality and savings owing to the geographical position. For the investigation, AIT will carry out thermodynamic building simulations for a test building in different regions of Austria. From the results, index numbers will be derived, quantifying the significance of the factors in terms of energy savings potential.

Additionally, the topic of integrating the weather forecasts into the building automation is of interest. In collaboration with ee-consult, UBIMET will research the market potential, consulting suppliers of building automation systems, and define and create the requirements for an universal software interface. The goal of the study is to develop a conclusive integration concept that provides a representation of the complete process chain, from weather service provider to telematic control components.

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