

Biogas plant supplies residential area



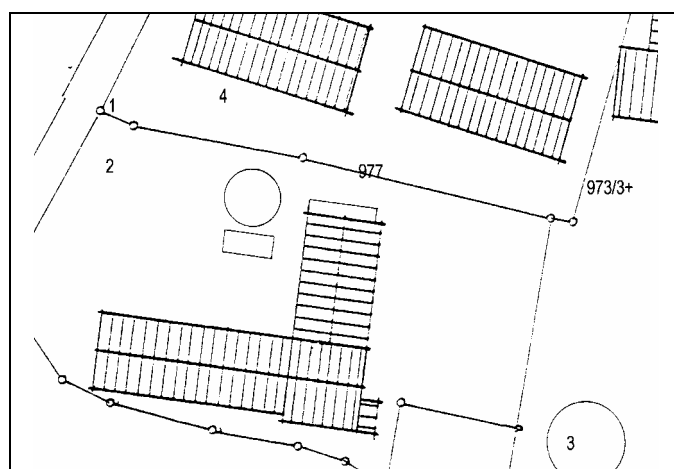
SV-Energieerzeugung GmbH, Taufkirchen



In Taufkirchen near Munich the energy supply on the basis of renewable resources was established for a residential area of 28 owner-occupied flats and two business units. The owner, Mr. Josef Wagnmüller founded an energy supply company, which bought and runs the plant. Mr. Wagnmüller is besides a farmer also member of a distillery cooperative. He uses the proportionate of the lactic acid for the energy supply of the biogas plant. To run the biogas plant all the year – the lactic acid is only during the distillery campaign from September until April at the disposal and to increase the yield of the power generation, manure from the neighbour's farm is added.

To ensure the maximum heat performance in the winter months a wooden chips heating is installed. Also the wooden chips come from the own forests. The boiler is equipped with a multi-component burner, in which excessive biogas can be combusted. With the possibility of an additional natural gas socket of the boiler unit and the power station, the safety of the supply can be maintained if the renewable part falls out.

Because of the use of a two-step high-quality fermenter, the closed and compact structure of the plant and the bio-filter, odour emissions are avoided and the plant can be established directly beside a residential area.



### Technical data

planned substrates:

|                                   |                             |
|-----------------------------------|-----------------------------|
| potato lactic acid                | ca. 1.000 m <sup>3</sup> /a |
| cattle manure                     | ca. 4.000 m <sup>3</sup> /a |
| grass pruning and vegetable rests | ca. 200 t/a                 |
| fermenter volume:                 | 314 m <sup>3</sup>          |

biogas yield:

|  |                               |
|--|-------------------------------|
|  | up to 450 m <sup>3</sup> /d   |
|  | ca. 146.000 m <sup>3</sup> /a |

methane content in biogas > 68 %  
hydrogen sulphide (H<sub>2</sub>S): < 600 ppm

installed power station: 1 x 15 kW<sub>el</sub>

from the biogas generatable electric power: ca. 120.000 kWh<sub>el</sub>/a

from the biogas generatable heat energy ca. 200.000 kWh<sub>th</sub>/a

The installed power station performance is first of all arranged for the current requirements of the residential area. A second power station with 40 kW<sub>el</sub> is planned. More than the half of the biogas is directly burned in the hot water boiler and contribute to the living-rooms – especially in the transition time. Wooden chips and grain is dried with not used heat.



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