



Municipal Geothermal Plant

Uniejów, Poland – 3 000 inhabitants

Geothermal – Municipal energy - District heating

In 1978 it was discovered that Uniejów had deposits of geothermal waters. In the 1990s the deposits were carefully examined to check the possibility of using the waters for heating, recreational and therapeutic purposes.

Project in a Nutshell

In 1999 the Voivodeship Fund for Environmental Protection and Water Management in Łódź and the Municipality of Uniejów established a company "Geotermia Uniejów", which one year later started the construction of the heating system using geothermal energy. In 2001 the first consumers were supplied with heat generated by the new plant. Since 2006, thanks to the construction of a peak-demand/supporting boiler house fuelled with wood chips, this is the first Polish geothermal heating plant using only renewable energy sources. The plant in Uniejów uses geothermal waters located approx. 1.9 – 2.0 km below the surface, in the Lower Cretaceous sandstones.



Credits: Janusz Tatarkiewicz

The project was financed through multiple channels. The geothermal heating plant was co-financed by the Voivodeship Fund for Environmental Protection and Water Management in Łódź. The co-financing reached 11.5 million PLN (approx. 2.7 Mio EUR), while the total investment cost came to 17 million PLN (approx. 3.95 Million EUR). The producing well to exploit geothermal waters was rebuilt with the financial support from the National Fund for Environmental Protection granting almost 1 million EUR between 2000 and 2004. Biomass-fired boilers, which replaced oil-fired ones, were co-financed by the Ekofundusz Foundation. The co-financing came to 0.8 million PLN (approx. 0.2 million EUR).

Impact & Next steps

Thanks to the plant, the coal-fired boiler houses were abandoned. The replacement of the oil-fired boilers with the biomass-fired ones enabled a considerable reduction of pollutants and CO₂ (by 81.9%). Air quality was not the only positive effect of this initiative: the municipality now owns a stable and independent district heating system using local energy sources.



Additionally, and the multiple uses of the available geothermal waters led to further investments, which resulted in the creation of new jobs. In the future “Geotermia Uniejów” plans a further expansion of the district heating network, as well as finding new applications for the available geothermal water. The city now has modern leisure and therapeutic facilities to offer to potential customers.

Replicability: Challenges & Success Factors

The success of the project was linked to the clear benefits deriving from it, not only in terms of a positive environmental effect but also in terms of quality of life in the area and of energy security. Also the environmental awareness of the citizens and the tourists interested in the operation of the geothermal heating plant was increased.

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