WASTE OVER

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¿Is it...

...possible?

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SPAIN ITALY
PORTUGAL FRANCE
BULGARIA GERMANY

Waste as a Renewable Energy Source

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2. THE PROBLEMATICS OF WASTE.

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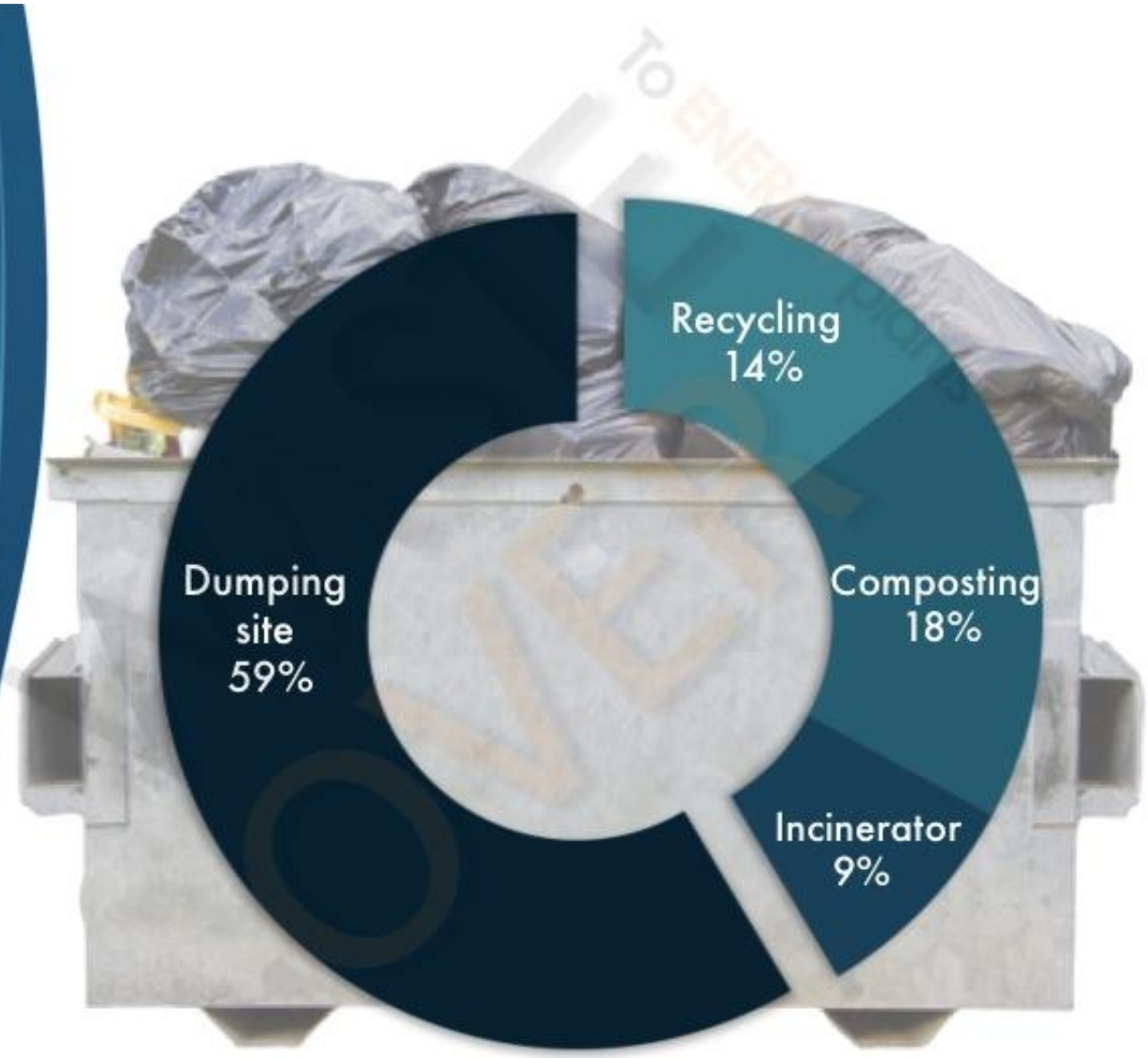

LANDFILLS

1. Creation of Infection sources, places prone to developing insect and disease-carrying rodents.
2. Unpleasant odours caused by decomposing organic matter.
3. Underground and surface water contamination(leachates).
4. Air contamination by spontaneous combustions.
5. Landscape destruction and socio-economic degradation of environment.

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INCINERATORS

1. Waste into toxic ash transformation.
2. CO2 and dioxin emissions.
3. Among the gases emitted have been detected toxic metals like lead, mercury and cadmium, and so dangerous products such as dioxins (substances that accumulate in fatty tissues and are highly carcinogenic).

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COMPOSTING PLANT

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1. It is a good system for compost generation with the use of organic fraction of garbage or remains of pruning, etc
2. Slow and uneconomical process
3. Admission of certain waste only.

RECYCLING

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1. Waste volume rejected and sent to landfill exceeds 60% the garbage entry.
2. Significant level of odours emissions and gases into the atmosphere.
3. The Biogas generation system employed has been rejected for years in other countries

DISPOSAL

LANDFILLS

INCINERATORS

60%

RECOVERY

COMPOSTING PLANTS

RECYCLING

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Energy

Energy

Recovered Material

Recycled Material

Pollution

+ CO_2 & Dioxins & heavy metals emissions
+ Landscap & environment contamination.
+ Odours emissions.

Pollution

+ Only specific waste is treated
+ Minimum capacity to recover and recycle.


DISPOSAL
RECOVERY
WASTE
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LANDFILLS
INCINERATORS
ecoparc
Energy
Energy
Recovered Material
Recycled Material
Pollution
Pollution
+ CO_2 & Dioxins & heavy metals emissions
+ Landscap & environment contamination.
+ Odours emissions.
+ Only specific waste is treated
+ Minimum capacity to recover and recycle.


DISPOSAL
RECOVERY
WASTE
OVER
LANDFILLS
INCINERATORS
ecopare
INEFFICIENT
SOLUTIONS
Energy
Energy
Recovered
Material
Recycled
Material
Pollution
Pollution
+ CO_2 & Dioxins & heavy metals emissions
+ Landscap & environment contamination.
+ Odours emissions.
+ Only specific waste is treated
+ Minimum capacity to recover and recycle.

WASTE OVER

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Energy

Recovered Material

Recycled Material

+ NO CO_2 emissions
+ 100 % waste recovering and treatment.
+ ENVIRONMETAL CARE GUARANTEED.

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3. PROCESS DESCRIPTION

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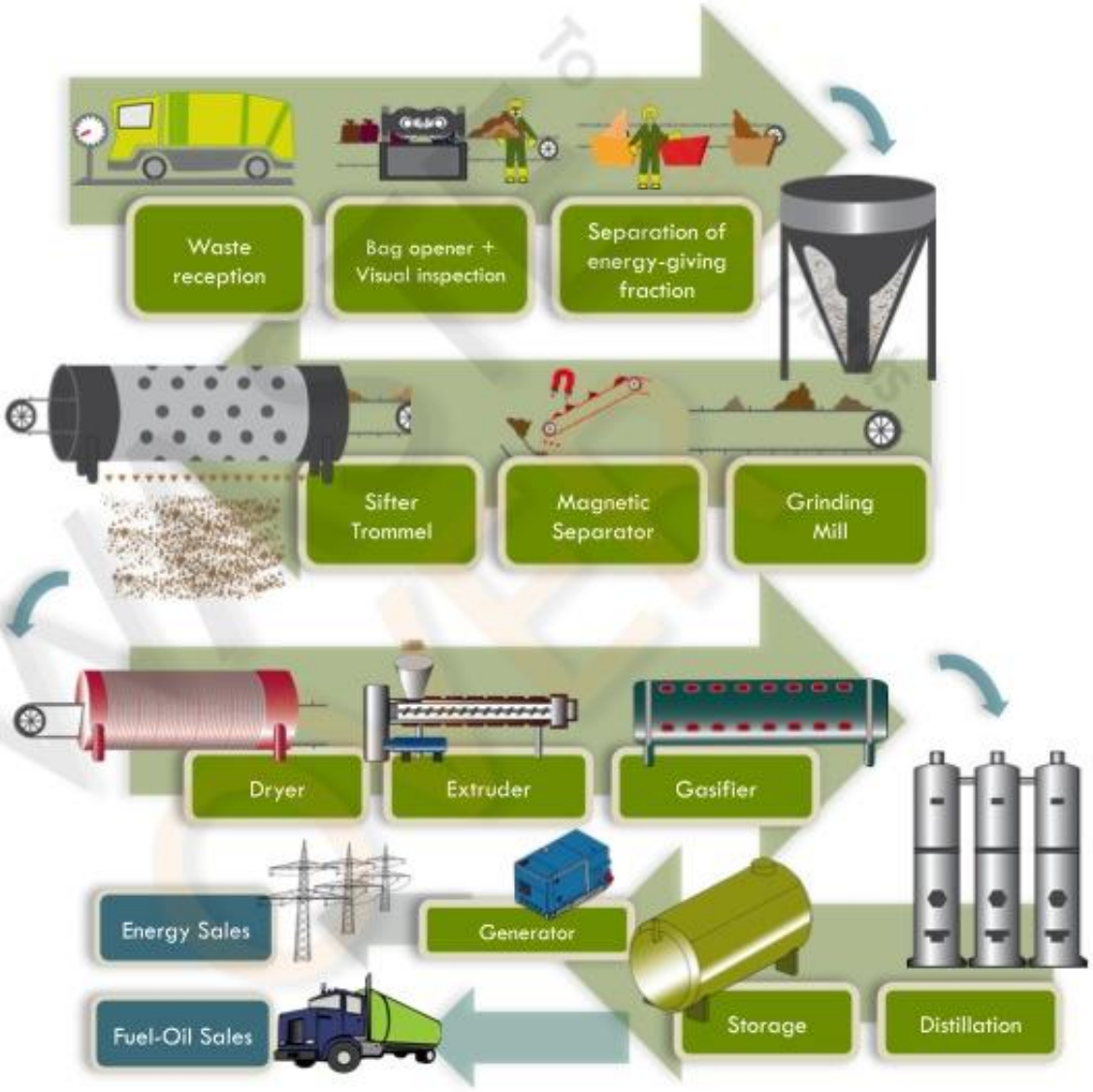

Reception + Inspection

1. Waste arrival to the plant, truck control, weight and traceability of the waste…
2. Visual inspection of the waste, the bags previously go through the bag opener which will allow to check the content.
3. Manual separation of the big volume non energy-giving materials permit the process to continue.

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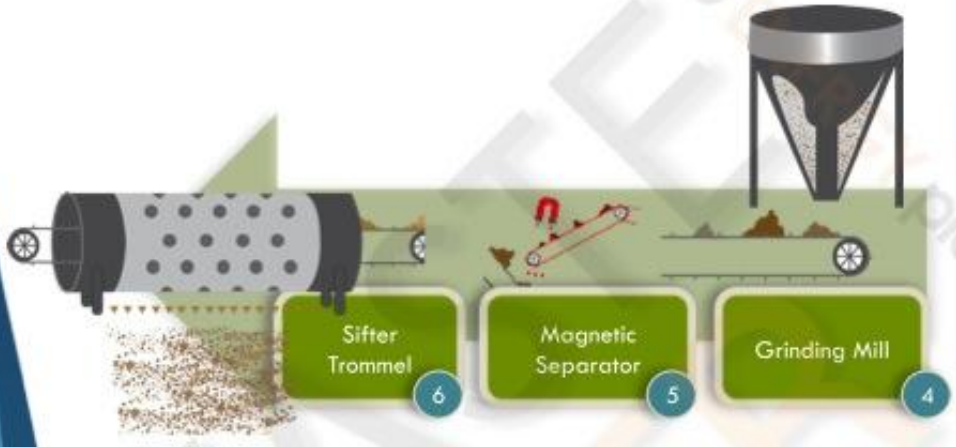
Reception + Inspection

Preparation process



4. The waste goes through the mill which grinds and frgmentizes it.

5. Several magnetics separators extract the metallic materials from the process, those will be treated separately.

6. Separation of the different types of waste by density using the sifter trommel. The ones resulting with a diameter exceeding 50 mm return to the mill.

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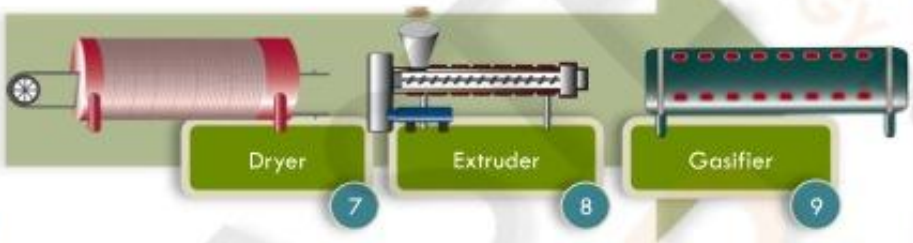
Reception + Inspection

Preparation proces

Gasification Process



7. The waste comes in the dryer and continue to the next stage with a humidity of the 10%.

8. The extruder gets the material ready to the Gasifier.

9. Transformation of the material through the gasifier operating at high temperatures. Together with the catalysators, the fuel-oil is recovered.

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Reception + Inspection

Preparation process

Gasification process

Final Product

10. Gases are condensed by the distillation equipment and the resulting particles will be filtered by the condensation and decantation system.

11. The obtained fuel-oil is stored in tanks, this fuel-oilis free of sulfur, tar and chlorine.

12. 13. Sales of Fuel-oil as fuel (heating/industrial) or as raw material for manufacturing new plastics, it is also possible to produce energy through the generator and sell it to the Electricity distribution network.

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5. RESULTING PRODUCT

Energy-giving waste

Sludges | Organic fraction | Paper & Carton | Liquid Manure | Slaughterhouse waste | Forest Biomass | Plastics | Textiles | Used tyres

Gasification
Distillation

Generator

Electricity

Fuel-Oil

Raw material for new plastics

No Energy-giving Waste

Ferrous Metal

Pressing
+
Palletizing

Foundry companies

Aluminium

Higyene
+
Molten

Aluminium bars Sales

Glass

Grindind
+
Higyene

Recycled Glass Sales

Other Inerts

Separation
+
Clasification

Aggregates companies

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6. GRAPHIC MATERIAL


WASTE
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PLANT OVERVIEW


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UNLOADING


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BAG OPENER

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VISUAL INSPECTION

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MILL

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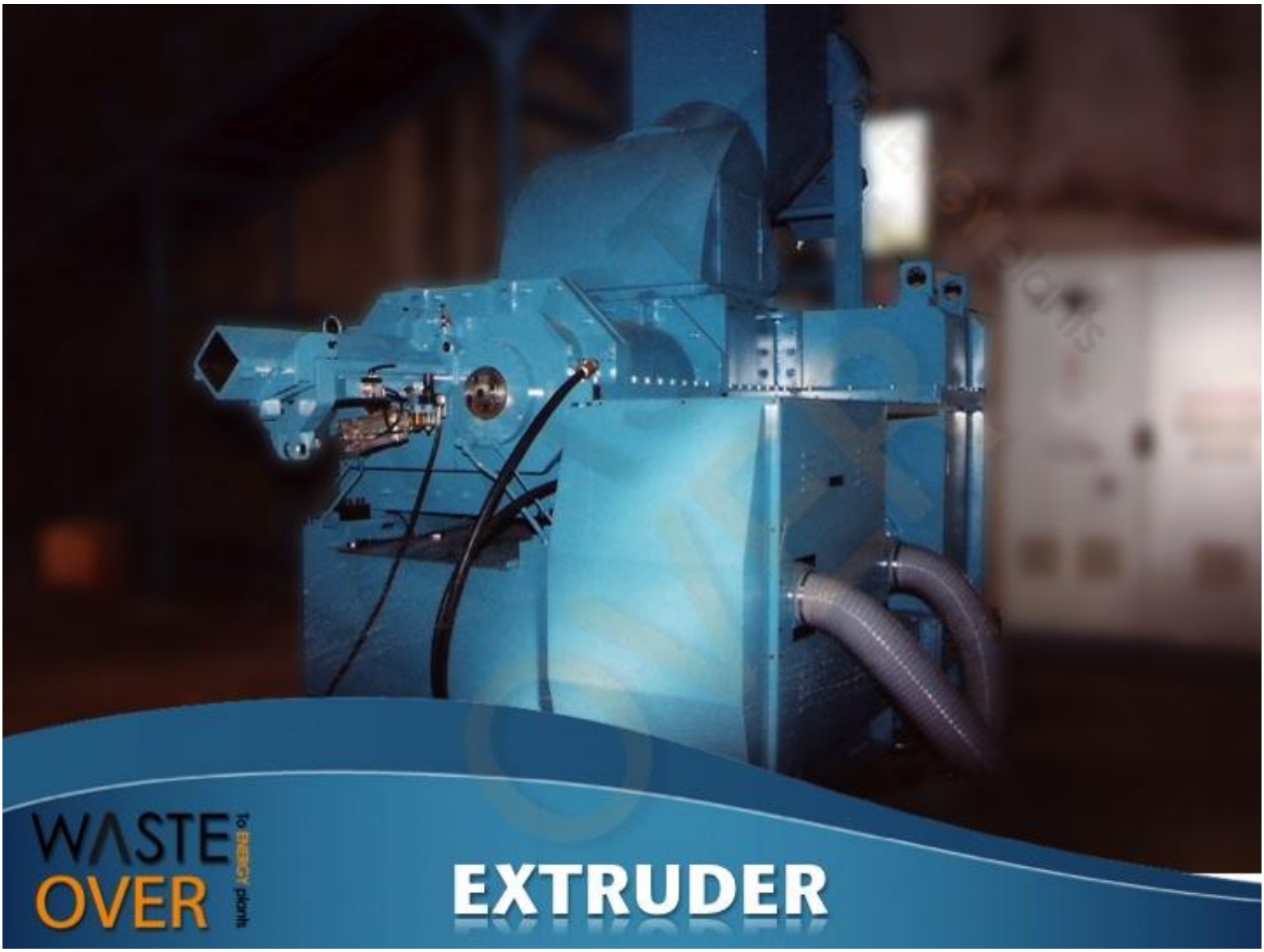
TROMMEL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EXTRUDER


WASTE
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GASIFIER


WASTE
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GENERATOR


WASTE
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FUEL TANKS

WASTE OVER

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WATER HIGIENIZIER SYSTEM

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