

Genergia Pinerolo

Biogas CHP for district heating

Main CHP project indicators

Heat capacity (total)	MW _{th}	3
Electrical capacity (total)	MW _{el}	3,150
Technology	Motor engine	
No. of units	3	
Manufacturer	Caterpillar	
Type of Fuel	Biogas	
Heat: yearly generation	GWh	16,7
Electricity: yearly generation	PJ	32.400
Year of construction	2004	
Total investment costs	EUR	2,7 mio
Financing	Own funds	
State support	Green Certificates White certificates	
Location	Pinerolo (Turin) Italy	
Information	epiantoni@genergia.it	

General description of the case

The CHP plant uses biogas coming from three different sources: landfill connected to the plant by a 3 km biogas pipeline, anaerobic digestion of organic fraction of solid urban waste and wastewater treatment plant.

The useful heat is used for the anaerobic digestion plant and for the district heating of the city of Pinerolo.

The 50.000 t/y digestion plant can produce about 7.000 t/y of compost.

Success factors

The key success factor was the use of the cogenerated thermal energy for industrial and district heating.

The population is motivated to accurately separate municipal waste and provide high quality organic fraction because of the benefits of district heating and compost production they get in return.

The new plant needed for the waste management in the area was therefore highly supported by the population (no NIMBY opposition).

Main barriers

Bureaucracy in the authorisation process.

Conclusions

The project has proven the following:

- the technical and economical feasibility of an integrated plant from waste management to CHP returning benefits to population;
- the effective cooperation between an industrial user and an ESCO (energy service company).

The project has been awarded by “Bioenergy Best Practices” prize.

Picture

