

A large pile of waste, including plastic bags and debris, is shown in the background. A green banner with white text is overlaid on the image.

# TRASH 2 CASH





# Municipal waste- Energy Blessing, Not a problem!



Everybody turns their money to  
garbage-  
We turn our garbage to  
real money

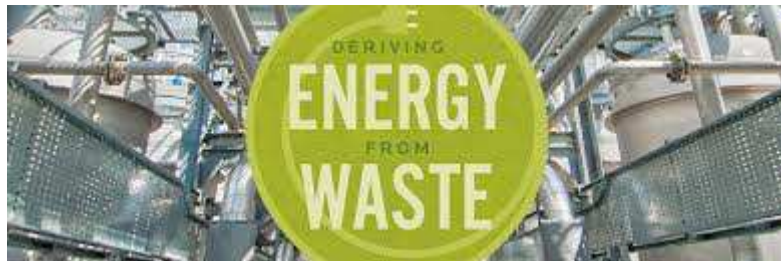
Today we'll turn the stink into a good odor and we will talk about :



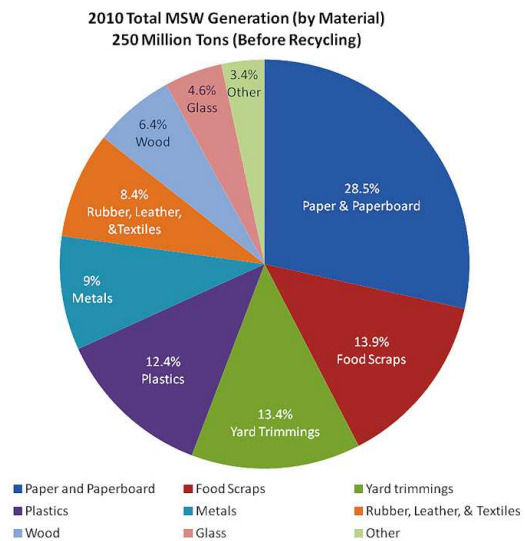
- The present situation in handling Municipal Solid Waste (MSW).
- Vision: Sophisticated automatic Garbage separation systems with W2E technics- **zero** home segregation and **zero** landfill
- Business concept - financial independence – fast ROI
- Support from the government and the EU
- Who are we?

# Current waste management

- Huge amounts of stinky & unhealthy garbage
- Huge municipal expense on handling and controlling
- The environmental disaster of land filling
- Europe is spending millions on organic waste separation.









**Automatic  
waste  
segregation  
150 tons  
per day**



Click for video



Automatic segregation machine



Plastic is energy blessing !



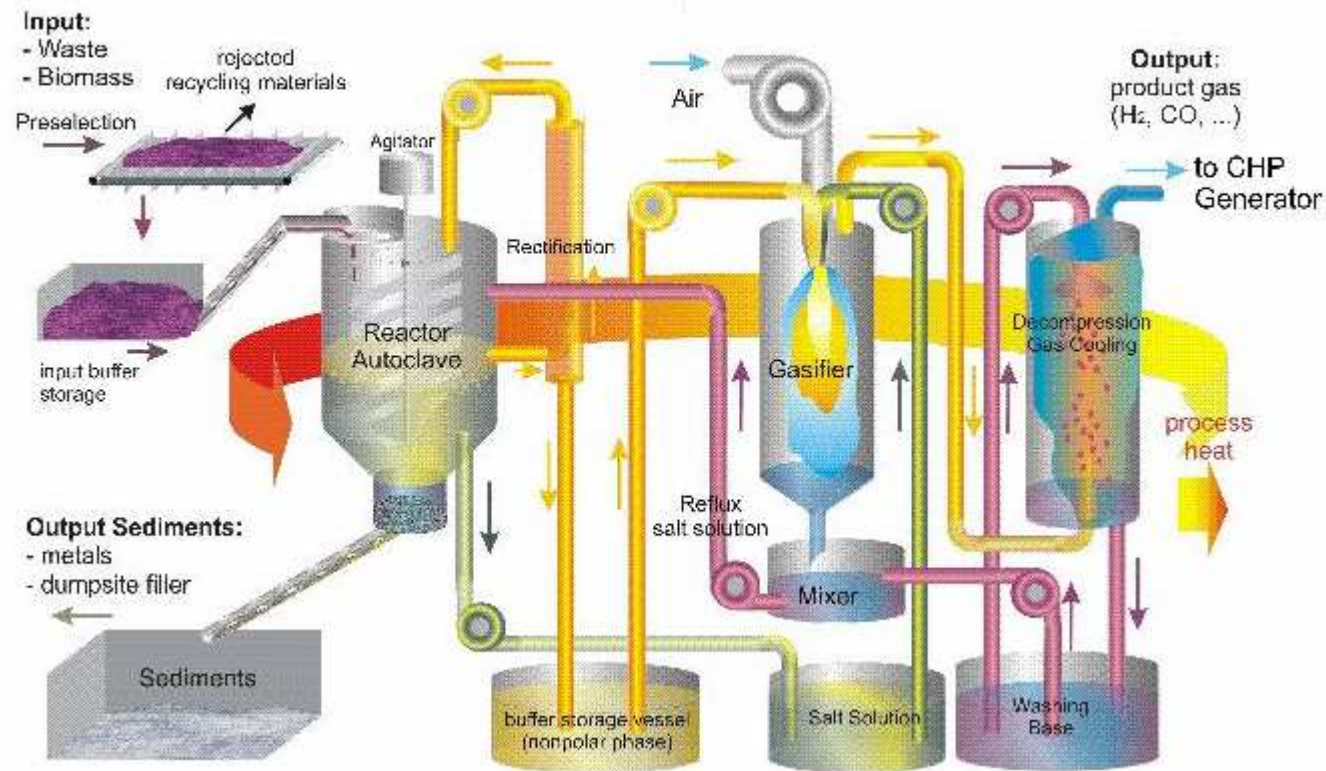
# The Plastic Carbon turns into pure **ENERGY !**



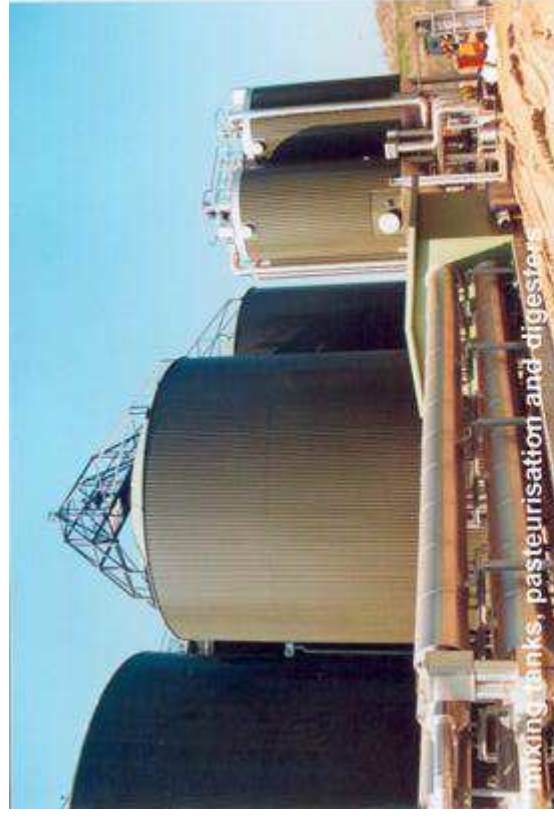
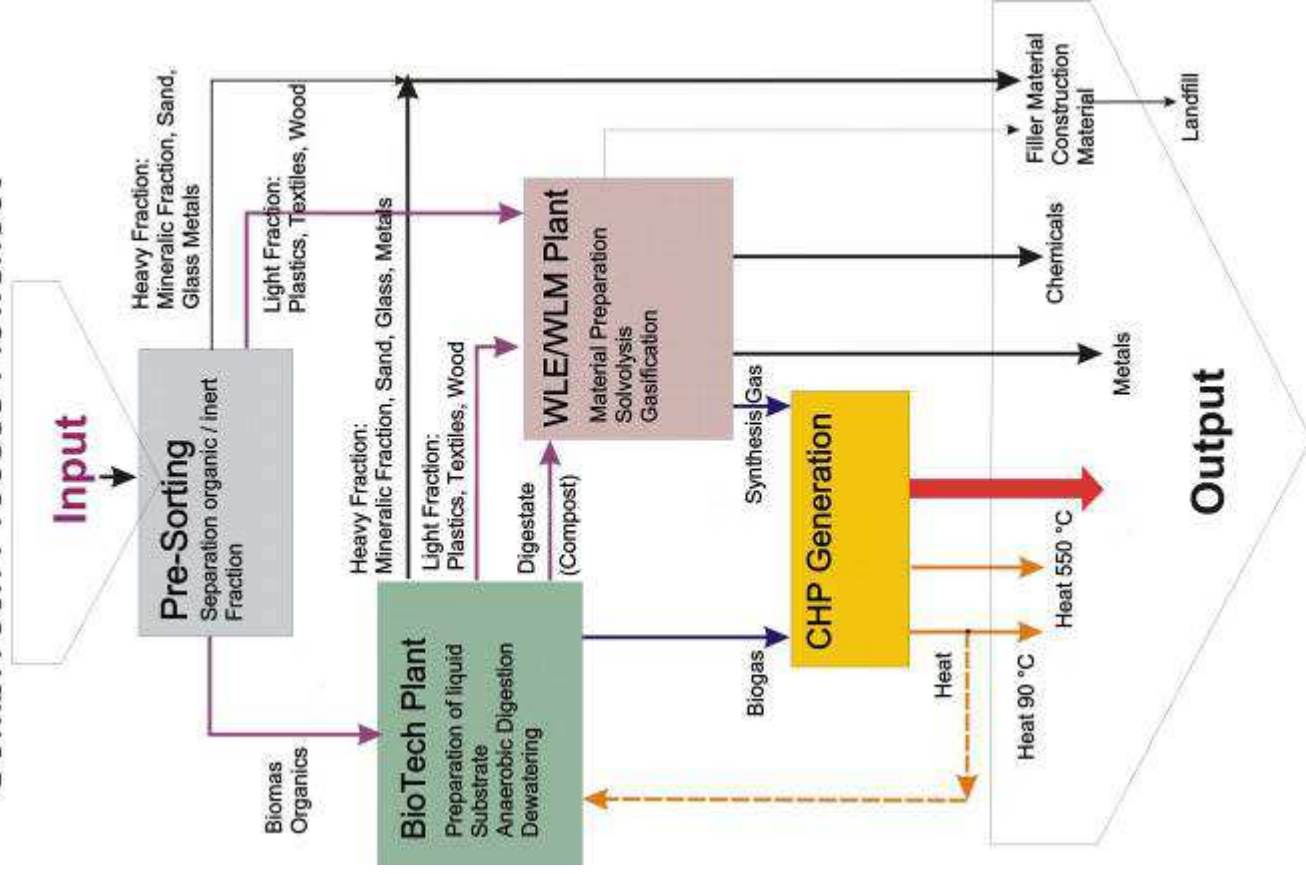


# The new process

Equipment List (Flowsheet) SeaNergy Technology .



# CombiTech Process Flowsheet



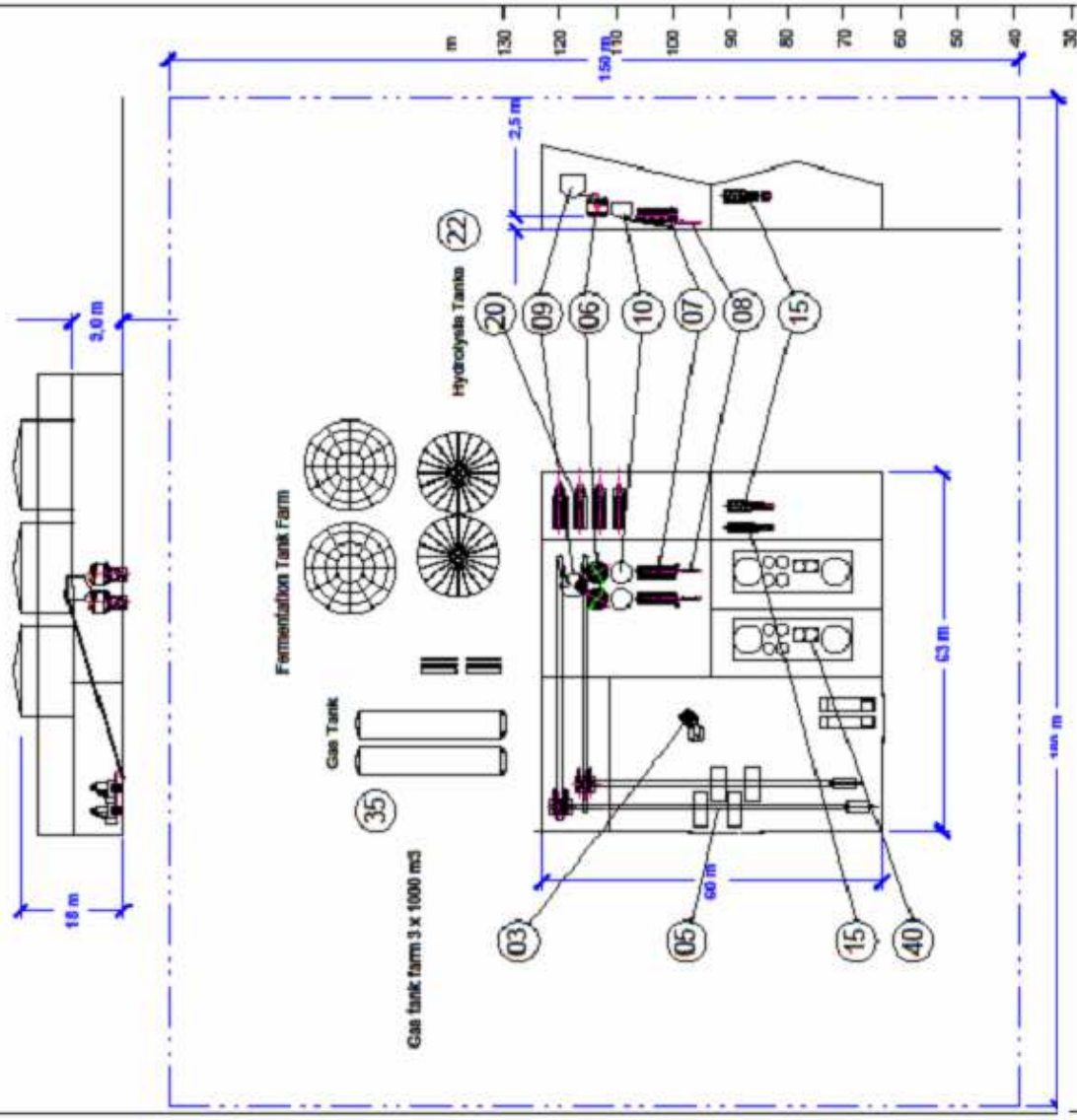


## This is how the new hybrid W2E looks in reality (Germany)

Home Waste entry point



Electricity  
generator



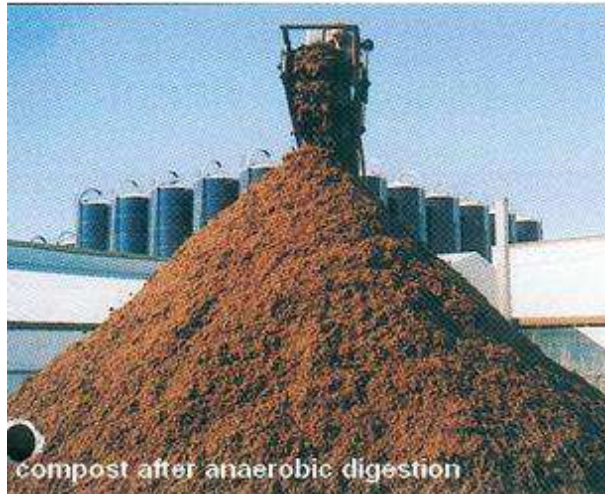
ground size needed for 150,000 Tones/Year 150X 180 SM

- |                                   |                                     |                  |
|-----------------------------------|-------------------------------------|------------------|
| 1 Waste delivery area             | 6 Turbodissolver                    | 15 Decanter      |
| 2 Pre-crusher 100 mm/bag splitter | 7 Light particles dewatering screen | 20 CHP generator |
| 4 Sorting conveyor                | 8 Press worm separator              | 40 WLE Module    |
| 5 Fine shredder 25 mm             | 9 Intermediate storage tank         |                  |
|                                   | 10 Slurry receiving tank            |                  |



# Final output products:

Finest worlds compost quality



Electricity



Raw material for the paper industry



Precious  
Metals and  
Environmental  
raw materials



## Zero landfill !!!

Do Not Touch - it is hot !

Even pruned shrubs vegetation produces a lot of energy ....





## 5 Project Data

### 5.1 Capacity and Waste Program

The plant will treat the following sort of waste:

mixed, unsegregated  
municipal solid waste (MSW)

waste type: capacity  
t/year t/day

Waste A 150.000

capacity  
t/day

500

total

150.000

500

### 5.2 Assumed Waste Composition

The following waste composition (in weight-%) has been assumed and all calculations are based on it:

assumed waste composition:

organic fraction  
paper/cardboard  
plastics  
glass  
metals  
rubber, rags, leather, diapers

stones and others

waste quantities wet:

organic fraction  
paper/cardboard  
plastics  
glass  
metals  
rubber, rags, leather, diapers

### 5.5 Operating Conditions

The working time has been assumed as follows:

working time days/year 300  
waste feeding to the plant hours/day 8  
waste processing hours/day 24  
waste fermentation hours/day 24  
treatment after fermentation hours/day 24

## 6 Energy and Mass Balance

### 6.1 Generation of biogas, electricity and thermal energy (AD)

organic fraction dry matter (DM) t/year 20.000  
specific generation of biogas m<sup>3</sup>/t DM 330  
total biogas generated from MSW m<sup>3</sup>/year 6.600.000

Electric energy:

calorific value of biogas kWh/m<sup>3</sup> 6,3  
process conversion efficiency % 83,0  
biogas energy generated kWh/year 34.511.400  
conversion into electricity % 40,0  
equivalent electric energy kWh/year 13.805.000  
electric energy consumed by the plant kWh/year 3.207.040  
surplus for sale kWh/year 10.597.960

required electric generator capacity kW 1.700

Thermal energy:

biogas energy generated kWh/year 34.511.400  
equivalent electric energy kWh/year 13.805.000  
remaining thermal energy kWh/year 20.706.400  
thermal energy consumed by the plant kWh/year 3.336.000  
thermal losses in the plant kWh/year 1.240.000  
surplus for sale kWh/year 16.130.400

This thermal energy has not been valued for this study. It may be used however for cooling and air conditioning

# City business model advantages:

- Strategic client - can not ever stop producing waste....
- Huge savings of Municipal spending for handling, transporting and land filling
- Eliminating the need for source separation
- Green - Green - Green
- Zero landfill
- Recycling municipal waste- the most “sustainability” existing