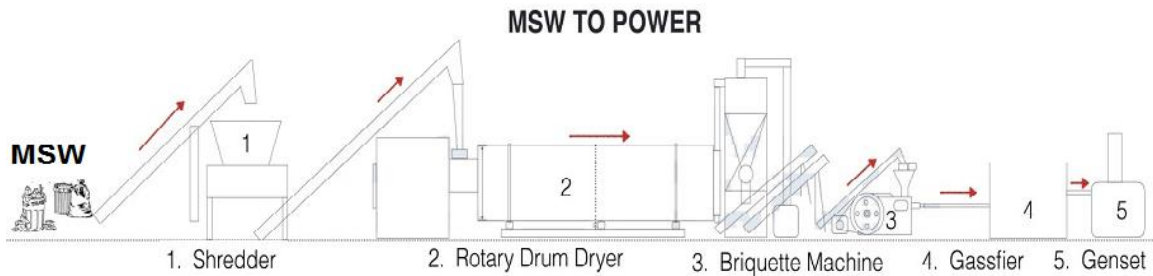
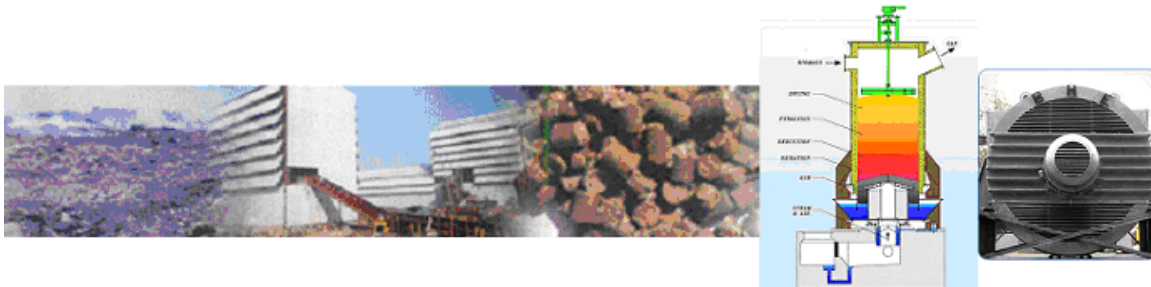




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Proposal For “Your Town”

**Up to 500 MW power plant
With Start
60 MW power plant
Using
Municipal Solid Waste (MSW) as fuel**

Introduction:

For Cities with production of more than 800 Tons of Municipal Solid Waste per day, we present this proposal.

Production of the electricity from Municipal Solid Waste (MSW) is environmental project and most profitable one in a long run.

More expensive than gas and coal power plant, but due to the negative cost of fuel, return of investment is shorter.

For small amount of MSW up to 200 Tons per day gasification is proposed.

Cities and suburbs with a population of 4 million, produces around 3,000 Tons of MSW per day, which could fuel at least 60 MW of power.

For more information, please visit www.chamco.net

Used Tire could also be added to the garbage for either gasification or producing fuel, to stop burning tire and damaging environment more than dumping.

Project Cost:

For the purpose of calculation without considering the actual prices in your city, we estimate:

The total cost of the Sorting and Briquette making facilities and Power Plants including; survey, feasibility study and planning, engineering, procurement, contracting, test, commission and training for 60 MW output, Turnkey, is approximately \$180,000,000. That is \$3,000,000 (three million USD) per Mega Watt.

Project Income:

A – “Power Purchase Agreement” (PPA) for electricity, which the national grid pays to the owner of the plant. For calculation purposes, we will use an average 20 cents per kilowatt hour (KwH). This is derived from 15 Cent for Domestic and 25 Cent for Industrial use.

Assume that the PPA for 60 MW of electrical power generation at a fixed price is \$0.20 per KWH.

Sale of electricity =

$60 \text{ MW (net power generation)} \times 1000 \times 24 \text{ (hours)} \times 365 \text{ (days)} \times \$0.20 \times 0.85 \text{ (Efficiency Factor)} = \$89,352,000$ gross income from power generation annually.

B - Tipping Fee: Municipalities pay the plant operators/owners a tipping fee for each Ton that they receive and handle per day. The average tipping fee is around \$10 / T

Tipping Fee =
 $3000 \text{ (T/D)} \times \$10 \text{ (per Ton)} \times 365 \text{ Days} = \$10,950,000 \text{ Annually}$

C - Operation & Labor Cost.

For this project of 60 MW power plants and RDF plant, a work force of about 20 technical and 50 non-technical workers are estimated.

Assuming \$80,000 per technical and \$40,000 per non-technical works, the approximate labor costs will be: $20 \times \$80,000 + 50 \times \$40,000 = \$5,200,000$

D – Spare and Maintenance approximately \$1,000,000 per year.

Summary:

- Assume 6 years Return Of Investment (ROI)
- Cost of facilities \$180,000,000
- Income from PPA \$89,352,000
- Income from tipping fee \$8,760,000
- Labor costs \$5,200,000
- Maintenance costs \$1,000,000

- ROI $180,000,000 / (89,352,000 + 8,760,000 - 5,200,000 - 1,000,000)$
- ~ 2 years with zero emission and huge Carbon Credit

Note: Return of Investment for Gas and Coal Power Plants are 5 to 10 years.

For projects of 60 or more MW from MSW, CHAMCO has partnership with CMEC of China.

<http://www.sinomach.com.cn/en/>

<http://en.cmec.com/>

Ethiopia project name is Reppie waste-to-energy plant, it is the first waste-to-energy plants in Africa which EPC by CMEC (CNEEC belong to CMEC)

