



Surizénergie – Philippeville (Belgium)

Surizénergie is the name of the biogas plant built in 2006 in Surice a small village near Philippeville in Belgium. This pilot project was conceived by the non profit-making association of the village “La Surizée” which wanted to find out solutions to the energy wasting by using local resources. The biogas project was a good solution. But residents were reluctant the biogas plant in their neighbourhood fearing odours, noise annoyance and did not endorsed the project. Today, this pilot project is well understood and permit to associate farmers, local citizen and the Surizée association for an environmental project of renewable energy production.

The biogas plant is made of a depot silo for solid substrate, a storage tank for liquid substrate, a digester and a storage tank. In total, 3 farms collaborate in this project by supply the digester with their substrates. The by-products of food industry are not accepted to avoid any contaminations. The heat produced by the system is using for the heating of 16 housings. The major part of electricity production is sent to feed the grid.



Mr Burniaux:

“This technology used at our pilot unit level matches our expectations. For the future, we hope to increase the production by two from the end of 2009 and to reach a flow of 200 kW/h. This should heat 30 accommodations in the neighbourhood and a school building. Since 2007, we are also experimenting different biomass crops in comparison with maize as energy crop.”

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key data

Start of Operation	2006
Type of corporation (Ltd. Etc).....	non profit-making association
Type of feedstock	Liquid and solid manure (cow), energy crops (maize, sugar beet,...), grass
Amount of gas produced.....	422 455 m3 per year
Investment costs.....	848 000 €

production data

Input liquid manure (cow).....	500 tons per year
Solid manure	1800 tons per year
silage maize, sugar beet	1800 tons per year
wastes from food- industry	none
Grass.....	10 tons per year
Type of feedstock supply.....	Effluents from 3 farms in total
Available area for the output of the biogas fertilizer	120 ha (3 farms in total)
Thermal power rating of the gas engine.....	138 kW
Generated thermal energy	1 060 000 kWh per year
Utilisation of heat.....	Heating of 7 houses and 9 flats Digester
Electrical power rating of the gas engine	104 kW
Generated electrical energy	792 000 kWh per year
Annual power consumption (electricity) of the plant itself.....	40 000 kWh per year
Annual delivery of electricity to the (national) electric grid company.....	707 000 kWh per year
Name of the (national) electric grid company.....	Lampiris
Feed in tariff received [in €/kWh].....	0.029-0.058 € per kWh

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Plant technical description

Digester.....	1500 m³
Post digester.....	-
Gas storage tank.....	260 m³
Digested manure storage tank.....	1500 m³
Residence time in the digester.....	40-50 days
Temperature of the anaerobic digestion (operational temperature).....	35-38° C
Period of operation per year	7680 hours per year

Financing

Equity capital.....	13 000€ (2%)
Government grant.....	835 000 euros (98%)
	shared between
	Europe Union and the
	Walloon region

Involved Companies

LEE planning office (Luxembourg), TMC s.a. (Belgium), Bio-dynamics s.a. (Belgium), Rehau (Belgium), CIS Dofny (Belgium), Sanelec (Belgium), Vicabois (Belgium)

For further Information, please visit [the plant's webpage](#) or contact:

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