

The image shows an industrial facility, likely a heating plant or energy center. It features a complex network of yellow pipes running across the ceiling and floor. In the foreground, there are large white and silver cylindrical components, possibly heat exchangers or storage tanks. In the background, there are blue industrial cabinets or control units. The floor is made of light-colored tiles, and the ceiling has various pipes and lighting fixtures.

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Considerable energy savings through remote monitoring

Municipal Housing Society Berlin, Germany

For GEWO BAG (Gemeinnützige Wohnungsbau-Aktiengesellschaft) Berlin with more than 70,000 apartments and houses, efficient energy usage is of prime importance. Thanks to the installation of a new intranet-based building automation and control system by Karl Rückert Gebäudeleittechnik, a Siemens Solution Partner, GEWO BAG saves considerable amounts of energy and minimizes CO₂ emissions.

Desigo™ provides constant monitoring Energy-efficient operation of building systems is possible only if constant monitoring is ensured. Investigations confirm that if heating plants are permanently monitored, energy savings of between 20% and 30% can be achieved. GEWO BAG is fully aware of the energy efficiency efforts required these days and migrated their building systems to the intranet-based Desigo building automation and control system from Siemens. 76 of their premises are presently interlinked, enabling important plant parameters to be constantly monitored – especially the efficiency factor of 76 heating plants.

Karl Rückert Gebäudeleittechnik Karl Rückert Gebäudeleittechnik GmbH was founded in Berlin-Kreuzberg in 1998 and is now a Solution Partner officially authorized by Siemens for operations in Germany. The company offers comprehensive system solutions in the field of building automation and control, covering planning, engineering, commissioning, and the development of energy saving concepts for heating, ventilation, air conditioning, and refrigeration plants.

Answers for infrastructure.



Online monitoring

Together with the Siemens Solution Partner Karl Rückert Gebäudeleittechnik GmbH, Berlin, the building engineers of GEWO BAG developed a remote management concept based on BACnet/IP. Costs are comparable with the previous modem solution, but the new concept provides a permanent online link to the respective premises. The amount of data now delivered is considerably larger than before and the heating controller functions can be directly accessed. The concept is based on a MPLS network (Multi Protocol Label Switching). Operation of the MPLS network is independent of the Internet and satisfies stringent security standards. Using a secure VPN link, password-protected access from any PC is possible. Automatic forwarding of fault status messages in the form of SMS to the respective service engineers allows for quick troubleshooting.

Fast migration with no adverse effect on building users

In contrast to classical energy saving measures, such as additional thermal insulation, replacement of windows and heating boilers, IP-based remote management systems can be installed short-term without disturbing building users. In the case of GEWO BAG, the new remote monitoring system was installed and the 76 central heating plants were migrated and commissioned within just six months.

Less energy – short payback time

Working on average energy savings of 20% and professional efficiency factor monitoring, investments can be recovered within less than 12 months. In addition, the new remote management system offers further energy saving choices. On the basis of the experience gained thus far, fine-tuning of the heating plants can deliver additional energy savings of 4% to 8%. In view of the premises' CO₂ emissions of more than 21,000 tons per year, cuts in emissions of at least 2,000 tons per year are considered realistic.

Highlights

- Significant reduction of energy costs and CO₂ emissions
- Short installation and payback times
- Alarm reporting via the Internet and SMS should faults occur
- Constant monitoring of important plant parameters, especially the boilers' efficiency factor
- Efficient management of a large number of premises via online network

Solution Partner

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The information in this document contains general descriptions of technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

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