

CZ, Decin district heating



General

Owner

MVV Energie CZ Co.
(shareholder 96,90%)
Decin municipality
(3,10%)

Operator

TERMO Decin Co.

Region

Decin

Project

Inhabitants connected

4687 households, 4 kindergartens, 2 elementary schools, 5 media centers, 2 zdravotních středisek 2 nursing homes

Design of the DH

pre-isolated tubes DN 350 - 25

Others uses (drinking water, cascade uses...)

treated for drinking water

Production of heating and/or cooling

heating-warming in Heat pump from 55 up to 72°C

Planning of the operation (from pre-studies to full completion)

borehole for a heating plant in 1998, verification of the flow rate, temperature (30°C) and pressure (0,35 MPa)

Dates of beginning and end of construction

Oct 2000/Oct 2002

Administrative permits

Water use permit

Difficulties faced

aggradation of heat pump exchangers, treated water reveals high calcium amount

Comparison with fossil energies

more expensive and complicated operation

Financing

Investment for geothermal well

approx. 530 mil. CZK

Investment for geothermal heating station

Financing (banks, funds, PPP...)

MVV Energie CZ Co. capital, investment loan of 274 mil. CZK provided by HVB Bank Czech Republic and grant of the Kingdom of Denmark in the amount of 30 mil. CZK. State Environmental Fund of the Czech Republic contributed to partially cover the interests on the investment loan.

Investment for DH network and substation
Amount of Subsidies if any

30 mil. CZK

Cost of the MWh sold

607,41 CZK (VAT excluded)

Technical

Installed capacity (MWth)

104

subsurface and surface technical schemes
Temperature of the geothermal resource (production - injection)

subsurface design without channels

Operating Temperature of the DH

110/50°C

Heat Pump if any (power in Mwe and COP)

2 units, each of them:
heating power:3
283 kWt
consumption:.....962
kWe
COP - 3,41

Geothermal flow rate

max. 54l/s

DH Length

18.890

Innovation if any

regular heat pump repairing