



SOLUTION  
*Buggy*<sup>®</sup>  
CONNECT • INTERFACE • TEAMUP

# Introduction

*“SolutionBuggy is INDIA's Largest and Exclusive Platform for Manufacturing Industries to MENTOR-CONNECT- EXECUTE Industrial Projects with our vast network of curated and experienced 12,000 + expert consultants and qualified product suppliers”.*

**We work with you to address your critical business priorities.**

Our goal is to enable the manufacturing sector access the right resources and expertise at the right time. Our innovative platform with its advanced AI helps industries and consultants to collaborate and work on projects.

**3500+ Projects**

**12000+ Expert  
Consultants to  
Assist**

# Advantage - SB

## 01 SB Mentoring

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A special initiative taken by SolutionBuggy and Indian Manufacturing Industries Association (IMIA) with leading industry veterans & startup mentors to handhold and help Entrepreneurs in to SET-UP Successful Manufacturing Businesses.

## 02 Project Execution

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“One Stop-Single Window” solution to complex and critical projects Project Management by professionals (Reporting, timelines, quality, delta analysis etc). Multiple skill profile management ensuring Quality- Cost-Delivery.



## 03 Industry Funding And Government schemes

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Assist companies in getting funded through special grants, loans based on collaterals, hypothecation and government subsidies from banks, NBFCs, Private equity and venture capital firms as equity, debt syndication, working capital requirements, bill discounting and LCs.



# Our Core Team



SolutionBuggy was started with a view to bridge the gap between entrepreneurs and consultants. We at Solution Buggy believe in creating an ecosystem to strengthen MSME manufacturing sector. We have over 12000 consultants associated with us having an experience of over 25 years in each vertical of their expertise offering an APT solution to our client.

## Our Core Team

- **Arjun N (Founder & CEO)** - Over 12 years of experience in manufacturing.
- **Guruprasad B (Director)** - IIMB alumnus and over 18 years of experience in consulting and startups.
- **D S Mehra (Project- Director)** – Ex. Associate Vice President Spark Minda Group with over 35+ years of experience.



# Introduction To Biofuels

Biofuels are renewable energy sources derived from organic materials, such as

- Plants,
- Crops &
- Organic waste

Unlike conventional fossil fuels, biofuels also offer different advantages including,

- Lower carbon emissions,
- Reduced dependence on fossil fuels, &
- Potential for economic growth.



# Biofuel Market Size

India is set to overtake Europe in terms of biofuels production by 2026 according to the report by International Energy Agency (IEA).

While annual global demand for biofuels is set to grow by 29% from 2022 levels by 2026, reaching 1.5 billion liters.

India is seen to account for almost 30% of new biofuels production over the forecast period.



# Different Types of Biofuel

- Ethanol
- Biogas (CBG)
- Green Hydrogen
- Biodiesel



# Introduction to Ethanol



Ethanol is a type of biofuel commonly produced from crops like corn, sugarcane, and cellulosic biomass.

The production process involves **fermentation**, where the sugars from these feedstocks are converted into ethanol, followed by **distillation** to obtain a high-purity product.





## Exciting Growth Statistics of Ethanol Industry

India is set to become the third-largest market for ethanol in the world after the US and Brazil by 2026.

In 2021, India produced around 4.2 billion liters of ethanol.

The government of India has set a target to achieve 20% ethanol blending with petrol by 2025, which is driving the growth in ethanol production.

The government's target of achieving 20% ethanol blending with Petrol by 2025 would require an estimated 7.2 billion liters of ethanol annually.



# Govt. Impetus for the Ethanol Industry

as recently increased the purchase price upto Rs.60.29/litre for Ethanol made from broken rice and Rs.65.6 from sugarcane juice.

g Ethanol plant in Panipat has been operational for a year now.

as MP, Assam and Bihar have additional incentives such as Rs.1.5/litre extra subsidy, Rs.5cr capital subsidy

explore other raw materials such as bamboo, jaggery, sea algae etc are being considered as alternatives

D95 has also progressed rapidly and high chances of running a few modified vehicles as Test runs by Dec 20

s such as bagasse and Pressmud are being promoted as raw material for CBG production, which will improve Sugarcane based units



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# What ails the Ethanol Industry today....

Insistent supply of raw materials. Currently broken rice and corn from FCI is not enough to meet the demands of ethanol plants

High consumption of water for processing, almost 8l of water per 1l of Ethanol. This is high considering most of these plants are in arid regions. Sugarcane based ethanol plants are highly water intensive

Political issues as there is a backlash that “Food grains” are being used to produce “fuel”. FCI stopped rice supply to ethanol units in August 2023

Shift in focus from EBP to Hydrogen as a fuel cell has also shifted the focus from EBP to these technologies to reduce pollution

High cost of by products such as DDGS disposal has to be looked at as there is no buyer guarantee for such high quality DDGS

Financing program for EBP policy is very difficult to attain as most banks are approving loans only to an extent of 60% for entrepreneurs

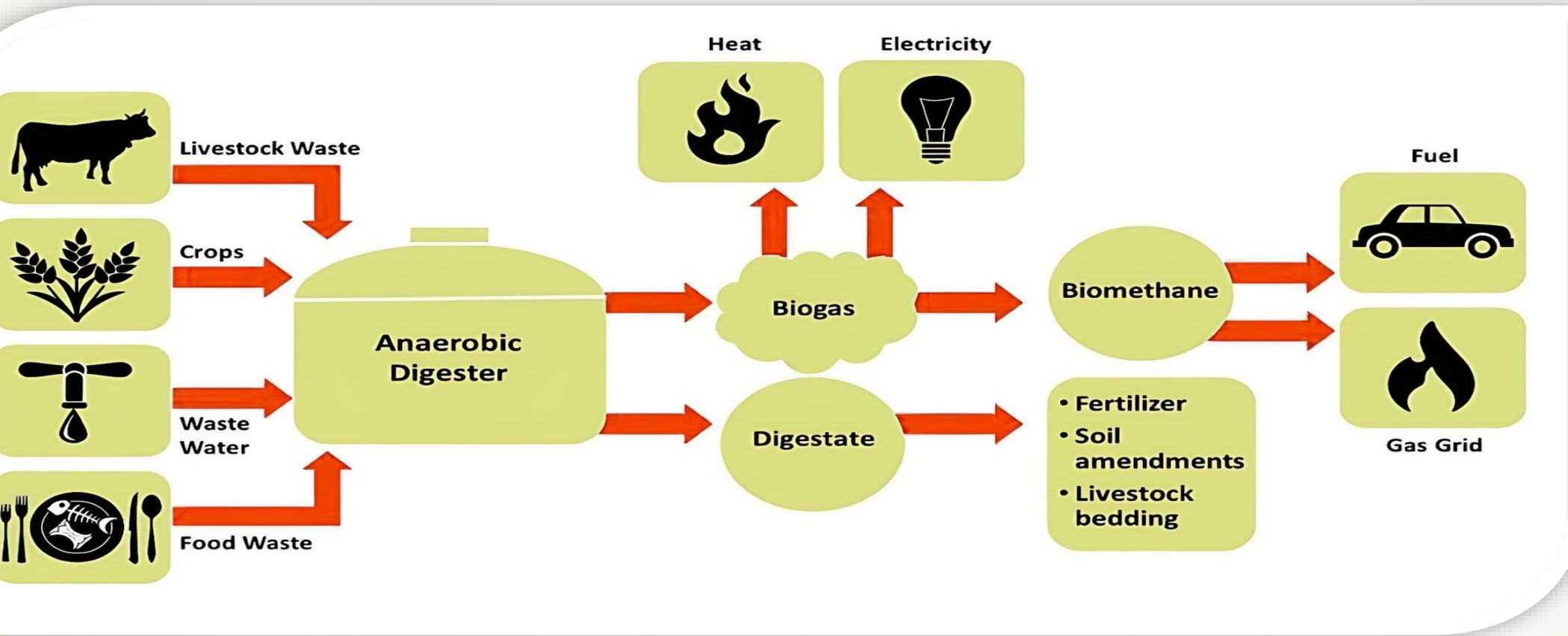
# Overview of Biogas

Biogas is a renewable energy source produced through the anaerobic digestion of organic waste, agricultural residues and energy crops.

This process involves the breakdown of organic matter by bacteria in the absence of oxygen, resulting in the production of biogas.



# Generation & Utilization of Bio Gas:





# Interesting Facts on Biogas Industry

India is the second-largest biogas producer in the world, accounting for approximately 10% of global biogas production.

Biogas production in India has been growing steadily, reaching 5.9 billion cubic metres in 2021.

Over 7,600 biogas plants installed in India have a total installed capacity of over 7,600 megawatts as of 2022.

Biogas production in India has the potential to replace about 25% of the country's current natural gas consumption.

Manure is the most efficient raw material with highest bio gas yields per ton of raw material.

Over 100 individuals issued for plants ranging from 2TPD to 50TPD of CBG production.



# What ails the CBG Industry today....

floated in 2018, but the policy has had very less takers until 2023

cy in the raw materials supply. Based on the raw materials, yield of biogas and hence CBG varies  
entrepreneur has no control over the raw materials.

and required for growing Napier grass, almost 80 acres for just 2-3 TPD plant, hence difficult to setup in Tier  
Napier grass is used as RM

s to be located within 25kms to the production plant, hence should be setup in areas where CBG demand

which is part of City gas distribution network can be another avenue to off take the CBG but right now  
work is still small

are not forthcoming to sanction loans without high collateral which is a hindrance to new entrepreneurs

# Green Hydrogen

Green hydrogen is produced through electrolysis, a process that uses renewable energy sources such as solar and wind power to split water molecules into hydrogen and oxygen.

Green hydrogen has various applications, including transportation, power generation and industrial processes.





# Market Size of Green Hydrogen

Hydrogen production capacity in India is projected to reach 4 gigawatts (GW) by 2026, according to the Ministry of New and Renewable Energy.

The government aims to produce 1 kilogram of green hydrogen at a cost of \$2.8 per kilogram by 2023, and reduce it to \$2 per kilogram by 2027, according to the Indian government's National Hydrogen Mission.

The green hydrogen market is projected to grow at a CAGR of over 45% between 2021 and 2026, according to a report by Mordor Intelligence.

Biodiesel is a biofuel produced from vegetable oils, animal fats, and even algae

The production process involves a chemical reaction called transesterification, where vegetable oils or fats are converted into biodiesel.





# Know More About Biodiesel Industry

Biodiesel market size reached US\$ 383.4 Million in 2022.

According to IMARC Group, the market is expected to reach US\$ 643.0 Million by 2028, exhibiting a CAGR of 10.5% during 2023-2028.

Biodiesel helps reduce carbon emissions by around 60-80% compared to conventional diesel, supporting India's efforts to combat climate change.

India is one of the world's largest biodiesel producers. In 2021, it accounted for approx 7% of the global biodiesel production, making it the fourth-largest producer after the United States, Brazil, and Germany.



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# Thank You

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