



# The hidden potential of waste



# Waste-Econ - know-how



- ▶ Members of Waste-Econ have experience and completed projects around the world with a focus on:
  - ▶ Ecological reprocessing of many types of waste
  - ▶ Ecological production of heat from waste
  - ▶ Ecological production of electrical energy from waste
  - ▶ Cleaning of industrial and municipal waste water
  - ▶ Desalination of sea water powered by energy from waste
- ▶ Waste-Econ provides comprehensive turn-key contracts including financing with the guarantee of long-term business sustainability and return.

# Aims of the Waste-Econ alliance



- ▶ The Waste-Econ members combine efforts to make the most of what is today the overwhelming product of human existence and human endeavour - WASTE.
- ▶ The main aims of Waste-Econ are:
  - ▶ To produce usable raw materials from waste
  - ▶ To remove waste from our surroundings and environment
  - ▶ To use waste for a better life

# Capabilities of Waste-Econ

- ▶ For Existing landfills
  - ▶ Separation of landfill gas and its processing
  - ▶ Disposal of already preserved landfills (revitalisation)
  - ▶ Disposal of construction waste dumps
- ▶ For Municipal waste
  - ▶ collecting
  - ▶ sorting and separating
  - ▶ Pelleting and reprocessing
- ▶ For Other waste types
  - ▶ Processing into clean materials useable in various industries



# Thermal depolymerisation

- ▶ the cornerstone in the technical machinery of waste processing plants is the gasification unit for thermal depolymerisation



# Thermal depolymerisation

- ▶ Thermal polymerisation enables the conversion of worthless waste into valuable raw materials
- ▶ Conversion of carbonaceous substances into three basic components
  - ▶ gas- commercial /other uses
  - ▶ oil- commercial / other uses
  - ▶ carbon - commercial /other uses
- ▶ Usable for
  - ▶ Plastic and rubbish wastes/waste tires
  - ▶ Medical waste
  - ▶ Oil sludge and sludge from waste water treatment plants
  - ▶ Municipal waste
  - ▶ Biological waste



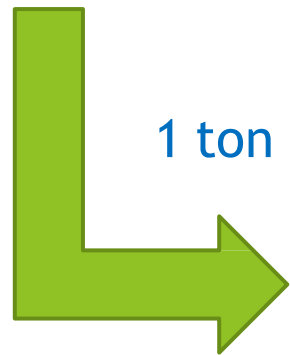
# Waste = electrical/heat energy



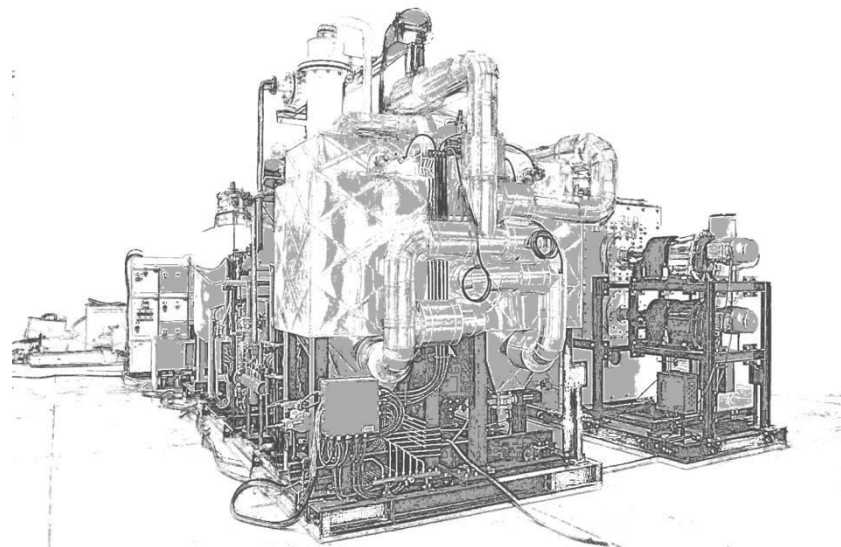
1,0 MW



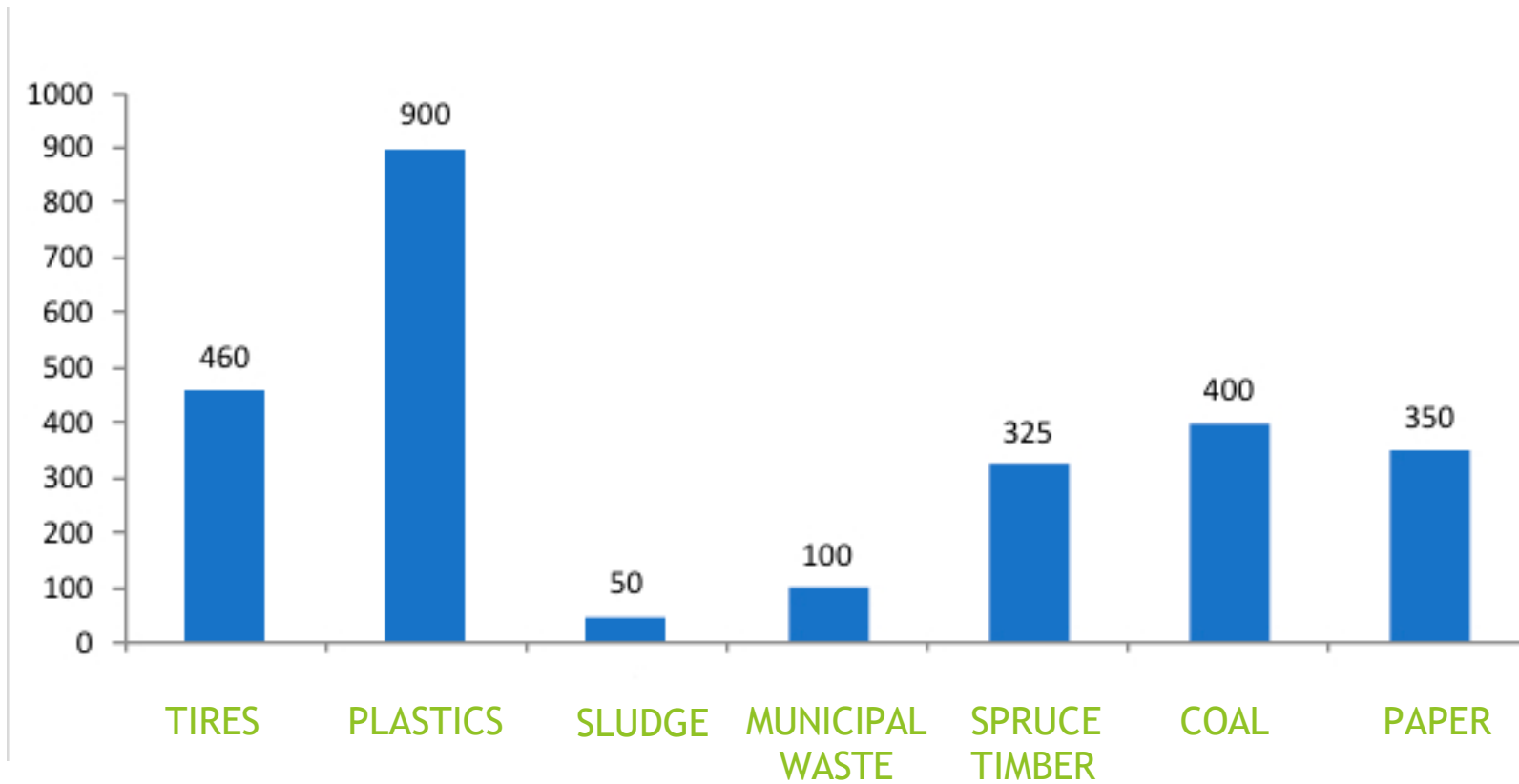
1,5 MW



1 ton



# Yeild of petroleum product from 1 ton of input material





# Yield of material from 1 ton of waste



Type of material	Oil product	Soot	Gas	Steel
	(liters)	(kg)	(kg)	(kg)
Tires	460	400	80	60
Plastics	900	50	50	
Sludge	50	250	700	
Municipal waste	100	270	500	
Spruce timber	325			
Coal	400			
Paper	350			

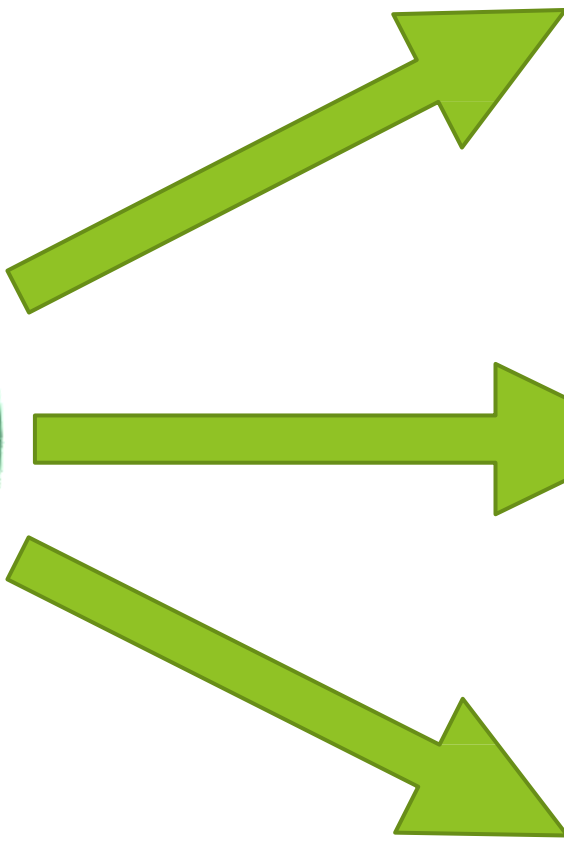
# Peripheral technology - energy from gas



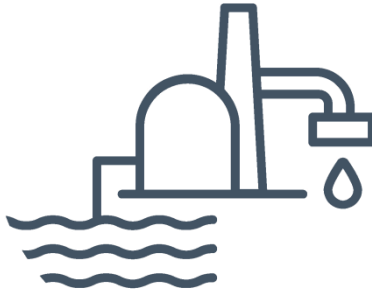
## ► Cogeneration unit



# Energy use



Consumption



Energy for desalination



Energy for cleaning waste water

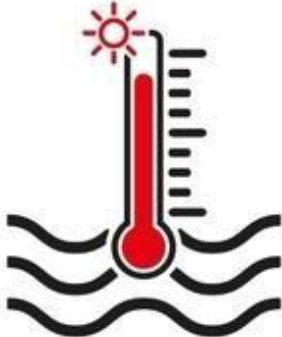
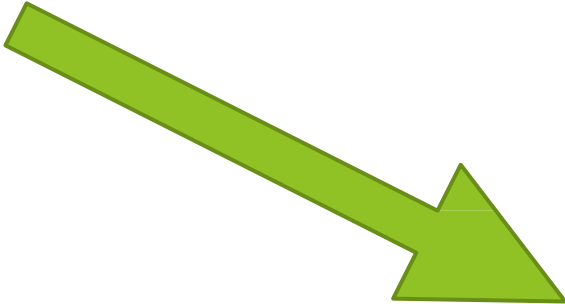
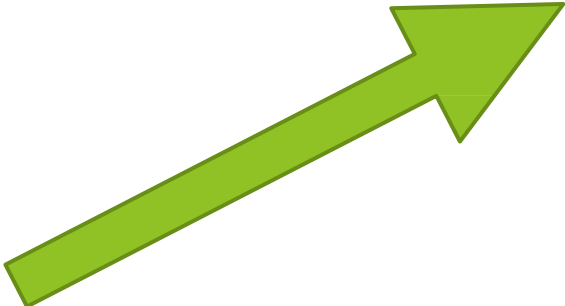


# Peripheral technology - energy for water

- ▶ Desalination stations
- ▶ Water treatment
- ▶ Biological water waste treatment
- ▶ Flotation treatment plant for water contaminated with petroleum substances
- ▶ Desalination equipment



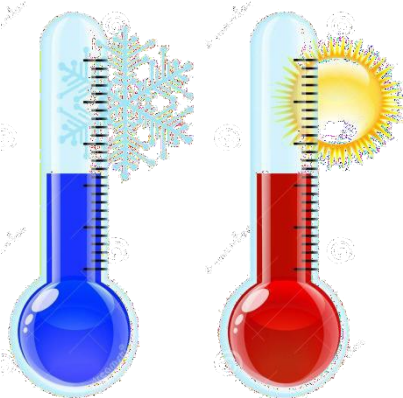
# Uses of heat



Water heating



Drying  
(input materials)



Heat exchange  
(cooling)



# Thank you for your attention

**King Brand Industrial Limited**

Rm. 1123, 11/F, Metro Centre II,  
21 Lam Hing Street, Kowloon Bay,  
Kowloon, Hong Kong

Tel: 852-22433328

Fax: 852-22433884

Email: [info@kingbrand.com.hk](mailto:info@kingbrand.com.hk)

