ATD Sram Mram Clean Energy Solutions Pvt Ltd

PRESENTATION

ON

GENERATION OF ENERGY

FROM

MUNICIPAL SOLID WASTE

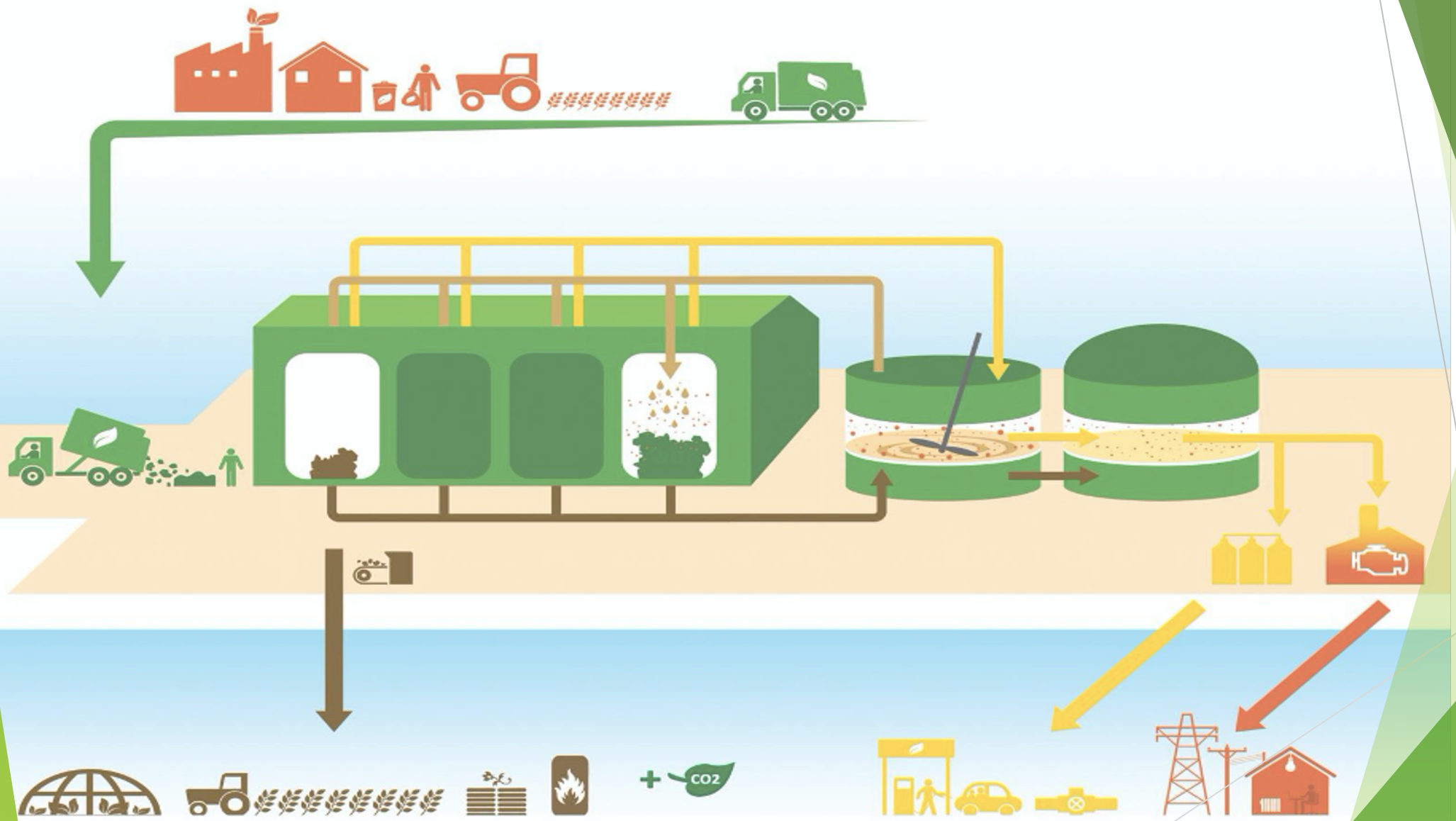
NEED FOR WASTE TO ENERGY

- The amount of Solid Waste generated each year has been increasing much faster than population growth.
- Today we are facing numerous environmental & economical challenges like:-
  - Population Growth and associated waste disposal need
  - Global Warming
  - Dependence on fossil fuel
- A common solution for all these challenges is

ENERGY GENERATION FROM WASTE

- Energy from waste provides:-
  - Safe and economic waste disposal
  - Greenhouse Gas reduction
  - Renewal Energy

WELCOME TO THE GREEN ENERGY



BIOGAS PLANT HIGHLIGHTS

- Plant will use segregated Municipal Solid waste, Vegetable & Food Waste and etc as main feedstock.
- Plant will produce biogas with methane content ranging from 50 – 55 % and produced biogas will be used to generate Fuel and Electricity.
- Valuable organic bio fertilizer (solid and liquid) is also produced.
- Plant is factory assembled modular systems, facilitating easy site assembly and quick installation.

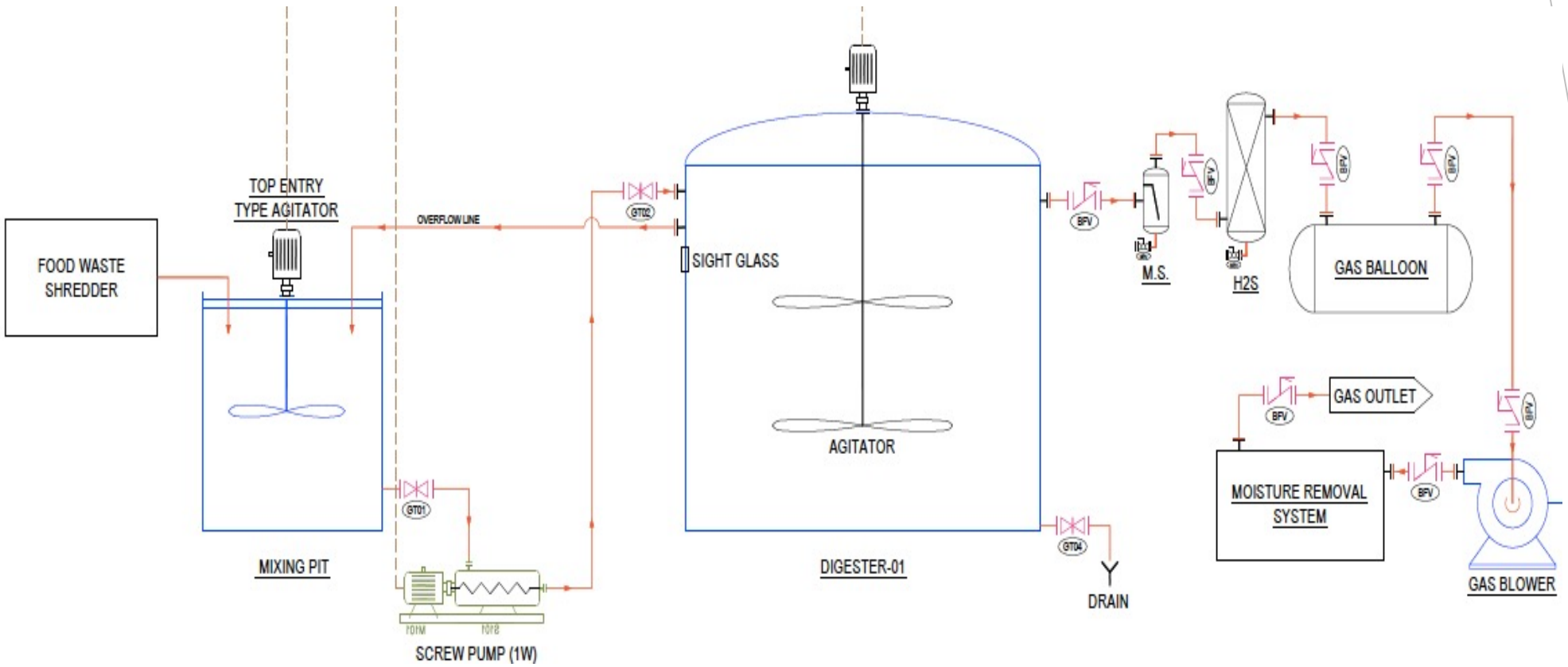
BY-PRODUCTS PRODUCED

50 Ton/Day Biogas Plant produces following By-Products :-

S No.	Product	Per Day Generation	Per Annum Generation
1	Biogas	3500 m3 per Day	12,77,500 M3
2	Bio CNG	1400 Kw per Day	5,11,000 Kg
3	Solid bio-fertilizer	7000 kg per Day	25,55,000 Kg
4	Liquid bio-fertilizer	20 KL per Day	7,300 KL

- Biogas can be upgraded to produce Bio-CNG so as to make it usable as fuel for vehicles used in transportation sector to replace the Mineral CNG.
- Electricity generated from the plant can be sold to national electricity grid.
- Organic bio fertilizers produces from the plant are ready for use without the necessity for any storage or additional treatment. Fertilizers can be sold to local farmers as valuable commodity that replaces chemical fertilizers in more effective and ecological friendly way.

BIOGAS PLANT WORKING PRINCIPAL



- The technology of organic materials conversion is made by means of biochemical decomposition (hydrolysis) of high-molecular compounds into low-molecular organic compounds (organic acids, salts, and alcohols).
- Further conversion of obtained dissolved compounds like organic acids and alcohols ($C_5H_7NO_2$, HCO_3) into gases - CH_4, CO_2. $C_5H_7NO_2 + HCO_3 + H_2O \rightarrow CH_4 + CO_2 + NH_4$

OUR PROPOSED SOLUTION

- Disposal of Municipal Solid waste is a major point of concern for Municipal corporations. At present average waste generation rate is 400 gms/capita/day which is increasing at the rate of 5% per year.
- In general, the collected waste is dumped in the SLF sites which in result emits green house gases and is a cause of many Bactria borne diseases.
- We propose to process the collected waste by generating **BIO GAS/BIO CNG ORGANIC BIO FERTILIZER, RDF,** etc. hereby making the best use of the municipal waste.
- We would process maximum available municipal waste and only inert waste would be sent to SLF this would help in reducing the pressure of SLF Sites.
- We propose to setup a processing unit under PPP model in Nagar Palikas with **minimum waste collection of 100MT per day**. This proposed plant will not only help in solving the problem of managing municipal solid waste but will also generate employment and would have positive impact on the environment as well.
- To set up the processing unit we would require support from Nagar Palika by providing **2 Acres of land (free of cost)** required for processing unit and tipping fee of **Rs. 1000 Per Ton.**

ADVANTAGES OF BIOGAS PLANT

- A non-polluting and renewable source of energy is created in biogas plants. Compressed biogas or electrical power can be used in Industries, Canteens, Restaurant, Hotels, Hostels, Sweet shops etc.
- It leads to energy security via conservation of natural resources (LPG, wood, kerosene, coal, etc.).
- Organic Municipal Solid Waste can be used in the plant as main feedstock.
- Biogas as a gas provides improvement in the environment, sanitation and hygiene by proper management of waste.
- Biogas digesters can destroy more than 90% of disease-causing bacteria that can otherwise enter surface water. Thus, it reduces risk to human and animal health.
- It improves ground water quality as anaerobic digestion provides several water quality benefits.
- It destroys Methane, which is a potent greenhouse gas with a heat trapping capacity of approximately 21times that of carbon-di-oxide. It thus leads to reduction of global warming.

THANK YOU

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