

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

Private client Asja Ambiente Italia S.p.A
Type of service Definitive design
Project cost € 44.252.200,29
Location Zuppa' - Mazzarra' Sant'Andrea (ME)
Total site surface 73.000 m²
Design period 2020

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 Sm³/h
Biomethane production 710 Sm³/h
Exhaust air treatment capacity
300.000 m³/h

MSW SECTION

Capacity 100.000 t/year
Biogas production 510 Sm³/h
Biomethane production 245 Sm³/h
Exhaust air treatment section
100.000 m³/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

