



Biogas plant „Ljubljana – KOTO” Ljubljana, Zalog - Slovenia Stock company

The location for the erection of biogas plant in Ljubljana, precisely in Zalog, was chosen because of disposable 1000m² building plot close to the KOTO factory, because of the possibility for optimal use of the existing pre-treatment equipment as well as staff's experiences and expertise with waste handling. One of the facts is the presence of available biological waste on the market and need for new ABP C3 treatment plant for electric energy which could not be supplied from electricity net in short period.

The capacity of the Ljubljana biogas plant is 8000 tons per year. The biogas plant was started up in September 2007. Cogeneration unit was purchased in 2006. Biological waste such as organic kitchen waste, flotation sludge and fat from fat traps are treated. The produced biogas is burned on the generator set with power 526 ekW, which is adjusted for natural gas and biogas, from which green electricity and heat are produced. The heat is used for heating of reactors, for steam production needed in other processes and for heating of the offices in cold periods. Electric bioenergy is used for own needs of processes in factory and the rest is distributed to the net. The plant is in full operation since June 2008 and is above to become classified producer of electric energy.

Liquid fertiliser is cleaned as waste water. In the future one part of liquid organic fertiliser produced will be used on nearby fields.



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Biogas Regions Shining Example



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Lea Lavrič (operator)

“The company KOTO has been present in the field of collection, treatment and marketing of animal by-products for many decades. With the erection of biogas plant we made up for the deficiency of company activities and contributed an environmental high efficiency technology for the treatment of organic waste which assured us the supply of renewable electric energy. The period since the first idea all through the time of biogas plant erection to the start up has been very interesting and inspiring.”

key data

Start of Operation	2007
Type of corporation.....	Stock company
Amount of gas produced	4500 m³ per day
Investment costs	2 760 000 €

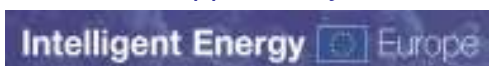
feedstock

Liquid manure (cattle).....	1000 tons per year
Biowaste (source sorted biological waste).....	1000 tons per year
Biowaste (organic kitchen waste).....	5000 tons per year
Wastes from slaughterhouse industry.....	500 tons per year

production data

Available area for the output of the biogas fertilizer	0 ha
Thermal power rating of the gas engine	584 kW
Generated thermal energy.....	2 800 000 kWh per year

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Utilisation of heat	district heating
	Steam production
Electric power rating of the gas engine	526 kW
Generated electric energy	n.a.
Power consumption (electricity) of the plant itself	260 000 kWh per year
Annual delivery of electricity to the (regional) electric grid company	n.a.

technical plant description

Digester	2 x 500 m³
Second digester	500 m³
Gas storage tank	Storage in digester
Residence time in the digester	18 days
Temperature of the anaerobic digestion (operational)	53 - 55 °C



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