



absolute water

ORGANIC WASTE TO ENERGY



THIS CANNOT BE IGNORED ANY LONGER !!



REALITY

Delhi generates 10 ,000 tonnes of waste per day.

In 20 years , an area of 440 Km square would be covered with this waste

1 ton of food waste = 4.2 ton of equivalent CO₂



REPURCUSSION



GHAZIPUR LANDFILL, NEW DELHI

The burning of trash everyday causes the worst air quality in all of Delhi

SOLID WASTE MANAGEMENT RULES

Highlights of new Solid Waste Management Rules, 2016

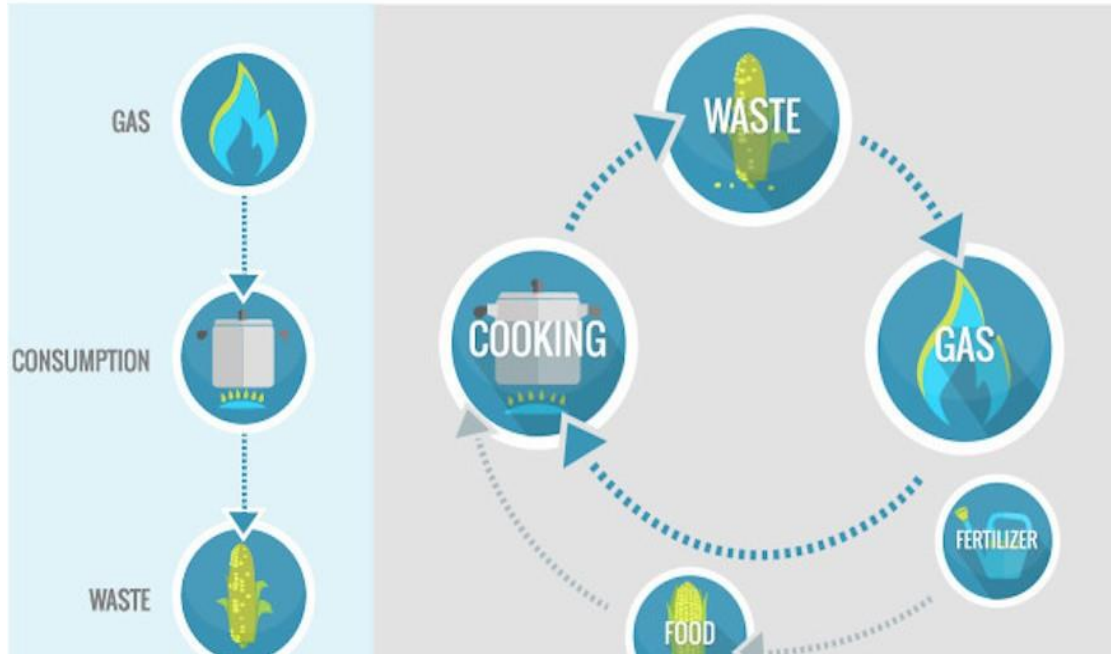
- It mandates segregation of waste at source to channelise the waste.
- Manufacturers of sanitary napkins are responsible for awareness on proper disposal.
- Power to local bodies across the country to decide the user fees.
- Bio-degradable waste should be processed, treated and disposed of through composting or bio-methanation within premises
- Department of fertilisers, ministry of chemicals and fertilizers should provide market development assistance on city compost.

All Resident Welfare and market Associations, Gated communities and institution with an area >5,000 sq. m should segregate waste at source.

AWPL SOLUTION 1

FOOD WASTE TO COOKING GAS

BIO INDHAN



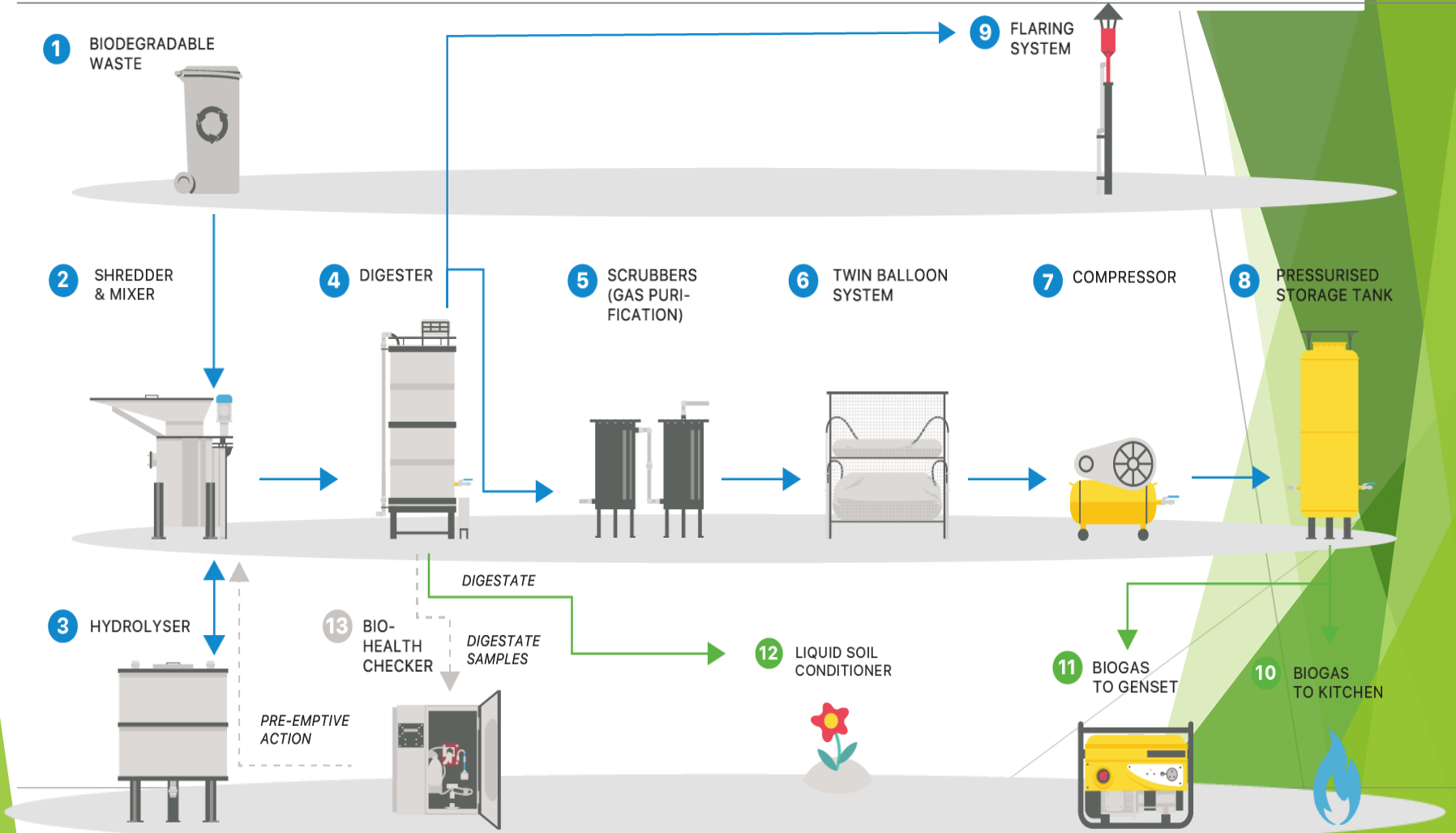
BIO INDHAN

The most sophisticated and efficient bio methanation solution

- Designed for urban establishments.
- Completely pre-fabricated, modular systems
- In-built odor, scum and foaming management
- Multi-level gas safety systems
- Flexible layout as per space availability



FLOW DIAGRAM BIO INDHAN



USP : AWPL BIO INDHAN

- Double the gas production and digestion rate of other biogas systems.
- Minimal usage of water.
- Zero effluent discharge system with rich manure content.
- Specially designed solution for seamless transition from LPG or PNG.
- Customized design to integrate with hybrid power generation units.

USP : AWPL BIO INDHAN

4 Clean energy
commercial LPG cylinders
equivalent/ton of food waste



Plug and play biogas
No civil work needed



24X7 Online
health monitoring

Water footprint: Minimal water needed
Carbon mitigation: Upto 450 tons of CO₂ pa/ton
Area footprint: 2 times lesser area



USP : AWPL BIO INDHAN

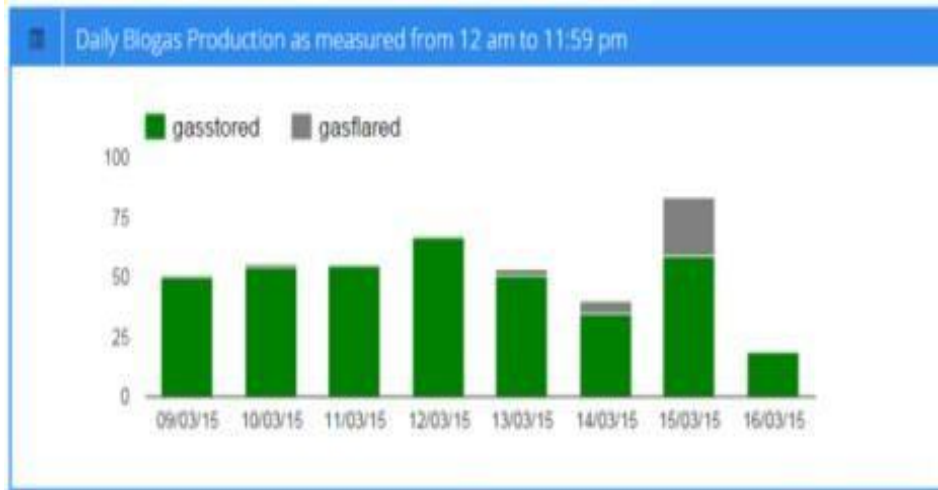
THE DIFFRENTIATOR Biological Health Monitoring

System with a “Brain”

WHAT DOES IT DO

- Plant health remotely monitored 24x7 for continuous operation.
- Automated gas management system for captive consumption through pipelines.
- Innovative health management for longer stability and performance.
- In-house developed technology and process for preventive maintenance and quicker solution.
- Online dashboard to monitor operational Parameters.

WHAT DOES IT LOOK LIKE



System Name :

Capacity : **700 KG**

Last Feed: **460 KG** Health : **0.70**

Gas Production Since Reset: **34 m³**

Average Daily Gas Production : **55.2 m³**

Data Last Updated : **16-03-15 10:32:24**

Total Gas Produced

61 %

34 m³ / 55.2 m³

Flow Rate

32 litre/min

Pressure

28 % full

2 bar / 6 bar

Temperature

41 °C

Flare Time

0 %

NaN min / 1440 min

Flare Volume

0 %

NaN m³ / 34 m³

Waste to Energy Calculation

AWPL BIO INDHAN

1000kg food waste to cooking gas

INPUT

Food waste = 1 Ton per day

Installation space = 400 sq.ft.
(20x20ft)

Generation of Biogas = 120-140
meter cube/day

Installation Time= 4 months

OUTPUT

Biogas equivalent to LPG =
70KG of LPG gas per day

70 kg LPG approx.=
4 commercial LPG cylinder

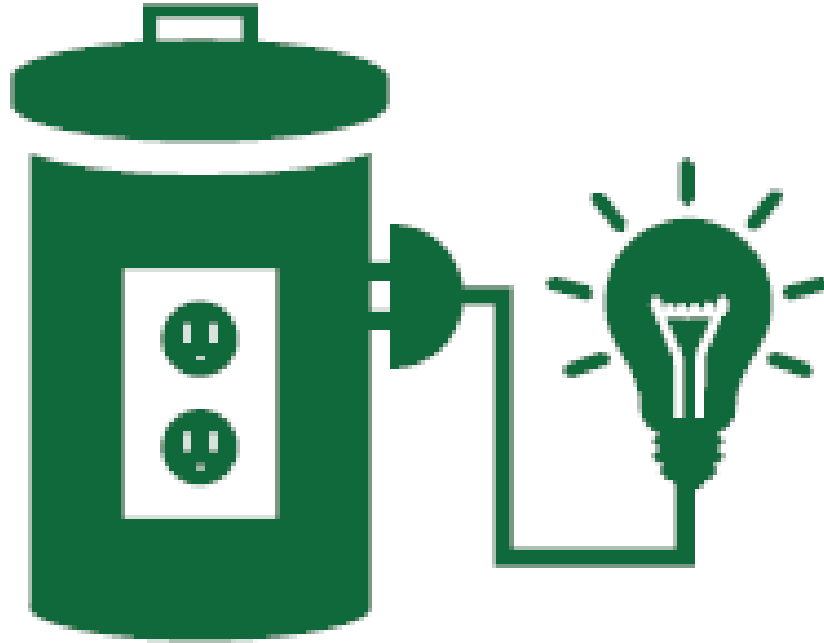
Current commercial rate LPG x units per
day = 4 X 1200= Rs 4800/day

Annual saving = 4800 X 350 day =
Rs. 16,80,000 per year

AWPL SOLUTION 1

FOOD WASTE TO ELECTRICITY

AWPL BIO BIDYUT



AWPL BIO BIDYUT

The bulk quantity of organic waste produced from public places, like Markets, Hotels , Restaurants, Institutes etc. can be used for the generation of electricity.

The main advantage of waste to electricity project is that, no external power is required for the operation of the plant.

The power generated in the plant can be utilized to meet the in-house requirements and can also provide light in the markets and street.

Minimum 500kg of organic waste is required per day .



Conversion of Food Waste to Electricity

AWPL BIO BIDYUT

Restaurant Food Waste

1000 kg of food waste generates

=

140 m³ Biogas

=

150 KW of electricity

=

250bulbs of 50 watt in 12 hrs

RETURN ON INVESTMENT AWPL BIO BIDYUT

Electricity produce in a day = 150 units per day

Electricity produced annual = $150 \times 365 = 54750$ units

Current commercial rate for 1 kw unit = Rs.8/unit

Annual rate of units = 54750×8 Rs

Saving per year = Rs 3,96,000 per year

Biogas Slurry produced in a day = 850 ltr.

Annual generation of Slurry = 850×350 days = 2,97,500 ltr.

Commercial value Rs./ltr = Rs.1/1 ltr.

Annual earning value of 2,97,500 ltr. = Rs 2,97,500/ year

AWPL BIO BIDYUT PLANT

Delhi Technological University, New Delhi

Waste Intake (MT/Day)	1.0
Energy generation (KW/Day)	150
Process technology	Biomethanation



OPERATIONAL SINCE 2019

ADVANTAGES OF BIOGAS

Clean fuel.

No residue produced.

No smoke produced.

Non polluting.

Economical.

Can be supplied through pipe lines.

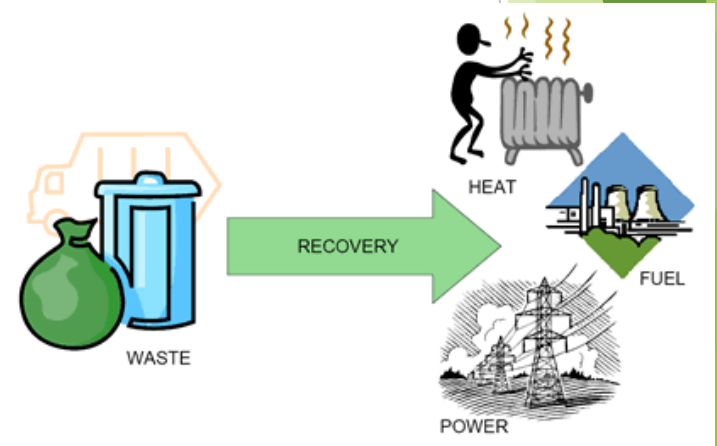
USES OF BIOGAS

Domestic fuel.

For street lighting.

Generation of electricity.

If compressed, it can replace compressed natural gas to use in vehicles.



Helping Nature to Complete It's Cycle



AREAS OF AWPL EXPERTISE

WATER RECOVERY

ORGANIC WASTE TO ENERGY

ZERO LIQUID DISCHARGE

BIO-FILTER STP

PADDY STRAW BASED BIO-CNG





absolute water

M 58, III Floor, M Block Market, Greater Kailash II, New Delhi 48

Tel : + 91 8800835115

Email : enquiry@absolutewater.in