





Aerial photograph from arabern plant

## Territory vision

Actually the first 32 public transport buses are taken in operation with upgraded biogas (green certificates), an other 13 buses follow from mid 2007. Until early 2010, a total of approx. 70 gas-powered buses should be in operation. The final goal is the replacement of all 100 diesel buses currently in operation.

On top, a program will be initiated to promote the utilisation of private light duty gas vehicles and taxis. The actions will include education of car workshop collaborators and sales managers. Subsidies will be given for the additional cost of a NGV and for the support of the installation of pumping stations. Five pumping stations are already in operation (actually on natural gas). Two more are planned in Berne and some additional ones in the seven regions where EWB provides gas until 2008.

The gas produced by the WWTP is not enough to operate the 70 buses available in 2010. It is planned to increase gas production with two measures: In a first step kitchen and restaurant waste will be fed to the digester of the WWTP. In a second step an additional digester for source separated waste might be built.

In the nineties a first approach to introduce selective collection of source separated waste has failed due to poor separation quality in the inner city. It will be a challenge to re-introduce the collection system to operate a special digester.



## Contribution to the Biogasmax project

### THE OBJECTIVES OF THE BERNE SITE WITHIN THE PROJECT ARE:

- Increase of biogas production and upgrading for use as transport fuel in 70, later 100 city buses, plus taxis and private NGVs,
- Monitoring and evaluation of the performance of the upgrading unit, drawing conclusions on the energy efficiency of the system and the reliability of operation,
- Monitoring of the city buses on gas consumption, maintenance, reliability and their respective costs,
- Emission control of the engines,
- A system like green certificates or labels shall ensure the sale and marketing of green gas,
- A report on the possibilities of making use of the biogas potential in the participating sites and an overview of the security of supply on national and European level.

### THE PARTNERS INVOLVED IN BIOGASMAX PROJECT ARE:

- Energie Wasser Bern (EWB) which locally coordinates the project, is responsible for the technical survey and operates the filling stations. EWB collaborates with other local companies and sets up education and communication campaigns,
- ARABERN monitors the production and upgrading of biogas,
- BERNMOBIL, the public transport operator, manages the gas-powered bus fleet, evaluates the energy efficiency and controls the emissions,
- Nova Energie contributes to the project management on the national and european level and provides technical consultancy.