

The bio-energy supply of Mauenheim

A pilot project for rural areas

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1. Introduction

- Mauenheim, near Tuttlingen, has 430 habitants living in 100 households.
- Construction of a biogas plant in the year 2006 by the KCH GmbH. Run by renewable resources.
- The biogas plant produces in combined heat and power (CHP) 3,8 millions kWh electricity and 3,5 millions kWh rejected heat.

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1. Introduction

- The produced amount equals the eightfold need of electricity of Mauenheim.
- With the aid of the civil corporation solarcomplex AG a district heat supply system was built. Using the rejected heat of the biogas plant to heat the local buildings.
- By an additional wood-chip heat production the total heat demand is covered through biomass.

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2. Project objectives

- climate protection in rural areas.
Target: Saving of 2800 t CO₂ each year!
- the complete energy supply (heat and electricity) of the village by biomass origin.
- assigning the energy concept to other municipalities.

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3. Technical facts

- connection of 66 households at the district heat supply system.
- Length of the district heat supply system two times 4000 m.



- Heat production
 - Biogas block-unit heating power plant 460 KW
 - Woodchip boiler 900 KW.

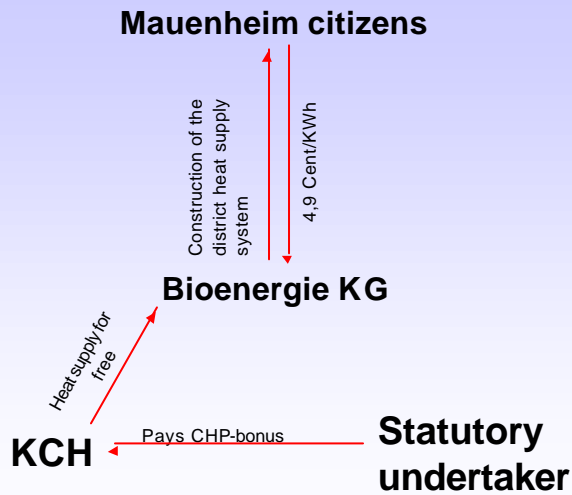
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3. Economic facts

- total investment 3.100.000 Euro.
- Energy price for heat 4,9 Ct/KWh
contract period 20 years
inflationary adjustment 2,5%.
- minimum purchase 15.000 KWh/a
building cost subsidy 3000 Euro.

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3. Economic facts



Pipe trench in Mauenheim



Heat transmission station with buffer vessel.



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4. Request to guarantee communal implementation

- Openness of community and mayor for the innovative project.

Communal assistance:

- fair franchise agreement to provide financing.
- consent for construction.

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5. Advantages for the environment

- 70 % less CO₂ – emissions:
→ due to renewable resources and CHP
- 70 % less mineral fertiliser,
and less input of pesticides, fungicides and
herbicides in agriculture.

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6. Advantages for citizens

- low heating costs for citizens
and industry.
- independence of oil and gas price fluctuations.
- secure employment in
agriculture and forestry.

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7. Advantages for the region

Regional added value through:

- high investments.
- more business for regional contractors.
- granting of loans by regional banks.

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Thank you for your attention!

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