



Municipal heating plant

Hostětín, Czech Republic - 240 inhabitants

Strategy - technical –mapping RES - buildings – heating & cooling

With the price of natural gas rising, households tend to disconnect from gas-fired municipal plants and return to coal boilers thereby causing increased pollution. The town of Hostětín has decided to go a different way: its city council adopted a strategy based on the use of wooden chips in combination with solar energy. This is contributing to the energy self-sufficiency of the town together with 9 thermo-solar systems on family house rooftops as well as a facade collector installed on the educational centre Veronica (22 m²) and large scale collector on the roof of the local cider house (36 m²).



Credits: Hostetin municipality

Project in a Nutshell

The heating plant required an investment of 36,4 mil CZK (1,44 mil EU). 31% was provided by the Government of the Netherlands (boiler technology) and the State Environmental Fund of the Czech Republic contributed 54% (heat exchange stations, boiler house). The former Czech Energy Agency took care of heat distribution and the citizens contributed to the household connections (respectively 9% and 5%). Heating plant operations (including purchase, fuel transport, transport planning, worker coordination or accounting) were taken care of by the town of Hostětín.

The wood chip boiler was put into operation in 2000 and went under major maintenance in 2010. Nominal boiler output is 732 kW, heating water distribution is 2,8 km long, fuel consumption is 500-600 tonnes of waste wood per year. Around 3500 GJ of heat is produced in the heating season and CO₂ savings are 1 100 tons per year. Since 2010, the electricity needed for the heat plant is produced by the PV plant built right behind it. Annual running of electricity production in PV and electricity consumption in local heating plant largely differ, but on average, the power plant produces about twice the electricity than is consumed by the heating plant.

Impact & Next steps

The benefits of the heating plant in Hostětín consist both in fossil fuel savings and decreasing harmful emissions in the municipality and also in producing the amount of electricity by photovoltaic power plants from Kněžice, which won't be produced in coal power plants. During the heating season, the heating plant produces roughly 3 500 GJ of heat: 1 100 tonnes of CO₂ are saved each year. Additionally, the heating price went down from 490 to 340 CZK/GJ for the citizens of Hostětín (data related to 2009 and 2011).



According to a survey, citizens are mostly satisfied. They feel the new heating system is effective, comfortable and environmentally friendly. Citizens connected to the heating plant have acquired a centralized heating system, which doesn't require an operator, fuel preparation work, etc. Improved air quality has also been identified as a positive as coal is no longer being used. The exemplary functioning of the heating plant also positively affected tourism and the status of the municipality.

Replicability: Challenges & Success Factors

The fact that the infrastructure that was developed is highly visible and citizens were able to witness the operation, influenced other projects. There are several biomass heating plants in close proximity around Hostětín, for example in towns like Štítná nad Vláří, Slavičín and in Brumov-Bylnice.

For further implementation of municipal heating plants, it is necessary that the municipality (operator) solves all the following basic aspects:

- have a long-term idea about how the municipality will develop especially future energy requirements and performance;
- long-term supply of biomass for the heating plant for reasonable prices;
- don not underestimate the importance of communication with citizens concerning the technology and overall project ambitions;
- highlight the benefits in user comfort and improvements to the quality of the environment (the chimneys are not pouring out smoke during heating season, comfort of central heating plant, etc.).

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