ENERinTOWN Case Study

Energy Monitoring System project for heat supply in Ruhpolding, Germany

Client

Municipality of Ruhpolding

Initial situation

It was planned to supply public buildings like schools, the swimming pool and the ice sports hall and small commercial enterprises with heat from a new biomass heat production plant. To realize this project in an efficient way a computer aided energy management system was implemented.

Object data

The project is subdivided into two supply areas analogous to the two phases of construction. Supply area 1 includes the indoor and open air swimming pool, the ice sports hall, 2 schools, the sports hall and a pizzeria. Supply area 2 includes assembly rooms, the town hall, restaurants, hotels, shops and other commercial enterprises.

Technology

The complete heat supply system is monitored by a computer aided system for energy management with the functions visualization, energy reporting, analysis, controlling and regulation. The heat production plant has 2 biomass boilers, 1 oil boiler for maximum demand and a condensation facility for cleaning the fumes and heat recovery. This facility is cooled by returned water from the indoor swimming pool. The plant is connected with the buildings in the supply areas by heat supply network and house services.

Realisation model

- Planning, financing, construction and operating of a biomass heat production plant including the heat supply network and the energy management system
- Continuous regulation and optimisation of the heat supply system by means of the energy controlling system
- Motivation program for technical staff of important costumers (swimming pools, schools, sports hall)
- Concessions contract for heat supply with a duration of 20 years between municipality and contractor
- Refinancing of the investment and operating costs by the revenues for heat supply (and the contribution by the Free State of Bavaria)

Results

Investment costs: 2.360 millions Euro
financial contribution: 1/3 (by the Free State of Bavaria)
By the substitution of oil and gas with biomass about 2.000 tons of CO_2 and 2.500 kg of SO_2 can be reduced per year.

Assistance provided

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