

THE AIM: CLIMATE NEUTRALITY

Sustainable energy concept in Horb

CLIMATE NEUTRALITY UNTIL 2050

The city of Horb participate in the statewide competition "Climate-neutral municipality". In this context the city has already taken some measures successfully, such as LED lamps at the street lamps, expansion solar and hydropower, as well as district heating system. Hereto the municipal utilities in Horb operate a wood-chip boiler to produce CO₂-neutral heat. The new location of the former barracks Hohenburg offered new possibilities to integrate new sustainable energy production plants.

CONSISTENT CONCEPT

After a Europe wide tender Burkhardt was able to prove itself to the supplier offering the most innovative and most efficient solution in the face of a number of competitors. This also convinced the state ministry and they funded the project. A crucial point was the sustainability that the heat from the wood pellets would be fed into the existing heating system with a length of 5.5 kilometers. The grid supplies buildings at the barracks

area and a housing are nearby. The highlight: the plant simultaneously produce electricity, which can be fed into the grid. The Burkhardt CHP makes this possible. Furthermore, the system is sustainable because of the two Burkhardt wood gasifier. They generate wood gas for the CHP from wood pellets. By doing this, 400 kW of electrical energy and 580 of thermal energy can be produced. This roughly corresponds to the energy consumption of 600 households and the heat consumption of 300 households. For the operation the plant needs one truck with fuel per week. For compensating load peaks and because of fluctuating demand a 3 million liter buffer storage was installed in autumn 2015. Its heat capacity amounts to 3,500 kWh.

BE ON THE HOME STRECH

With the installation of the both plants in 2015 every year 2,050 tons of CO₂ could be saved. The city of Horb has moved a decisive step closer to achieving its aim "Climate-neutral municipality Horb 2050".



One of two wood gas CHPs



The wood gas is produced in the gas reactor.



The two filler necks outside of the building

FACTS AND FIGURES

Location: Former barracks Hohenberg, Horb (Baden-Württemberg)

Information operator: Stadtwerke Horb with sustainable local heating concept

Information Burkhardt plants:

2x Burkhardt wood gasifier V 3.90

2x Burkhardt CHP ECO 180HG

total power:

400 kWel and 550 kWth

Comissioning:

2015