

**MECHANICAL
AND BIOLOGICAL
TREATMENT PLANT**
THIVA, GREECE





Mechanical and Biological Treatment

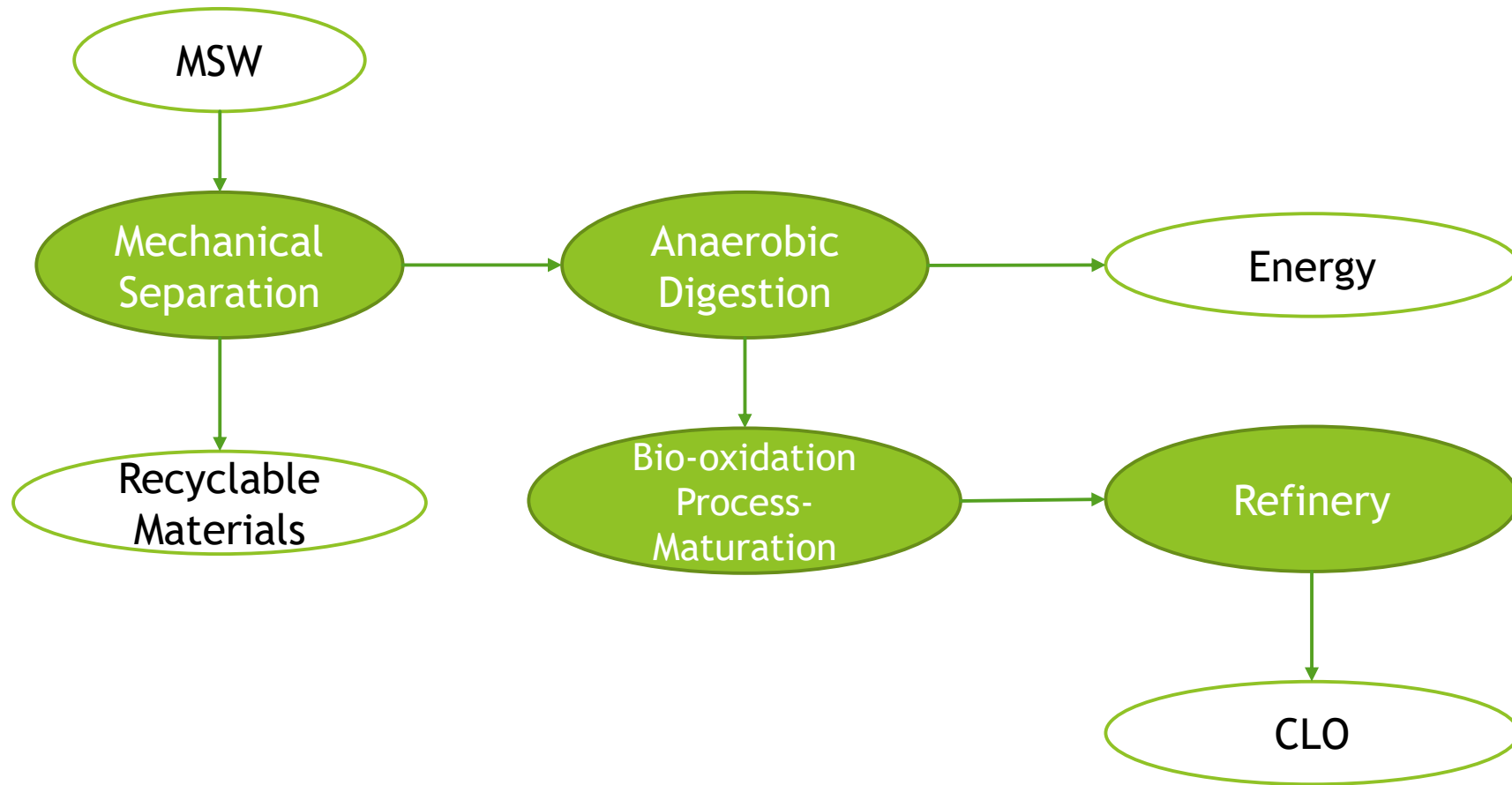
INPUT	Municipal Waste	32.000 Tn/year
	Preselected Recyclable Waste	1.700 Tn/year
	Preselected Organic Waste	1.850 Tn/year
	Green Waste	1.300 Tn/year
	Sludge	7.000 Tn/year

OUTPUT	Recyclable Materials	7.000 Tn/year
	Compost and CLO Production	7.500 Tn/year
	Energy Production	5.000 MWh/year

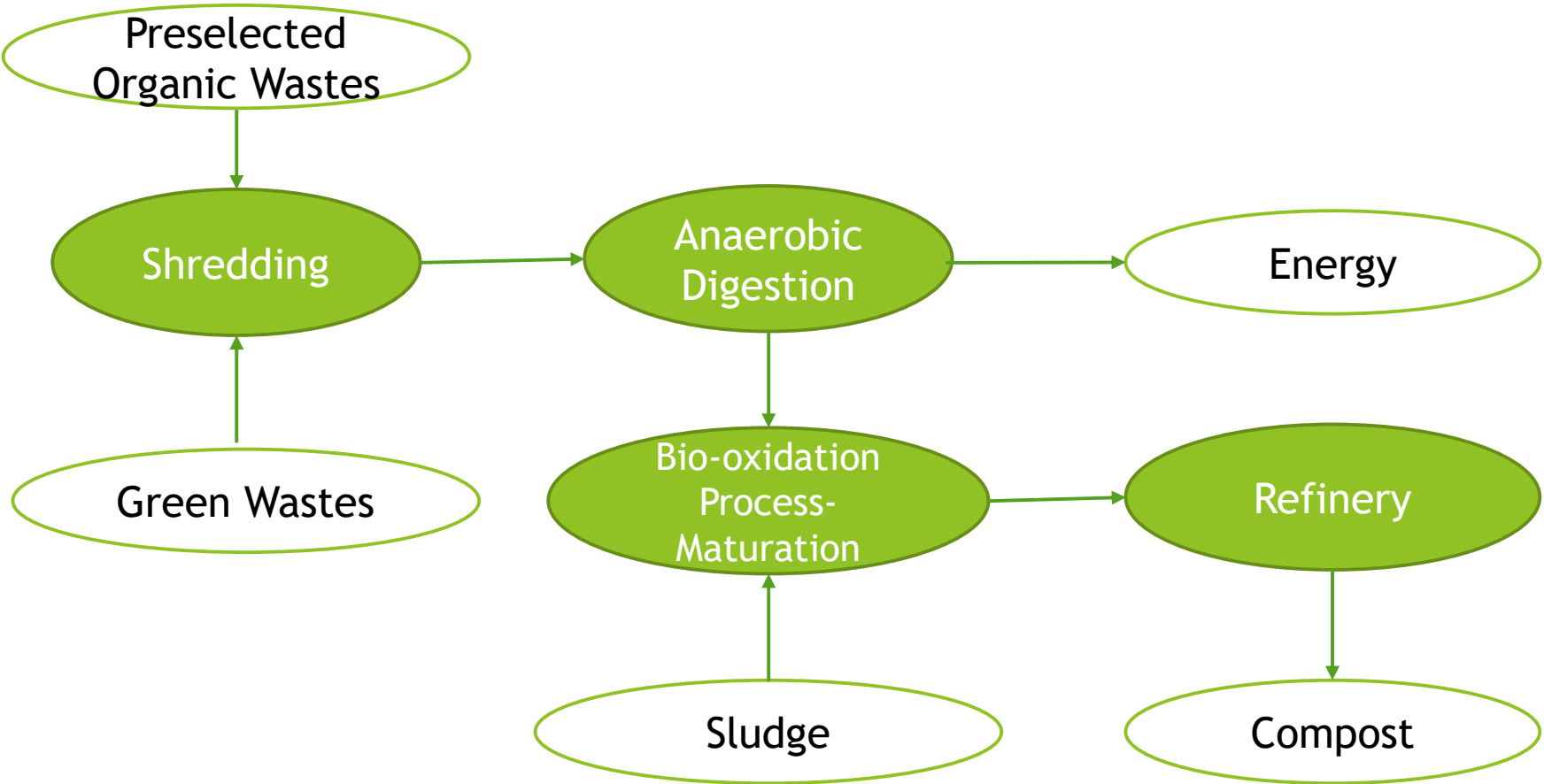
**The mission:
Transforming Waste
into Resources**



Municipal Waste Treatment



Biowaste Treatment





Waste Reception

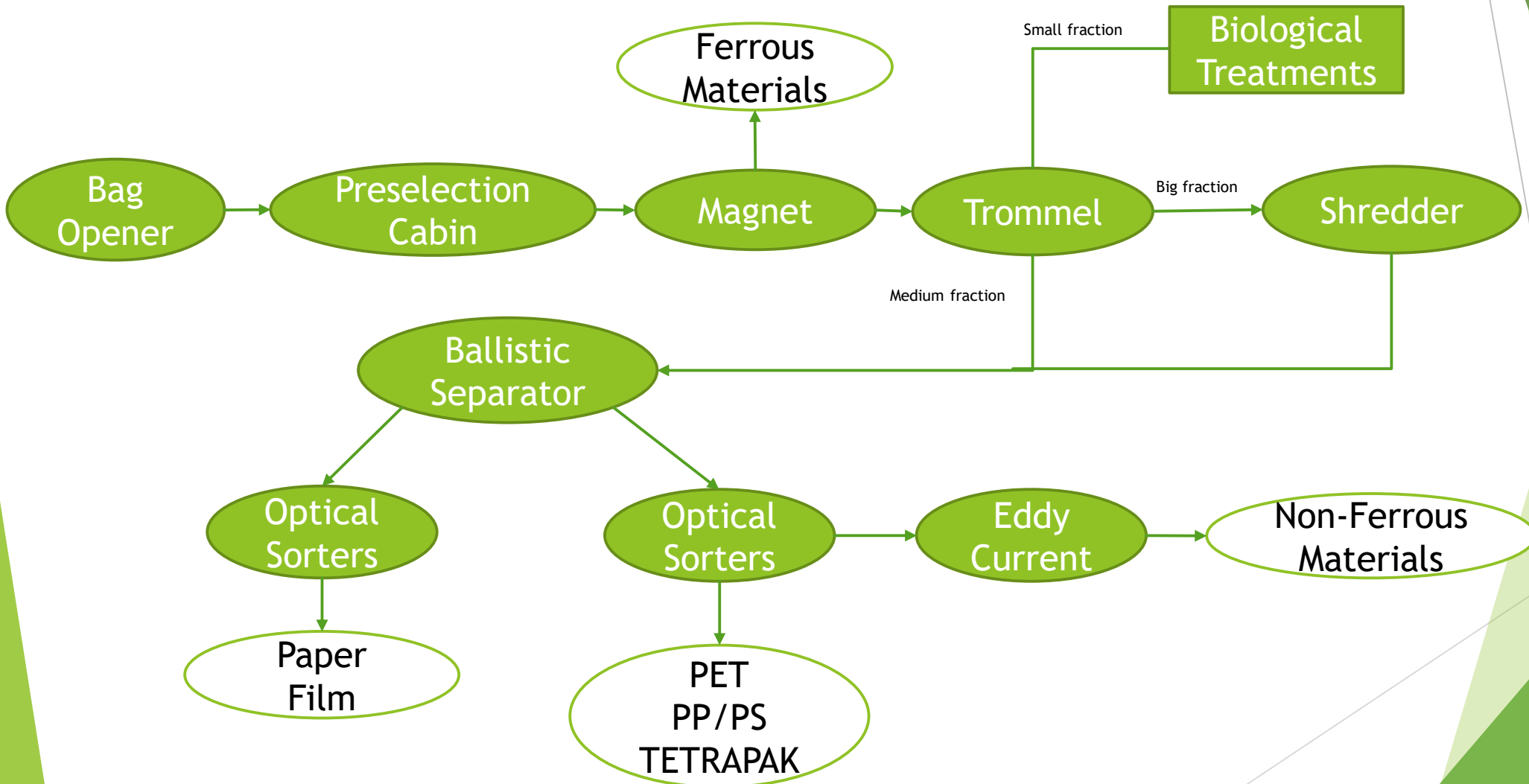
- ▶ MSW (green bin)
- ▶ Preselected Recyclables (blue bin)
- ▶ Preselected Organics (brown bin)
- ▶ Sludge

Mechanical Separation Line

- ▶ Capacity 20 Tn/H
- ▶ 1 Line
- ▶ Based on Optical sorters



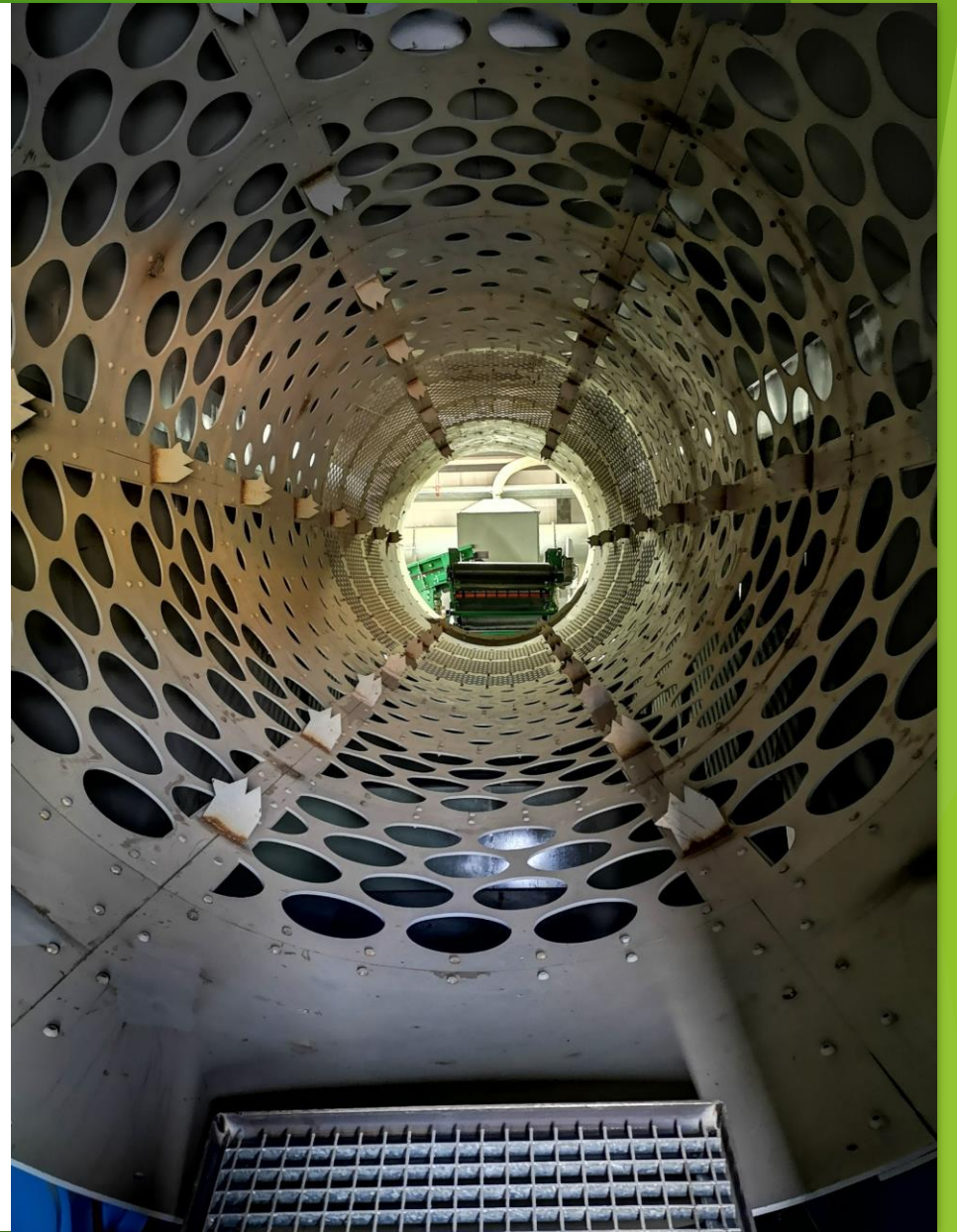
Mechanical Separation Line

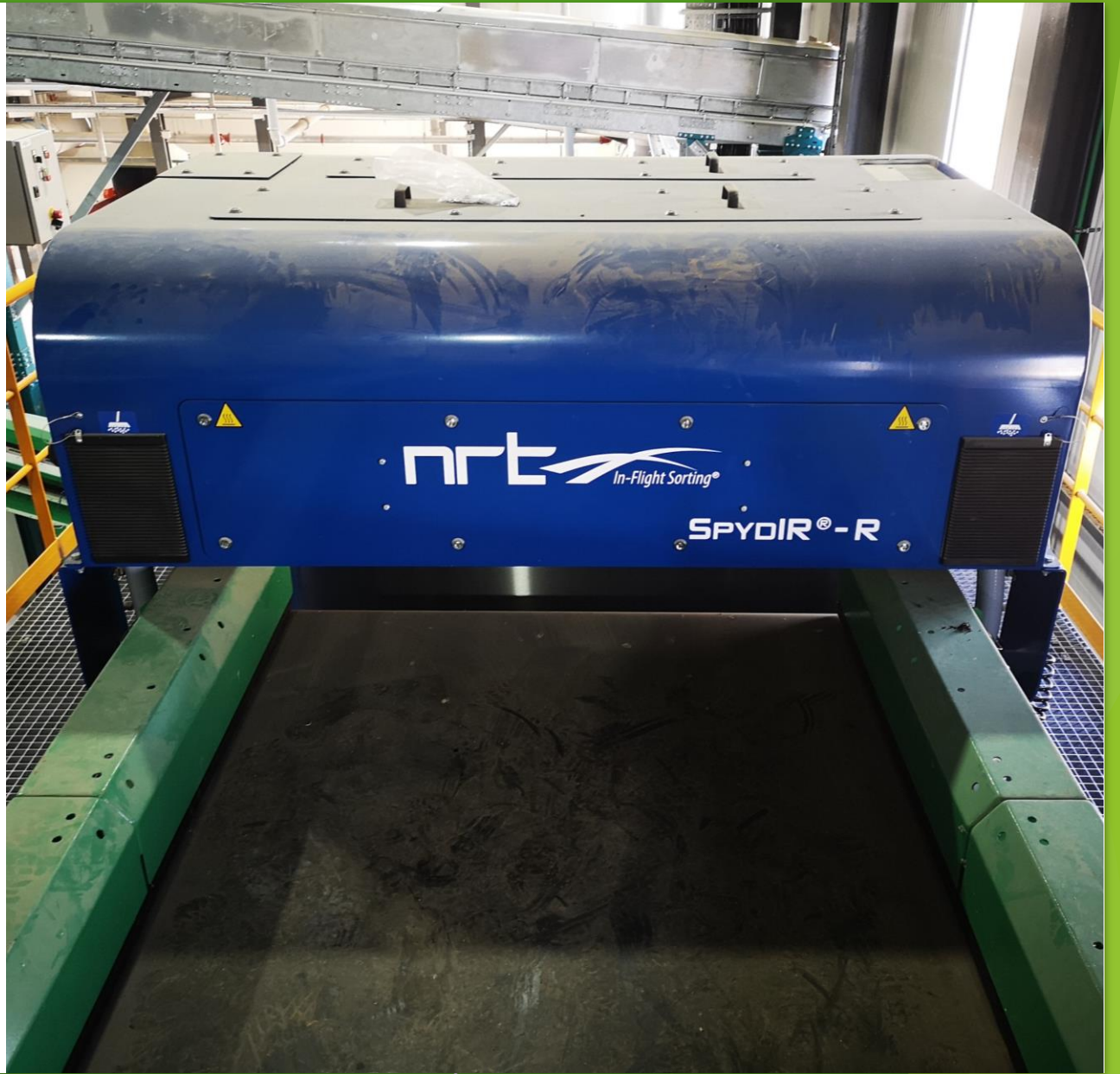












Biological Treatment

- ▶ 6 dry anaerobic digestion cells
- ▶ 4 composting cells (WATT's patented technology)
- ▶ 2 hybrid cells (WATT's patented technology)
- ▶ Wastewater Treatment Plant: RO





Anaerobic Digestion Cells

INPUT

- ▶ ~ 23.000 Tn/year Organic Fraction MSW

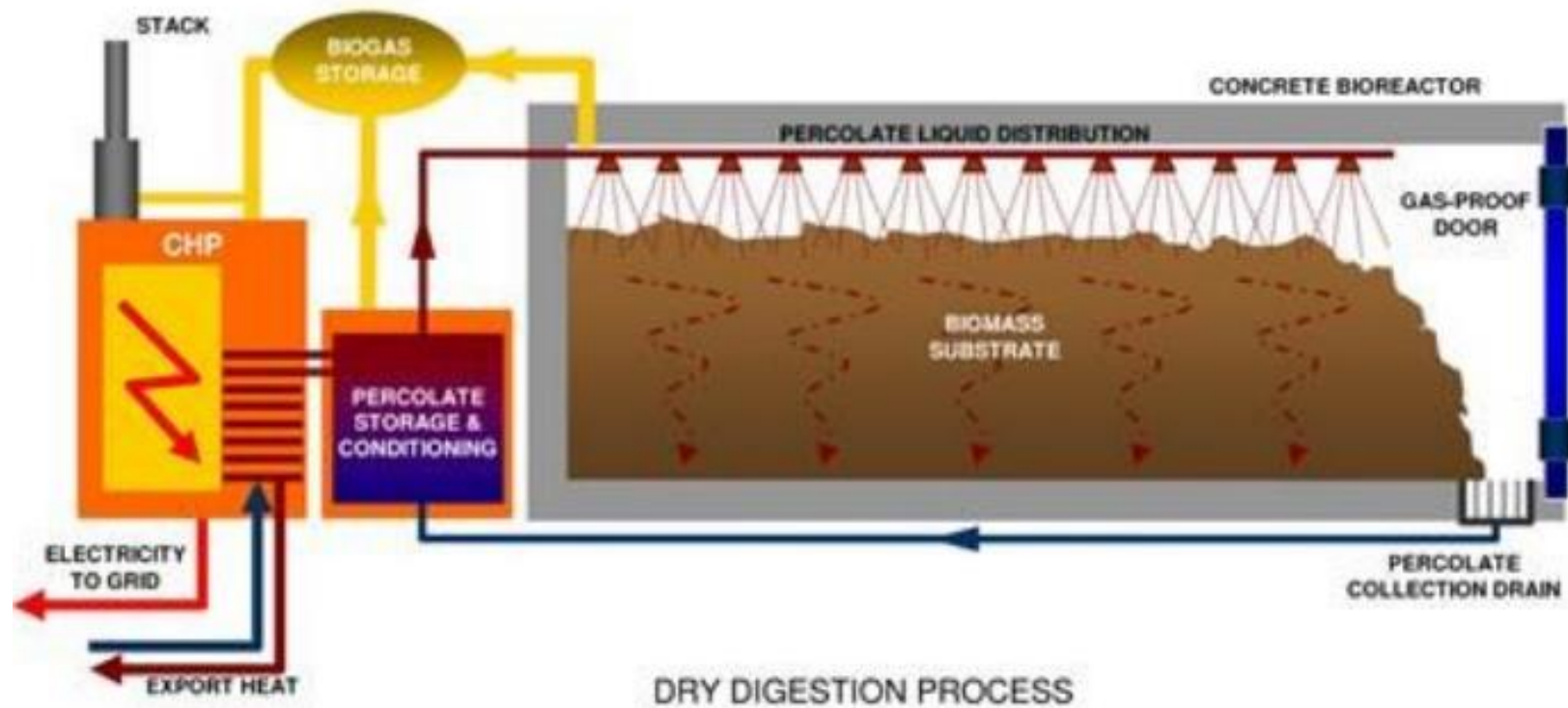
OUTPUT

- ▶ 20.000 Tn/year Organics
- ▶ 2.200.000 m³/year biogas

CIRCLE DURATION

- ▶ 21 days

Anaerobic Digestion



Composting Cells

BASED ON WATT'S PATENTED TECHNOLOGY

INPUT

- ▶ 20.000 Tn Organics from Anaerobic Digestion
- ▶ Sludge

OUTPUT

- ▶ 15.000 Tn Organics for Maturation

CIRCLE DURATION

- ▶ 14 days



Hybrid Cells

BASED ON WATT'S PATENTED TECHNOLOGY

Anaerobic followed by Aerobic digestion inside the same cell

INPUT

- ▶ 1.850 Tn/year Organics
- ▶ Green Waste

OUTPUT

- ▶ 1.500 Tn/year Organics for Maturation
- ▶ 112.000 m³/year biogas

CIRCLE DURATION

- ▶ 35 days



Waste-water Treatment

- ▶ Capacity 50 m³/day
- ▶ Processing water from
 - ▶ Aerobic treatment
 - ▶ Dehydration of sludge



Biogas Management



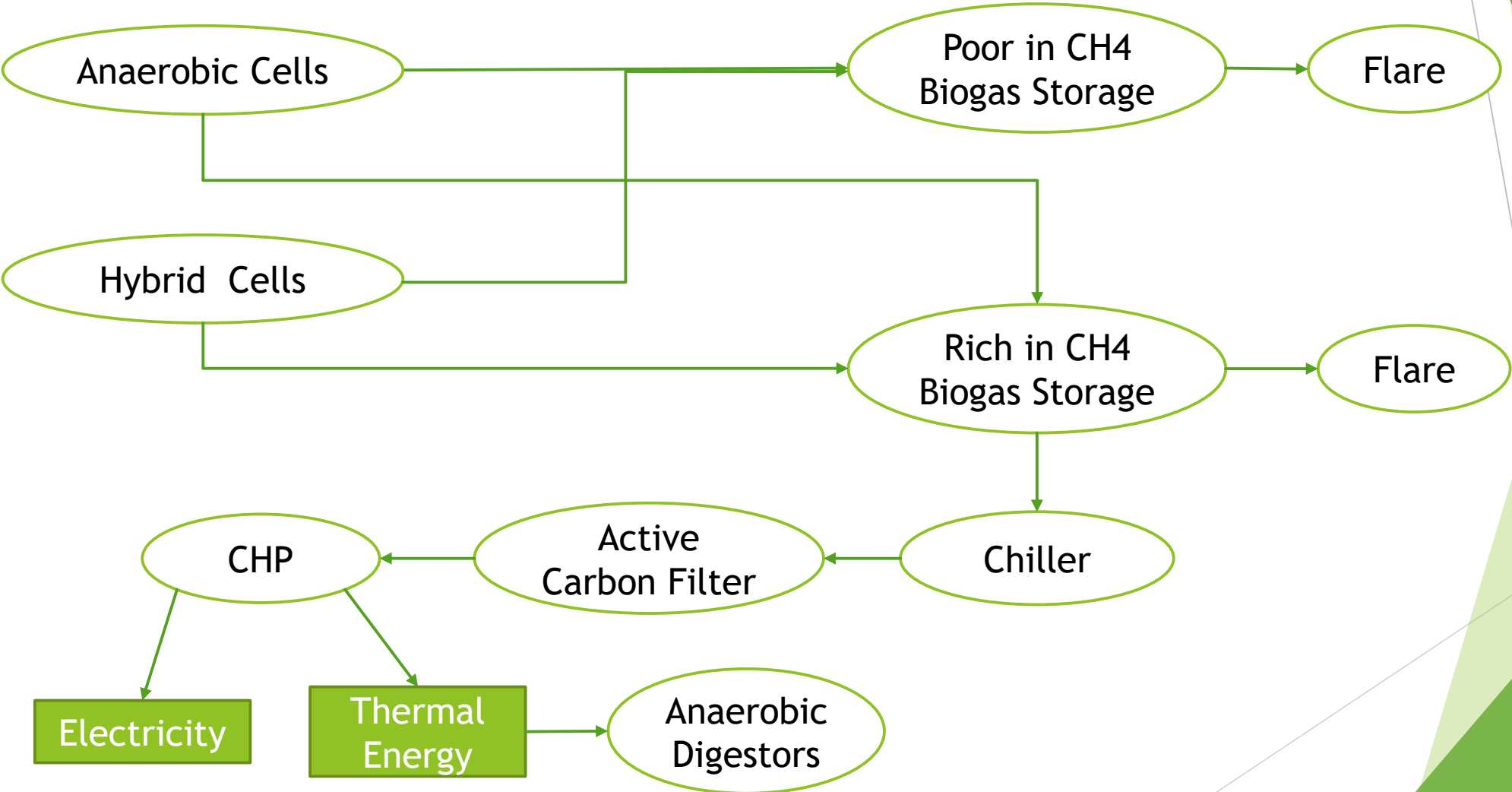
INPUT

- ▶ 2.200.000 m³/year biogas
 - ▶ 1.500.000 Rich in CH₄
 - ▶ 700.000 Poor in CH₄

OUTPUT

- ▶ 5.000 MWh/year electrical energy
- ▶ 2.400 MWh/year thermal energy

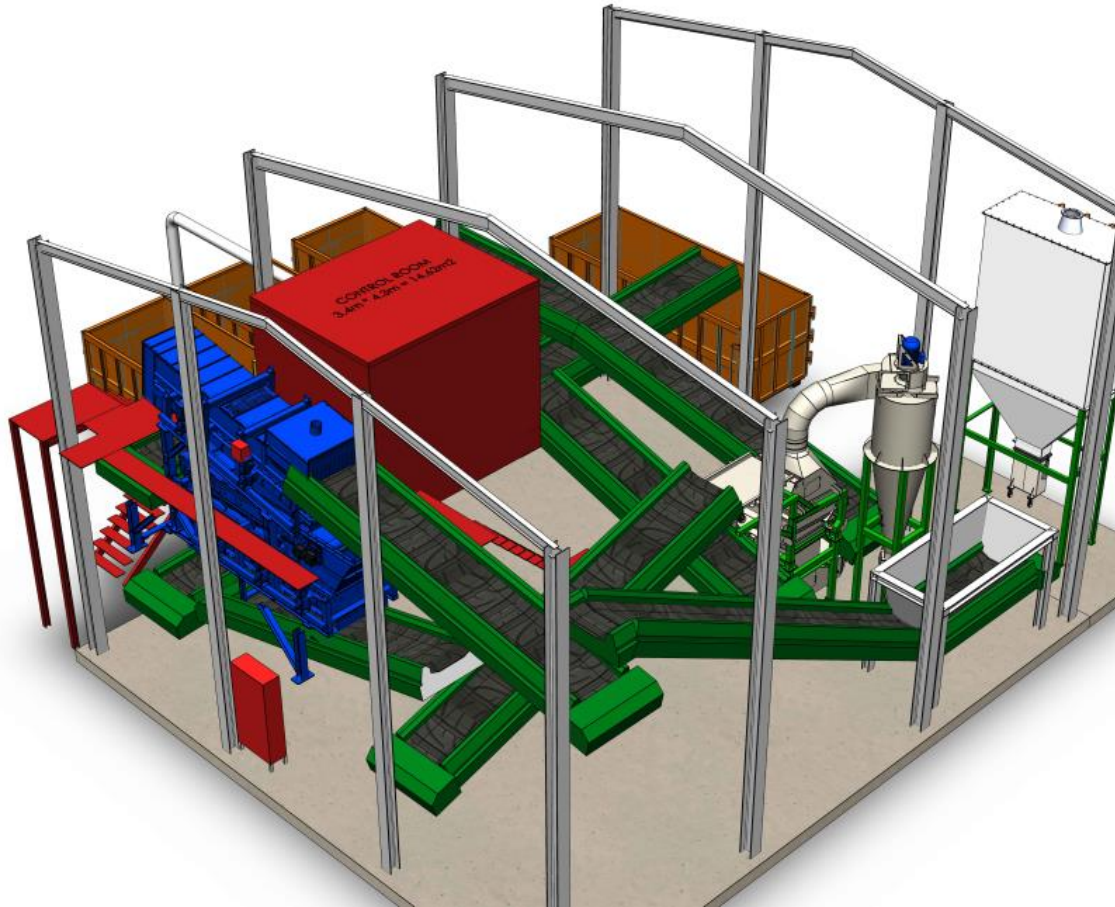
Biogas Management







Refinery

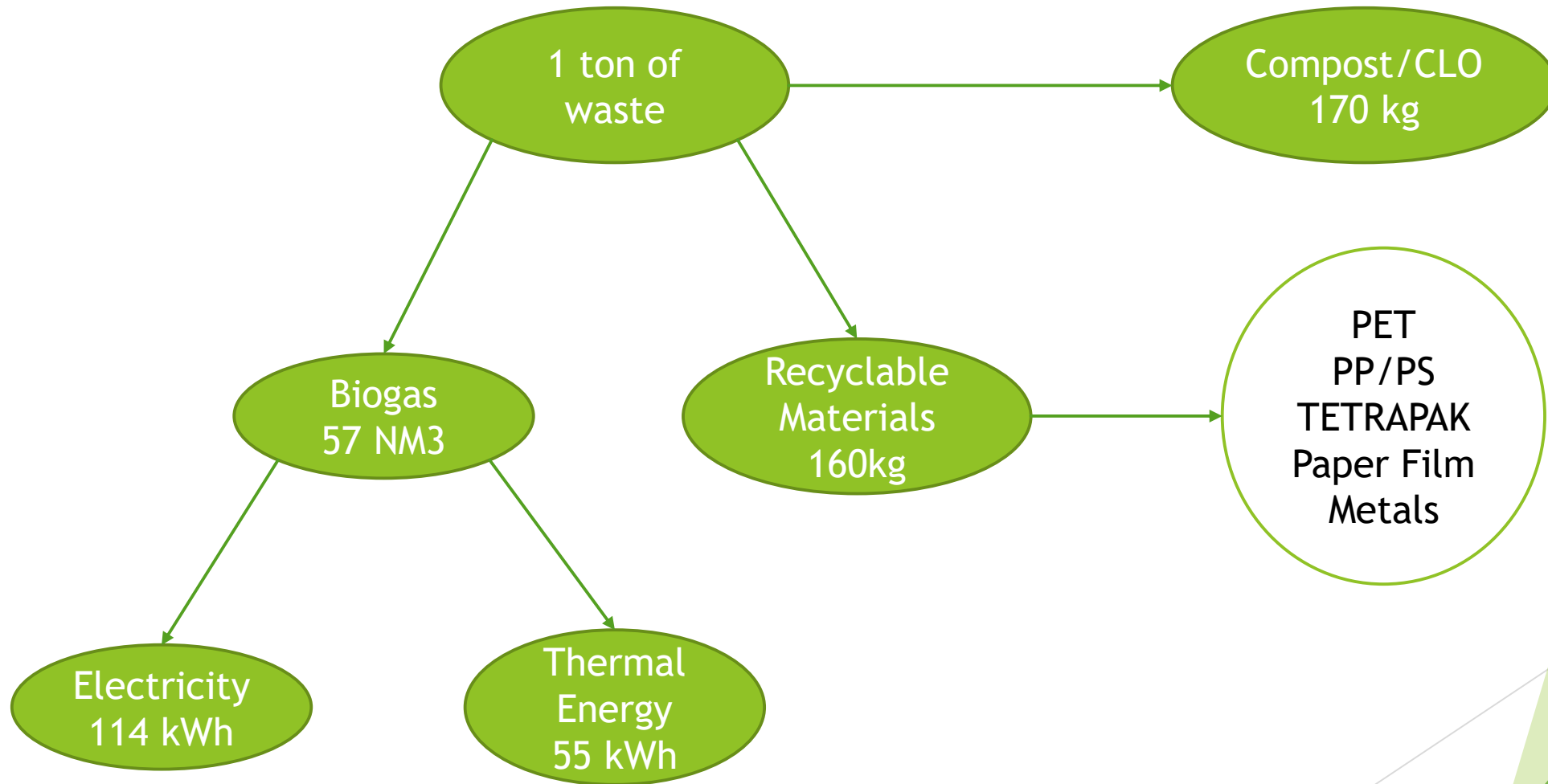


PRODUCTION OF CLO AND COMPOST

INPUT

- ▶ 11.340 Tn/year
- ▶ Capacity 8tn/h
- ▶ Equipment used:
 - ▶ 2 stage star screen
 - ▶ Densimetric table
 - ▶ Air separator

Summury





THANK YOU

WATT