

BEST PRACTICE IN AUSTRIA – ENERGY EFFICIENT CITIES

BASIC INFORMATION

Title of the Best Practice

Renovation of the heating system and entrance of the primary school Judenburg-Stadt

Location:

Country: Austria

GoogleMaps link:

<https://www.google.at/maps/place/Volksschule+Judenburg-Stadt/@47.16916,14.6569248,19z/data=!4m5!3m4!1s0x4771caf3ae351483:0x560a032cb717ecd6!8m2!3d47.1693032!4d14.6569352>

Partners involved:

Stadtwerke Judenburg AG, Burggasse 15, A-8750 Judenburg, *Web: www.stadtwerke.co.at, role in the action]*

Owner and Operator

Municipality of Judenburg

Mayor Hannes Dolleschall

Hauptplatz 1

8750 Judenburg, Austria

post@judenburg.gv.at

Planner and Architect

Building department of the Municipality of Judenburg

bauamt@judenburg.gv.at

Volksschule Judenburg-Stadt

Dir. Silvia Celin

Herrengasse 20-22

<http://www.vs-judenburg.at/>

Implementation year: 2019

Photo: [Fotocredit: @Uwe Söllradl, City of Judenburg]

Pictures of the building and from the opening ceremony on the 7th of Oct. 2019



SYSTEM CHARACTERISTICS

Brief Description

The Volksschule Stadt consists of a historical school building, the former girls and boys school. This was extended in the 1980's with the addition of a gym-hall, which also resulted in a beautiful assembly hall. The school building was heated with a night storage heating system in the last decades. This was not optimally controllable in terms of comfort, resulting in different temperatures in the classrooms. In 2019, the Stadtwerke Judenburg AG - a 100% subsidiary of the municipality of Judenburg - installed a new heating system with radiators and connected the building to the town's district heating system, which is fed with CO₂-neutral heat from waste heat from the Pöls pulp and paper mill. This is an innovative PPP-model between the town and the ESCO, without high initial investment costs for the town. In addition, the main entrance was moved back to the original entrance on the street side and made barrier-free.

Investment scale

Replacement of the electrical night storage heating by biomass district heating

Replacement of the electrical night storage heating system by a new heating system with radiators and connected to the town's district heating.

Installation of a smart heating control

A smart heating control unit allows for a good adaption of the room temperature to the demand. Smart meters count the energy consumption and deliver detailed data for monitoring and optimization.

Building technology

The redesigned main entrance on the street side was reopened and made barrier-free, giving the historic building a special touch again.

FINANCIAL SOURCES AND FINANCING DETAILS

Economic and Operating Data

Capital expenditure: EUR 263,000 for the new entrance, elevator and barrier-free access. No direct investment in the heating system, this is included in an innovative contracting model.

Return of investment: no data

Electricity savings (MWh/year): 378.000 kWh replaced by CO₂-neutral heat

Or fuel savings (kg or m³ or kWh or GJ): --

Cost savings (EUR/year): n.n.

CO₂-saving of 94 tons per year

The heat is supplied by Stadtwerke Judenburg AG via a heat supply contracting.

This heat supply contract includes also the replacement of the old electric heaters by a central heating system with radiators. Costs for installation of the heat transfer station, pumps, pipes and smart control system were financed by the ESCO Stadtwerke. The municipality pays only the heat which is consumed in the building, and a contracting fee for refinancing the investment.

PROJECT IMPLEMENTATION BENEFITS

The old night storage heaters offered little comfort when heating, they were also difficult to regulate. The new heating system is equipped with a modern smart heating control system and offers the highest comfort. The temperature can be adjusted very well to the demand.

The district heating comes from the pulp and paper factory in Pöls. It is fed with waste heat from biomass and thus very climate friendly and CO₂-neutral.

ADDITIONAL INFORMATION

The replacement of the electric heating by CO₂-neutral district heating from biomass is also a part of the energy and climate strategy of the City of Judenburg. Judenburg is part of the Climate Alliance and the Covenant of Mayors and was also awarded with the European Energy Award in Gold (5e) and the Climate Star Award.