



Potentials to save energy

Analysing and identifying energy saving potentials is an important issue when considering the cost effectiveness of real estate management. This is especially true for companies with a high energy demand. When carrying out effective energy management it is important to use the data to create the optimal transparency and to allocate costs according to consumption.

Connection to building automation

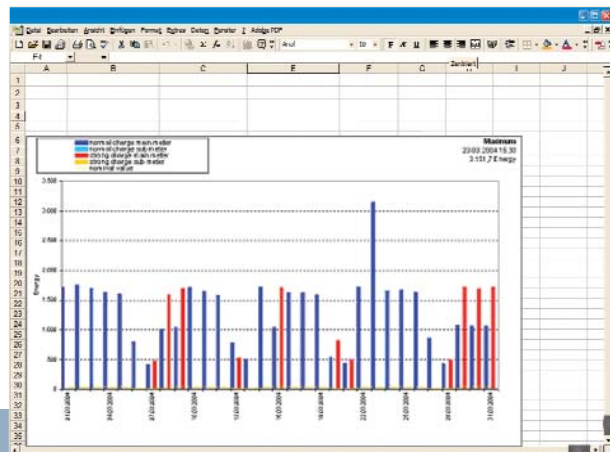
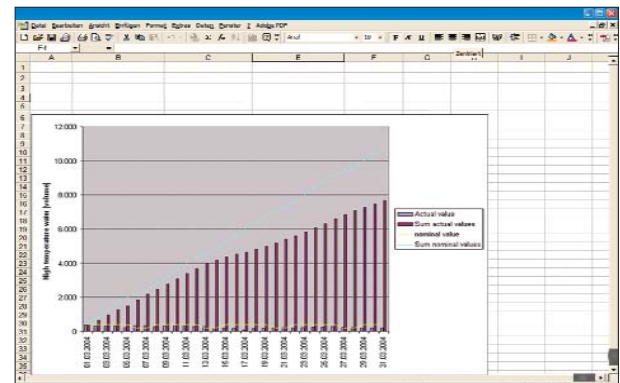
Automatic interfaces to building automation systems are the perfect basis for processing mass data. Values measured by all kinds of meters, including hierarchically structured ones, are read out at defined regular intervals.

The transfer of data and the aggregation of the measured meter values to consumption values are carried out via programme routines. This allows the control of further processes such as postponing maintenance activities by counting the operating hours.

At the same time, the measured consumption can be transferred via these routines to other systems such as the lease management system in order to generate service charge settlements.

Transparent consumption data

On the basis of the meter values, aggregated data such as daily, weekly and monthly consumption, daily, weekly and monthly maximum consumption or 96-hours average consumption are identified and made available for evaluations. Meter replacements are automatically taken into account. In order to be able to benchmark the energy consumption of buildings located in different places, the measured values are adjusted to the respective weather conditions by allocating the buildings to the corresponding weather stations and to the daily temperature figures. The measurements are evaluated via a comprehensive reporting; thus, providing the basis for negotiations with utility companies and for value assessments of a buildings.



Weekend consumption		Project	UR 89		
		Real estate	Business Plaza 04		
		Block	Block 2004		
Weekend consumption					
Date	Building	Counter	Consumption	Nominal value	Deviation
03/06/04	Building 0590 V04	Electric power# counter (1016248)	12191	300	4063.7 %
03/06/04	Building 0590 V04	Electric power# counter (1002118)	8.39	300	-99.8 %
03/06/04	Building 0590 V04	Electric power# counter (1028268)	298	300	-0.7 %
03/06/04	Building 0590 V04	Electric power# counter (1028268)	7979	300	2626.0 %
03/06/04	Building 0590 V04	Direct heat counter discharge (P1 253001715)	200	300	-33.3 %
03/06/04	Building 0590 V04	Direct heat counter (P1 253001715)	29.3	300	-90.3 %
03/06/04	Building 0590 V04	Direct heat counter discharge (P1 253001715)	0	300	-100.0 %
03/06/04	Building 0590 V04	Direct heat counter (P1 253001715)	0	300	-100.0 %
03/06/04	Building 0590 V04	Direct heat counter discharge (P1 2000)	3.94	300	-99.2 %
03/06/04	Building 0590 V04	Direct heat counter (P1 2000)	33.9	300	-88.7 %
03/06/04	Building 0590 V04	Direct heat counter discharge (P1 253001715)	0.6	300	-99.8 %
03/06/04	Building 0590 V04	Direct heat counter (P1 253001715)	0	300	-100.0 %
03/06/04	Building 0590 V04	Cold water meter (P1 481878)	0.7	300	-99.8 %
03/06/04	Building 0590 V04	Cold water meter (P1 481878)	0	300	-100.0 %
03/06/04	Building 0590 V04	Cold water meter (P1 007170)	0.3	300	-99.9 %
03/06/04	Building 0590 V04	Cold water meter (P1 013421)	0	300	-100.0 %
03/06/04	Building 0590 V04	Water meter (P1 013420)	0	300	-100.0 %
03/07/04	Building 0590 V04	Electric power# counter (1002440)	10012.0	300	3337.3 %
03/07/04	Building 0590 V04	Electric power# counter (1002440)	894.62	300	197.7 %
03/07/04	Building 0590 V04	Electric power# counter (1016248)	212.75	300	-29.6 %
03/07/04	Building 0590 V04	Electric power# counter (1028268)	1730261	300	5767.5 %
03/07/04	Building 0590 V04	Direct heat counter discharge (P1 253001715)	200	300	-33.3 %
03/07/04	Building 0590 V04	Direct heat counter (P1 253001715)	27.5	300	-90.8 %
03/07/04	Building 0590 V04	Direct heat counter discharge	0	300	-100.0 %
03/07/04	Building 0590 V04	Direct heat counter (P1 253001715)	0	300	-100.0 %
03/07/04	Building 0590 V04	Direct heat counter discharge (P1 2000)	3.51	300	-98.8 %
03/07/04	Building 0590 V04	Direct heat counter (P1 2000)	32.7	300	-89.1 %
03/07/04	Building 0590 V04	Direct heat counter discharge (P1 253001715)	0.8	300	-99.7 %



Data points

- meters, sensors, status indicators
- capturing and configuring data points for different types of energy
- documenting meter replacements
- defining basic consumptions
- connection to building information

Evaluations

- consumptions measured within any period of time can be evaluated with respect to type of energy, building, data point etc.
- identification of consumption characteristic values for individual objects
- target/actual value comparison
- documentation of consumption during weekends and zero-consumption documentation

Measuring data

- manual capturing and processing of individual measurements
- manual and automatic import of measurement data files
- automatic import of measurements from the database interface to the building automation
- standardised interfaces to building automation systems by Kieback & Partner and Johnson Controls
- automatic import via ASCII Interface
- manual and automatic generation of consumption data
- multi-level aggregation of consumption data for any time interval (daily, monthly, 96-hours average consumption, etc.), manual or automatic aggregation
- normalising consumption data through adjustments (e.g. daily temperature figures)