New integrated installations for the management of Municipal Solid Waste
At Pentakomo Community Council, Region of Limassol, Cyprus

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Cyprus Waste Management General Info

Area: 5896 km² *
Population: 0.865 million
Density: 146 inhabitants/km²
GDP: 20,700 per capita in € **
Amount of MSW (2011): 658 kg/capita

Waste management

- Waste generated: 660 kg/capita
- Waste collected: 521.2 kg/capita
  - Waste recycling: 19.78%
  - Waste energy recovery: 0%
- Waste to landfill: 80.22%
Waste generation and recycling

**Fig 2:** Recycling of MSW in Cyprus
Source: EUROSTAT, 2012. Calculated as % of generated MSW
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Land filling

Waste Dump Sites Location in Cyprus (indicated in red triangles)
THE NATIONAL STRATEGY FORESEES FOR 4 INTEGRATED WASTE MANAGEMENT PLANS

KOSHI

PAFOS

NICOSIA

LIMASSOL
2013: international open tender for the construction and operation of an integrated solid waste management facility (IWMF)

KEY REQUIREMENTS

140000 TONS MSW / YEAR  
UP TO 20000 TONS RECYCLABLESSORTED AT SOURCE

PRODUCE SRF  
COMPOST GREEN WASTE  
90% DIVERSION FROM LANDFILL
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RESOURCE RECOVERY STREAMS

- Secondary fuel mixture of SRF - RDF
- Compost (provision)
- Ferrous Metals
- Non-ferrous metals
- Plastics
- Paper
- Glass
Organic Waste Management - a new approach

- At the heart of the process is the separation of dry and wet streams through the use of a patented high power press.
- With the application of high pressure, organic material is liquified and is pressed out from the waste in the form of slurry.
- The remainder is a dry waste fraction with a high calorific value.
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Waste system for treatment of municipal solid waste (MSW) based on the OREX press technology
ORGANIC FRACTION

• The cell structure of the ‘pressed’ material is broken and opened up for digestion
• the material is extruded through a mesh so it contains no large items;
• Total solids 30-35%
• Easy to transport
MSW Gross Calorific Value – dry fraction
Waste management performance

Diversion from landfill and recycling: Expected 7% to landfill

Energy recovery: biogas yield >180m³/h; CH₄ approximately 60%.
extrusion efficiency of digestible organics approximately 95%.

RDF: Gross calorific value >14,200 kJ/kg

Waste Water: 110 m³ / day