



# REDEVELOPMENT PROJECT OF THE DISUSED INDUSTRIAL FACTORY “SNIA - VISCOSA” IN RIETI

The proposed solution focuses on the conversion of an industrial site formerly used for the viscose production into a multifunctional platform for the community utility, such as electricity production from renewables and other social themes.

Therefore, some recovery systems are designed:

1. An anaerobic digestion section for organic waste resulting from separated collection;
2. A mechanical treatment section for RDF production, metals and plastics recovery;
3. An aerobic stabilization section for underscreen organic waste produced by mechanical sorting section.

Then, the following systems are designed to abide by the environmental policies and particularly renewable energy:

- Photovoltaic power plant;
- Thermodynamic solar power plant;
- Small wind turbines power plant;
- Small hydroelectric power plant;
- Co-generator using biogas produced in the anaerobic digestion section;
- Gasification plant using the RDF to produce heat and electricity.

This site is very close to the town, so it is very interesting to provide a heat transfer system, using an appropriate heat transfer fluid. So advantages for the city are achieved. Lastly, an educational center will be implemented to cooperate with university departments to develop the explained environmental themes. This could help young people to remain in their territory, making the site to become an excellent place for the development of future skilled professionals.

## DESIGN DATA

### Private client

M.P.S. Leasing & Factoring  
S.p.A.

### Task assigned and carried out

Preliminary design and technical-economic feasibility study

**Cost** 50.000.000,00 €

**Location** Rieti

**Coord. UTM (Zone 33 T)** 323,318

E – 4,697,917 N

**Site area** 170.000 m<sup>2</sup>

**Design period** 2013

## TECHNICAL DATA

### Refuse Derived Fuel (RDF)

**production plant:** 15.000 – 18.000 t/year

**Aerobic biostabilization plant:** 16.000 t/year

**Anaerobic digestion plant:** 1 MW

**Dynamic thermal solar plant:** 30 kW

**Photovoltaic plant:** 1.5 MW

**Gasification plant:** 4 MW

### PLASTIC RECYCLING PLANT

**Total producible energy:** 42 GWh/year

