Energy Recovery from Municipal Solid Waste

WASTE TO ENERGY PLANT AT VIJAYAWADA
UNIQUE PROCESS
DEVELOPED BY TIFAC, Govt of India

MSW → SORTING → MAGNETIC SEPARATION → PRIMARY SIZE REDUCTION → SOLAR DRYING

- Large stone, Tyres etc.
- Iron
- Woody Biomass

SECONDARY SIZE REDUCTION

COARSE FLUFF

AIR CLASSIFICATION

- Stones / Inert
- Plastics
- Glass/Rubber/Leather etc.
- Soil Enricher

HOT AIR GENERATOR → HOT AIR DRYER → SCREENING
A typical estimate for REFUSE DERIVED FUEL

**Basis** : 100 MT / day.

**Refuse derived Fuel** : 45.00 MT/day

**Large sized debris** : 5.00 MT / day.

**SAND/SILT** : 20.00 MT/day.

**Moisture** : 30.00 MT/day.

**Cal.Value** : 2200 – 2800 kcal / kg.
Characteristics Of Fuel Fluff / Pellets

Physical Properties of Fuel Fluff / Pellets

- **Product**: Fuel Fluff / Pellets
- **Shape**: Irregular / Cylindrical
- **Size**: 25 x 25mm to dia 8mm to 25mm
  - 150 x 150mm
  - Lgth 8mm to 40mm
- **Bulk density**: 0.02-0.03 MT/m³ / 0.6 to 0.7 MT/m³
- **Calorific Value**: 2200 Kcal/Kg / 3000 Kcal/Kg
Refuse Derived Fuel Pellets
The basic know how for RDF processing developed by TIFAC which is successful and proven.

The combustion technology should have special features to effectively encounter:

• Corrosion
• Erosion
• Fouling
• Uneven fuel characteristics
ENERGY FROM SOLID WASTES
VIJAYAWADA PLANT
Combustion mechanisms

Traveling Grate

Pusher Grate