



# MULTIFUNCTIONAL **WASTE TO ENERGY** PLANT - MAZZARRA' SANT'ANDREA

The project arises from the demand to recover the Organic Fraction of the Municipal Solid Waste (OFMSW) resulting from source separated collection. A combination of innovative technologies is set to maximize biomethane production. It involves the construction and operation of a multi-combined platform with two major sections for the treatment and processing of non-hazardous MSW collected within the Messina Province. The platform is expected to receive:

- OFMSU resulting from separate waste collection;
- Green waste from pruning of parks and gardens;
- Undifferentiated MSW and/or undifferentiated (residual) MSW from separated collection.

The implementation of the project consists of:

1. Recovery of the existing facilities and its integration with the new ones enabling:
  - A section designated to treat undifferentiated MSW which includes the stabilization of the organic content, material recovery such as metals and plastics, the production of Refuse-Derived Fuel (RDF) and biogas.
  - A section designated to treat Organic Fraction of the Municipal Solid Waste (OFMSW) resulting from source separated collection which will produce high quality compost and biogas;
  - A section designated for the upgrading of biogas produced after anaerobic digestion. The outcome, biomethane, should be fed into the national grid. The green energy recovered from the abovementioned sections will substantially benefit decarbonisation and the economy.
2. The reactivation of the unused old landfill leachate treatment plant, integrating existing structures and equipment's with new required facilities. Both the leachate and wastewater produced from the MSW treatment industrial platform will be treated.

## DESIGN DATA

**Client** Asja Ambiente Italia S.p.A  
**Type of service** Detailed design  
**Project cost** € 44,252,200.25  
**Location** Zuppa' - Mazzarra' Sant'Andrea (ME)  
**Total site surface** 73.000 m<sup>2</sup>  
**Design period** 202

## TECHNICAL DATA

**Compost production**  
14.000 t/year  
**Biostabilized organic fraction**  
29.000 t/year  
**Secondary solid fuel**  
49.200 t/year

## OFMSW SECTION

**Capacity** 60.000 t/year  
**Biogas production** 1.200 Sm<sup>3</sup>/h  
**Biomethane production** 710 Sm<sup>3</sup>/h  
**Exhaust air treatment capacity**  
300.000 m<sup>3</sup>/h

## MSW SECTION

**Capacity** 100.000 t/year  
**Biogas production** 510 Sm<sup>3</sup>/h  
**Biomethane production** 245 Sm<sup>3</sup>/h  
**Exhaust air treatment section**  
100.000 m<sup>3</sup>/h  
**Recovered materials:**  
 2.000 t/anno ferrous metal  
 1.300 t/anno non-ferrous metal  
 6.500 t/anno plastic  
 6.900 t/anno chlorinated plastic

