

Best-Practise-projects for bioenergy utilisation in urban environments



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Project name : Rillieux-la-Pape
Location : Rhône-Alpes
Bioenergy technology concerned : biogas

Executive summary :

The Lyon Urban District Council opened up a new way by deciding to put into service the first collective boiler in France supplied with discharged biogas.

Case description

Background :

The Lyon Urban District Council operates on the Rillieux district, a subsurface containment of solid wastes (CET). This system generated biogas through degradation of organic matters before producing energy from biogas.

Description :

The technico-economic situation which seemed the better to make the most of the 250 m³/hour of biogas produced by the CET consisted in fuelling the existing boiler of a 170 social housing complex of OPAC de l'Ain situated at 700 metres of the CET on the next district of Sathonay Camp.

Technical data (capacity, output, etc.) :

On the subsurface containment of solid waste, development of a system necessary to the preparation and also to the drying of biogas before its transport.

Biogas transport through a buried pipe on a distance of 700 metres.

Replacement of one of the two boilers of 1MW capacity each by a system allowing to produce energy from biogas as a back up to a natural gas operation

The yearly thermal needs of the whole boiler are a 2200 MWh capacity (at the boiler output).

The boiler replacement by a system aimed to produce energy from biogas allowed to cover 85% of needs from biogas and 15% of need from natural gas.

We can obtain a 1900 MWh capacity from biogas and a 300 MWh capacity from natural gas.

This new equipment allowed to fulfill 60-80% of energy needs of all the dwellings this means the equivalent of 2000 MWh of natural gas per year.

Financial data (investment, subsidies, etc.) :

The global investment amounts to 280.000€ tax excluded. This operation was subsidized up to 70% because of its exemplary and innovative aspect.

Which main problems had to be overcome?

Legal factors : The legal mounting/set up/organization of the operation was rather complex because of the multiplicity of players put together: from CET, belonging to Lyon Urban District Council in the Rhône district to the boiler, belonging to l'OPAC de l'Ain. Furthermore,

regulations about energy production from biogas in France are not very clear and precise, which has not facilitated the legal mounting.

Socio-economic factors:

Economic:

Others:

Information flow (which information needed, sources, difficulties, etc.)

The project had to overcome/make do with the lack of legal information available on the production of heat energy from discharged biogas.

Lessons learned :

The energy production from discharged biogas in social housing is a pilot experience in France. Such operation benefited from financing because of its exemplary and innovative aspect.

Contracting authority:

Energy producer: Lyon Urban District Council

Contact: Mr. Hodoul

Energy consumer: OPAC de l'Ain

Contact: Mr. Laffont

Pictures:

