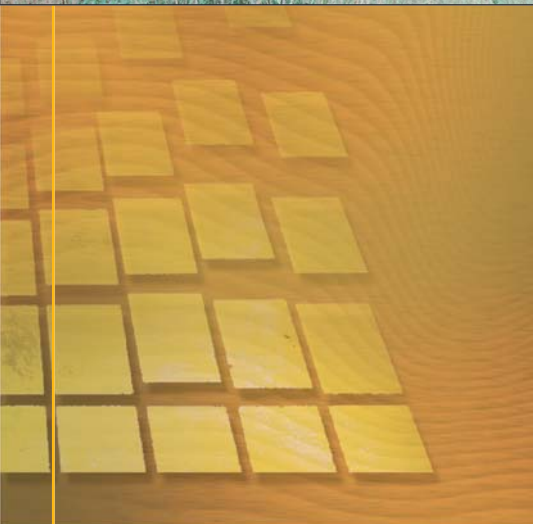
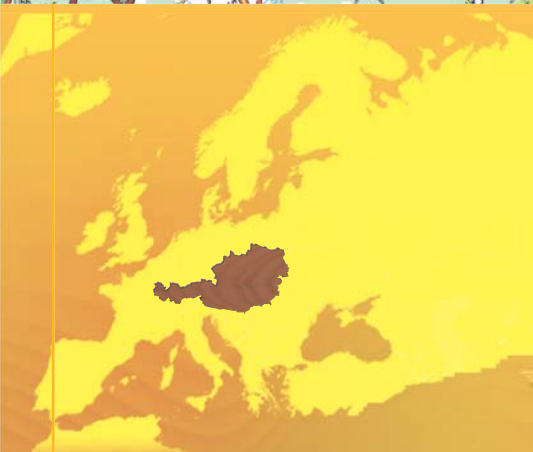




# The european wood energy road ©



## Weiz: The Municipality Bets on Wood

### Foundation of Fernwärme Weiz GmbH

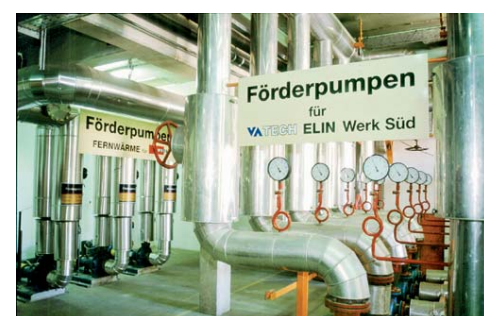
The municipality of Weiz took another big step within its local environmental responsibility in January 2005 by founding the Fernwärme Weiz GmbH (Together with the GWS, Gemeinnützige Wohnungs- und Siedlungsgen. Neunkirchen, Planungs-, Errichtungs- und Serviceges.m.b.H) and by taking over the Weiz district heating network, including the heating plant South. In the year 1995 already, despite an existing gas network, the city initiated a reorientation towards district heating. Weitzer Parkett has supplied the local swimming pool and the federal school centre with district heating since 1985. Waste wood from parquet manufacture was used for energy production

ting fossil fuel boilers were complemented with a 4.8 MW biomass heating plant. Thus local regenerative fuels are also used – 95% of the demand are covered with wood from within a radius of 8 km. At a connection power of 11.000 kW in the district heating network South, 80% of the total energy demand can now be covered with biomass. Furthermore, waste heat from VA TECH is still drawn for the district heating lines in the North. Beside fossil fuel boilers with a total capacity of 26 MW, the plant also possesses a block heat and power plant for natural gas with a nominal capacity of 1.450 kW and which for the time being covers 60% of the native electricity demand. Through a retrofitting of waste gas and coolant heat exchanger, 700 kW<sub>th</sub> at 180° and 1.000 kW<sub>th</sub> at 90° flow temperature could be won, which are fed into both the internal heating network at VA TECH as well as into the district heating network. Due to the consistent environmental policies of the municipality of Weiz, the further extension of the network and an increasing share of biomass is planned. From September 2005, heat will also be drawn from the heating plant of Weitzer Parkett. As of 2006, the waste heat of Weitzer Ökoenergie's biomass cogeneration with ORC process and an output of 800 kW<sub>el</sub>, which is currently under construction, will also be used. The Fernwärme Weiz GmbH is now able to cover approximately 80% of the total connected load also in the northern grid line (more than 9.000 kW<sub>th</sub>) with biomass.

### Information about the Municipality

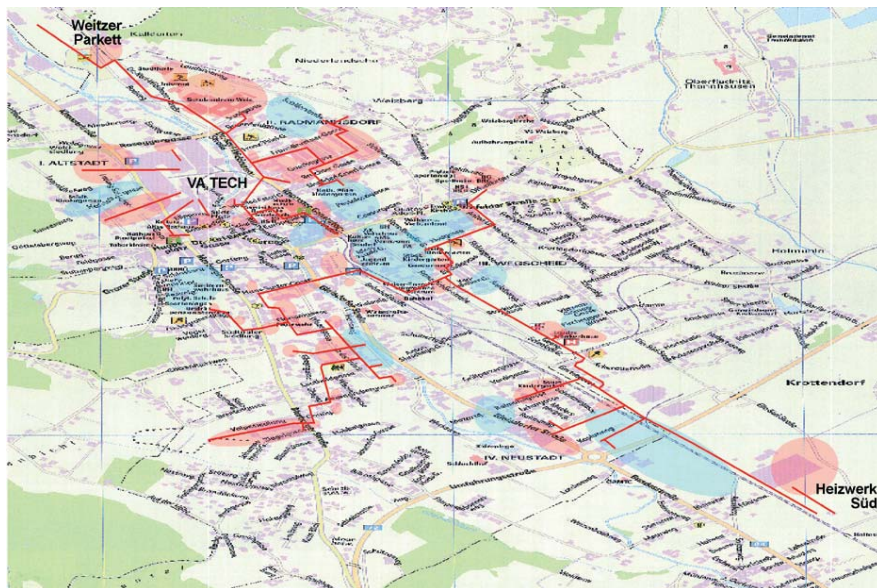
|                         |                     |
|-------------------------|---------------------|
| Altitude:               | 477 m               |
| Number of inhabitants:  | 8.909               |
| Area:                   | 5,7 km <sup>2</sup> |
| District's forest area: | 56.000 ha           |

within three biomass heating boilers with a thermic total output of 9.000 kW. VA TECH Hydro GmbH has also supplied buildings in the close vicinity of the heating plant North with district heating since 1988. In accordance with the municipality's "Ökoplan" ("Ecoplan"), the district heating activities were also rooted in the energy management of VA TECH. From May 1997 the district heating network South was set up in order to supply further properties. 1998 saw further extension and the new hospital of the town of Weiz, and various municipal, residential and industrial buildings were connected. In November 1999 the already exist-





Pipe Laying



MNetwork map

## Fuel Supply

**Network South:** The biomass boiler is heated with 3.000 bulk m<sup>3</sup> forestry wood chips, 16.000 bulk m<sup>3</sup> industrial wood chips (with a water content of 20 to 40%) and 5.000 bulk m<sup>3</sup> bark. The fuels come from three main suppliers, agricultural co-operatives and individual farmers from within a radius of 8 km, who deliver the surplus of their own need.

## Economic and Technical Data

Year of commissioning: 1999  
Purchase Price through take-over by Fernwärme Weiz GmbH: 3.750.000,-Euro

### Network North:

Number of consumers: 60  
Connection power: 9.000 kW  
Network length: 6,5 km  
Heat production: additional purchase from VA TECH & Fa. Weitzer Parkett

### Network South:

Number of consumers: 62  
Connection power: 11.000 kW  
Network length: 8,4 km  
Biomass boiler: Schmid  
Number of boilers: 1 Biomasse 4.800 kW  
3 reserve (fossil fuel 4.000 kW; 2 x 2.500 kW)  
biomass / annual fuel volume:

|                       |                       |
|-----------------------|-----------------------|
| Forestry wood chips   | 3.000 m <sup>3</sup>  |
| Industrial wood chips | 16.000 m <sup>3</sup> |
| Bark                  | 5.000 t               |

Quantity of heat produced: 14.000 MWh  
Size of storage area: Hall 2.300 m<sup>3</sup>  
Price per kWh: 0,495 Cent/kWh  
Index-linked to group IV lighting and heating

## Boiler Plant

**Network South:** The Schmid biomass boilers are complemented by HOVAL reserve boilers and peak load boilers for oil or gas. The biomass boiler covers approximately 80% of the total energy demand. The extraction of the district heating supply is carried out by a heat exchanger.

### VA TECH:

- Gas boiler 1, SGP 16 MW
- Gas boiler 2, Danstoker 16 MW
- CPH Jenbacher 1.450 kW<sub>el</sub>, 1.700 kW<sub>th</sub>

### Weitzer Ökoenergie:

- biomass boiler 1, Mavera 3,5 MW
- biomass boiler 2, Bertsch 3 MW
- biomass boiler 3, Kohlbacher 6 MW
- biomass boiler 4, Kohlbacher 4,5 MW
- ORC Process, Turboden 800 kW<sub>el</sub>

## Information / Contact

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