



Integrated system for the production of electricity through the exploitation of landfill biogas

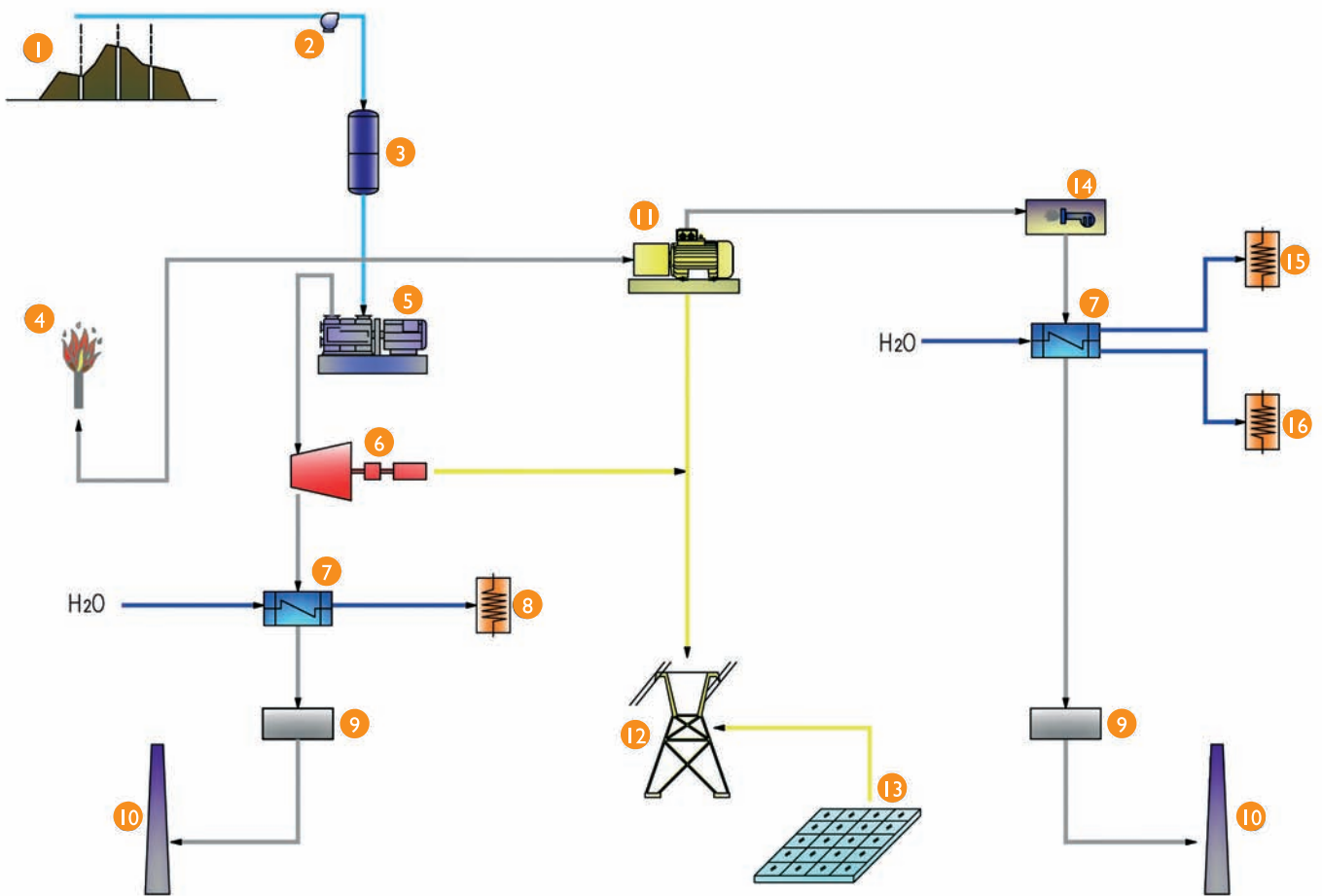
Giugliano in Campania, Italy

The plant is designed for recovering energy from the biogas created in the landfills of Masseria del Pozzo and Schiavi in the municipality of Giugliano in Campania.

The landfills, for a total volume of 6,000,000 m³, are property of the Municipalities of the NAI Basin, who assigned the energy recovery to Ges.En.SpA. TM.E. built the plant for Ges.En SpA and managed it for the first three years.

Electricity is generated from four gas engines, one gas turbine and photovoltaic modules, for a total power above 7MW.





Legend

- ① Landfill and collecting pits
- ② Biogas extractor fan
- ③ Gas treatment system
- ④ Emergency combustion system
- ⑤ Screw compression system
- ⑥ Gas turbine
- ⑦ Recovery boiler
- ⑧ Thermal facilities
- ⑨ Flue gas analysis
- ⑩ Stack
- ⑪ Gas engine and electric generator
- ⑫ Electric power transferred to the National Electricity Board (ENEL) network
- ⑬ Photovoltaic modules
- ⑭ Thermal reactor
- ⑮ Leachate treatment plant
- ⑯ Air-conditioning unit

Main data of the plant

Number of gas collecting pits	220
Gas extraction capacity	6.000 Nm ³ /h
Number of HT emergency torches	3
Gas engines	4 x 1.064 kW
Gas turbine	3 MW
Photovoltaic modules	81 kWp
Leachate treatment	3 m ³ /h



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