



Galanta's geothermal DH system

Galanta, Slovak Republic - 16 000 inhabitants

District heating systems – Geothermal energy – Retrofitting

The city of Galanta pioneered in the use of renewable energy sources among the countries behind the “Iron Curtain” by developing its own geothermal-based district heating system in the early 1980s. The GEOCOM project (running from 2012 to 2014) paved the way for an increased development of the renewable heat supply in the city.



Project in a Nutshell

Local activities in Galanta focused on actions aimed at increasing the overall efficiency of the existing setup by connecting additional buildings (increasing the total heated floor area) to the geothermal loop and by improving the energy efficiency parameters of those already benefiting from a geothermal heating system. For this reason, three housing units, a kindergarten and a primary school were selected as labs for model retrofitting actions complemented by basic system integration measures.

Three blocks of flats were selected for retrofitting. The retrofitting included the set-up of insulated doors and windows in the common areas; fully renewed rising pipes and the installation and use of thermostats in the apartments.

Impact & Next steps

Within the frame of the project the thermal capacity of the geothermal system was increased by 1239 kW. This investment has triggered the construction of three new municipal housing units (total 101 new apartments) and a few more facilities within the range of the district heating system which are today connected to the loop.

Replicability: Challenges & Success Factors

The current legislative framework does not regulate reinjection, which accounts for the discharge of about 0.5 million m³ of used, still warm and highly mineralised thermal water into the surface waters with unfavourable impacts on the environment. Since the introduction of new policies for a more sustainable management of natural resource was out of the scope of the GEOCOM project, local activities were focused on actions which could increase the overall efficiency of the existing setup: connecting additional estates buildings (increasing the total heated floor area) to the geothermal loop and improving the energy efficiency parameters of those buildings which are already benefiting from the service supply.



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