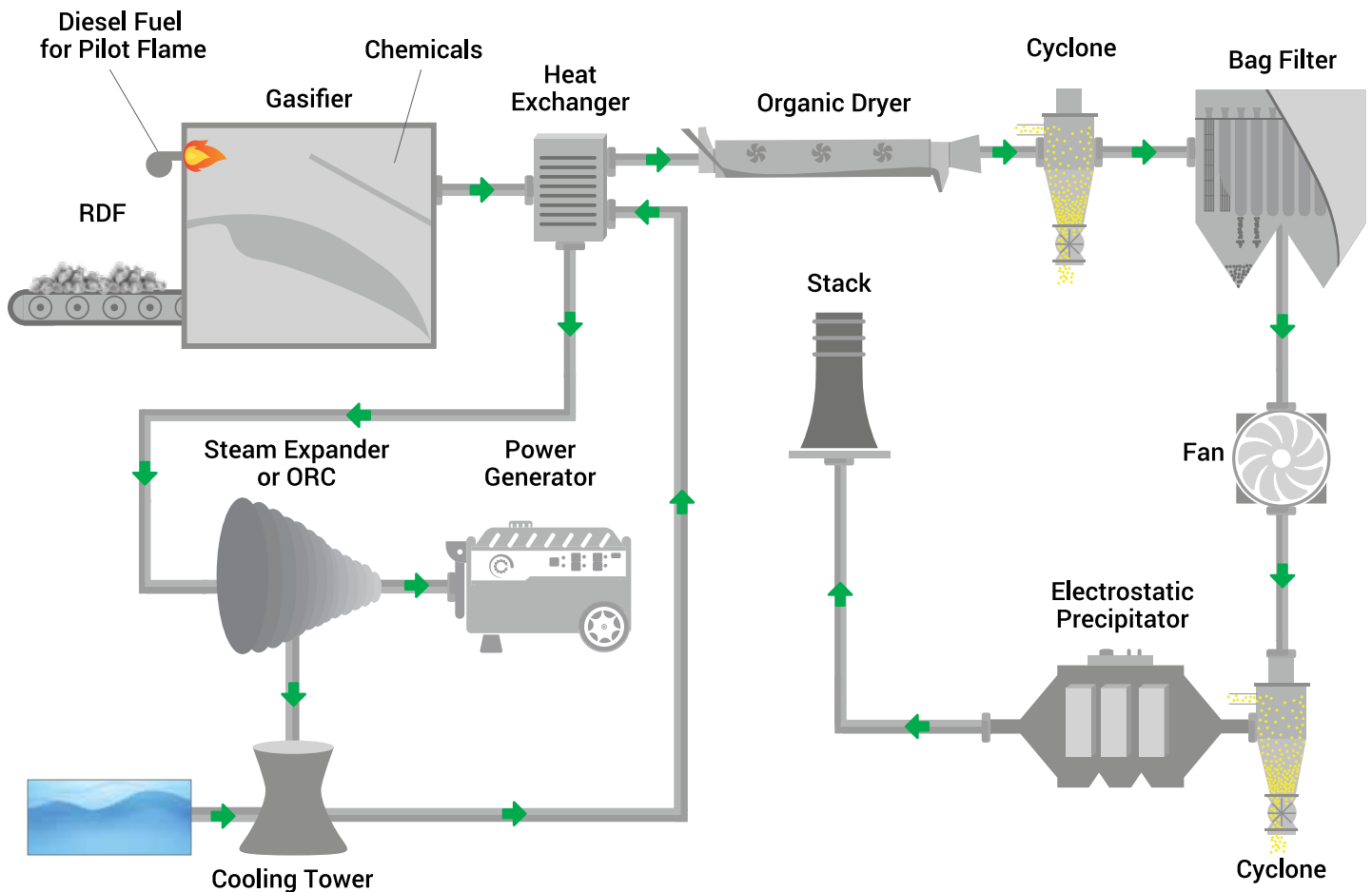


Waste to Energy

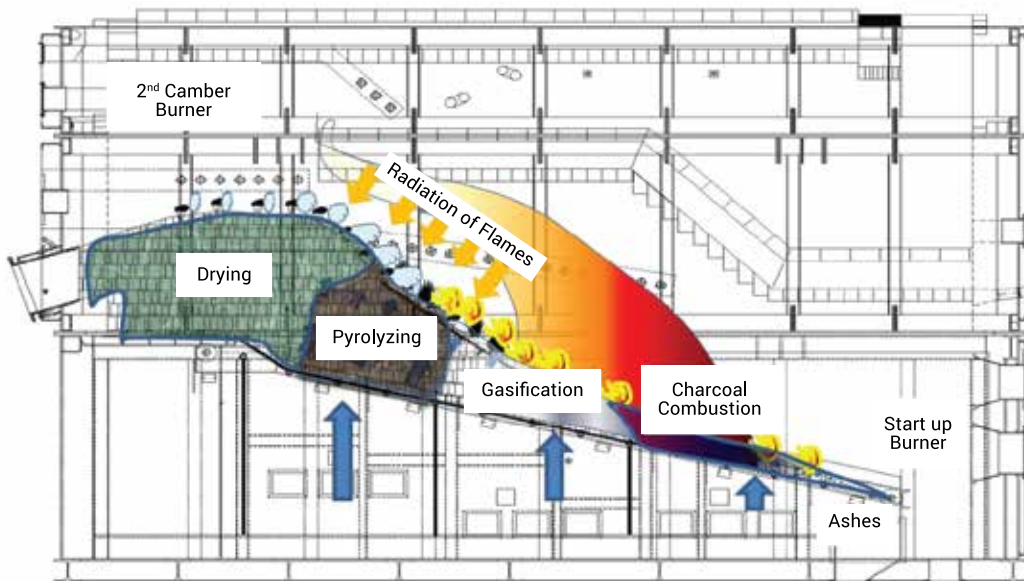
Phoenix Energy converts sources of waste such as municipal solid, industrial, and agricultural waste into valuable secondary products of homogeneous RDF.

PROCESS



Gasifier	To transform the RDF into gas and char
Heat Exchanger	To transfer the heat of the flu gas to the water circuit feeding the steam expander or ORC
Organic Dryer	The remaining flu gas will dry the organic waste in the RDF plant
Cyclone, Bag Filter, Electrostatic Precipitator	Clean the flu gas emission
Stack	To discharge the flu gas to the atmosphere
Steam Expander or ORC	To transform the thermal energy in the water/steam circuit to mechanical energy
Power Generation	To provide electricity from the mechanical energy

GASIFICATION PROCESS



Gasifier: To transform the RDF into gas and char. The char will be combusted internally to provide the needed heat to the gasification process and will be rejected in form of ash. The gas will be internally combusted with assistance of the pilot flame to produce hot flu gas.

EXPECTED OUTPUT

Expected output using various electrical energy generation technology

MSW (T/day)	RDF (T/day)	Total Heat (kW)	Electricity Generation Range	
			From	To
10	6.3	977	83 kwe	134 kwe
30	18.9	2931	245 kwe	534 kwe
50	31.5	4885	406 kwe	919kwe
100	63	9769	809 kwe	1777 kwe
150	94.5	14654	1212 kwe	2716 kwe
200	126	19538	1616 kwe	3300 kwe

* Assuming RDF Calorific Value of 3200Kcal/kg



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