

RO : Oradea, Romania



General

Description: The geothermal heat plant was designed to supply the secondary fluid (treated water) with a temperature of 102°C, which can provide 80% of the heat demand for space heating at the design value of -15°C outer temperature, and 100% for house hot water. The peak load for space heating is supplied by two natural gas fired boilers, which increase the supply temperature of the secondary fluid from 102°C to 110°C.

Contact: Transgex

Inhabitants connected	3000 flats, 8000 people	Production of heating and/or cooling	24 GWh/y
Others uses (drinking water, cascade uses...)	In 2012, a 50 kW demonstration ORC power plant was installed to complete the heating plant, being the first operational geothermal electric generation plant in Romania. Space and greenhouse heating, domestic hot water supply, process heat, balneology and swimming pool. During summer, when the heat depleted geothermal water has a constant low temperature, it is partly used for the losia Swimming Pool, the rest being re-injected	Comparison with fossil energies	Since 2005 a geothermal heating plant has been operating in the city's losia district, replacing 115.000 GJ/year of lignite and natural gas, which is used at the existing CHP.

Technical

Installed capacity (MWth)	24,2 MWth	Temperature of the geothermal resource (production - injection)	104°C
Installed geothermal capacity	19 MWth	Operating temperature of the DH	90°C