

## ENERinTOWN Case Study

### Energy controlling in the city of Salzburg, Austria

#### Client

Municipality of Salzburg

#### Overall objective

On a long-term basis the goal is to reduce energy consumption in municipal buildings by suitable measures like an automatic energy control system to increase comfort for the users and to make a contribution for the environmental at the same time.

#### Object data



120 buildings (schools, administrative buildings, workshops etc.) with 220 measuring objects are selected due to their energy consumption which is about 90 % of the consumption of all public buildings.

A selected building pool consists of:

1 residence, 1 school for handicapped children, 2 kindergartens and 1 fire-brigade. The effective area is about 17,000 m<sup>2</sup>. The energy consumption of these buildings will be optimised by an automatic energy control system.

#### Technology



- Energy monitoring system with automatic measuring, data acquisition, data handling and calculation tool.
- The system consists of the meter, remote controlled data acquisition (15 minutes intervall), modem interface to a data base, the Consumption Control Tool remote, alarm function
- About 1800 meters are installed in 220 objects based on M-Bus technology with 4600 data-points

#### Realisation model

The costs of the energy controlling system amount to about 870.000 Euro and will take 6 years to amortize.

For the building pool an individual ten-year contract was signed where the contractor guarantees a certain annual energy saving rate (45.057 Euro) for the entire pool. With this guaranteed saving all energetic measures and achievements of the contractor are financed. The contractor builds new power-system facilities and provides maintenance and optimal operation of the new equipment.

#### Measures implemented



- Insulation of the top floors
- Optimisation of the heating regulations respectively controls, installation of thermostatic valves, installation of single room regulations, load peak management, separation from automatic control loops
- Sealing of doors and windows, renewal of the boiler facilities and the water heating systems
- Optimisation of the interior lighting, integration into the energy controlling system
- Structure and support of the data base "consumption control"
- Trainina of the personnel and onaoina measures for user motivation

## Results



Energy savings of roughly 300.000 Euro per year are reached by measures to increase the awareness of consumers for the efficient use of energy and other optimisation measures for energy efficiency.

Building pool:	
Investment volume:	183.000 Euro
Entire energy costs:	298.000 Euro
Annual contracting rate:	45.000 Euro (15 %)
CO <sub>2</sub> reduction:	20 %

## Benefits for the clients

- Guaranteed energy saving
- Further warranties such as comfort standard, high quality of the installations, comprehensive service
- No investments by the city
- Professional support of the plants from own economic interest of the contractors
- Comfort improvements for the users by well maintained plants
- The city gets a co-ordinated package from one source
- Contracting as an innovative model

## Assistance provided

Landis & Staefa / Siemens Building Technologies GmbH & Co OHG  
Grazer Energieagentur (Energy Agency of Graz)

## Contact



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