TRUALT BIOENERGY

Paving a **Greener**, Cleaner Future for India

One of India's Leading
Biofuels Producers

www.trualtbioenergy.com

INTRODUCTION TO TRUALT BIOENERGY:

CONTRIBUTING TO INDIA'S EVOLVING ENERGY STORY

Contributing to India's Biofuels Story
By becoming part of the narrative of India's biofuels story, we are proud to play a role in this journey. By converting agricultural waste into biofuels, we are contributing to a circular economy that empowers farmers, creates jobs, and transforms waste into a valuable resource.

Biofuels: Powering a Sustainable Future
The Government of India's National Biofuels Policy lays out a clear roadmap for a cleaner, self-reliant future. Biofuels offer a pathway to meet energy demand while protecting the planet.

A Growing Nation, A Rising Demand
With over a billion people and fast on its way to becoming the world's largest economy by 2027, India's energy needs are surging. The challenge? Scaling growth while safeguarding the environment.

Aligned with Aatmanirbhar Bharat
As India works towards energy independence by 2047 under the Aatmanirbhar Bharat initiative, with an emphasis on cutting its reliance on over 80% of crude imports, TruAlt Bioenergy is contributing by delivering homegrown biofuel solutions.

In Sync with India's Climate Goals and Global Commitments
Our efforts are aligned with India's sustainability targets, including the Panchamrit goals set at COP 26, which aim to:

i) Increase India's non-fossil energy capacity to 500 GW by 2030.
ii) Meet 50 percent of the country's energy requirements from renewable sources by 2030.
iii) Reduce total projected carbon emissions by one billion tonnes by 2030.
iv) Lower the carbon intensity of India's economy by at least 45 percent by 2030.
v) Achieve Net Zero emissions by the year 2070.

Committed to India's Energy Future
TruAlt Bioenergy is not just powering progress; we're fueling a future where sustainability is the norm that ensures that our development is in harmony with the planet, not at its expense.

OUR GREEN FOOTPRINT FOR A CLEANER PLANET

Established in 2021, a green energy company steadfastly pursuing its objectives through a harmonious amalgamation of various policies laid out by the Government of India in its transition towards sustainable growth.

One of India's largest biofuels producers, strategically positioned as a prominent and diversified player in the biofuels industry.

Our product portfolio includes the production of Ethanol, Compressed Biogas, Fermented Organic Manure, By-products, and future fuels.

Largest Ethanol producer in India based on installed capacity, with an aggregate production capacity of 2,000 kilo litres per day ("KLPD"), as of March 31, 2025.

One of the first producers of CBG under the Sustainable Alternative Towards Affordable Transportation ("SATAT") scheme introduced by the Government of India in 2018.

We aim to foster a circular economy, empower agriculture, strengthen local communities, address environmental issues, and make sustainability and green mobility a tangible reality.

Our Mission

We are on a mission to spearhead the global transition to a sustainable, cyclical, and self-reliant economy, significantly contributing to achieving net-zero emissions. We aim to drive the adoption of cleaner energy sources, enhance energy security, and create an era where sustainability biofuel is the norm.

Our Vision

We aspire to lead the Global Energy Transformation Story through innovation, cutting-edge technological progress, and creating wealth from waste.

FUELLING A SUSTAINABLE FUTURE:

CURRENT PRODUCTS

- 1G Ethanol
- Compressed Biogas
- Extra Neutral Alcohol
- Fermented Organic Manure
- Biofuel Dispensing Stations

FUTURISTIC PRODUCTS

- 2G Ethanol
- Sustainable Aviation Fuel
- Mevalonolactone / Mevalonic acid (MVL)
- Polylactic acid (PLA)
- Green Hydrogen
- Future Fuels & High Value By-products

First Generation (1G) Ethanol / Extra Neutral Alcohol (ENA)

Unit 1
700 KLPD

Unit 2
500 KLPD

Unit 3
400 KLPD

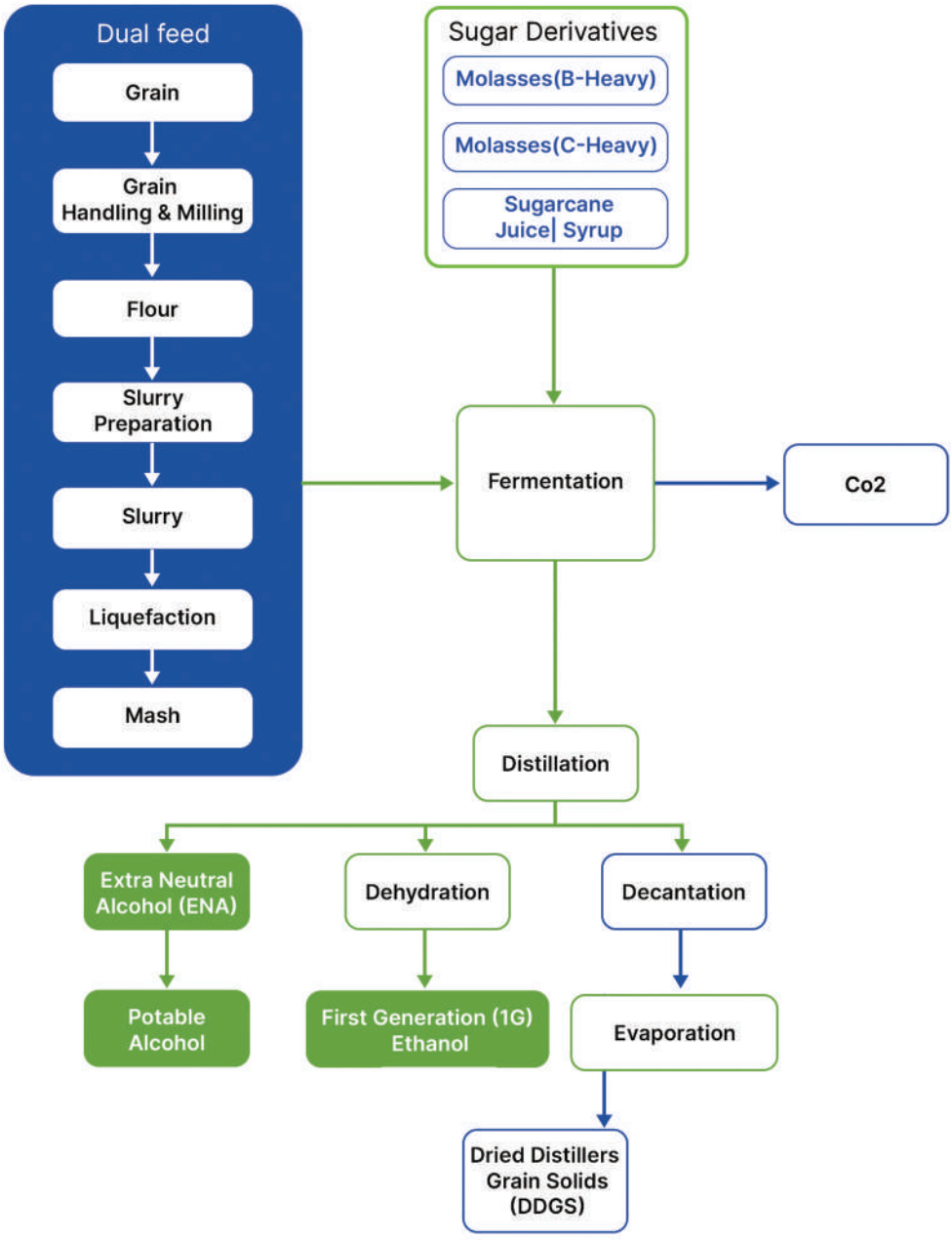
Unit 4
200 KLPD

Unit 5
200 KLPD

OUR LOCATIONS

- UNIT 1 MUDHOL
- UNIT 2 JAMKHANDI
- UNIT 3 KHANAPUR
- UNIT 4 KERAKALMATTI
- UNIT 5 BADAMI

FLOW CHART OF 1G ETHANOL

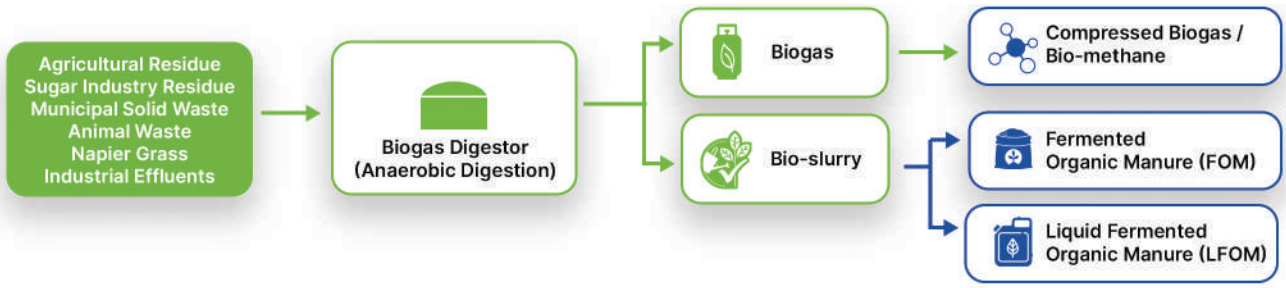


Sr. No	Current Applications	Forward-looking Applications
1	Fuel Grade Ethanol for Ethanol Blended Petrol (EBP) Program	Sustainable Aviation Fuel
2	Industrial Solvent	Cooking Fuel
3	Medical & Pharmaceutical Component	Electricity Generation
4	Alcoholic Beverages	Bioplastic and Biochemicals

Compressed Biogas (CBG) / Fermented Organic Manure

Number of Units	Current Production Capacities	Projected Production Capacities
1	12 TPD	Operational
7	Proposed JV with GAIL	7 Greenfield units of 12 Tonnes Per Day each
10	Proposed JV Strategic Partnership	10 Greenfield units of 20 TPD each

FLOW CHART OF CBG AND ORGANIC MANURE PRODUCTION



Sr. No	Current Applications	Forward-looking Applications
1	City Gas Distribution Network	Increased utilisation as a Transportation Fuel
2	Organic Manure	Power Generation Fuel

Sustainable Farming with Fermented Organic Manure (FOM) & Liquid Fermented Organic Manure (LFOM)

Fermented Organic Manure (FOM) and Liquid Fermented Organic Manure (LFOM) are nutrient-rich byproducts Compressed Biogas (CBG) plants. These organic fertilizers play a crucial role in sustainable agriculture, offering an eco-friendly alternative to chemical fertilizers while enhancing soil health and productivity.

KEY BENEFITS & APPLICATIONS

Soil Enrichment
Improves soil structure, water retention, and microbial activity for long-term fertility.

Nutrient-Rich Crop Support
Provides essential nutrients for healthier crops and higher yields.

Reduces Chemical Fertilizer Dependency
A natural and effective alternative to synthetic fertilizers, promoting organic farming.

Enhanced Plant Growth
Boosts plant immunity, root development, and overall yield quality.

Waste-to-Resource Solution
Recycles organic waste materials such as crop residues, kitchen scraps, and animal manure, minimizing landfill waste and supporting a circular economy.

By integrating FOM & LFOM into farming practices, we contribute to sustainable agriculture, healthier crops, and a greener planet.

THE BIOFUEL FUTURE

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India's First **Biofuel Station** has been setup in Karnataka

250 +
Biofuel Stations throughout India in the next 5 years

- Petrol
- Diesel
- E 100 Fuel
- Bio CNG / CBG
- EV Charging Points
- EV Battery Swapping
- Retail Essentials Outlets

Transitioning to a future led by the Bioenergy Sector

biofuels

SUSTAINABLE AVIATION FUEL (SAF)

THE FUTURE OF FLIGHT

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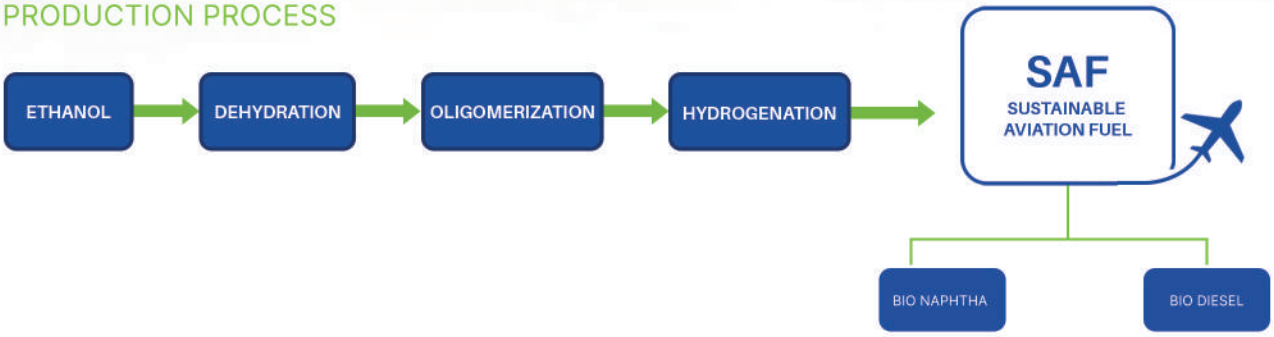
Pathway	Proposed Capacity	Capacity in Qty
Alcohol to jet (AJT)	310 KLPD	10 crore litres per annum

Application

Sustainable Aviation Fuel (SAF)	SAF By-products
	Bio - Naphtha
	Bio - Diesel

PRODUCTION PROCESS



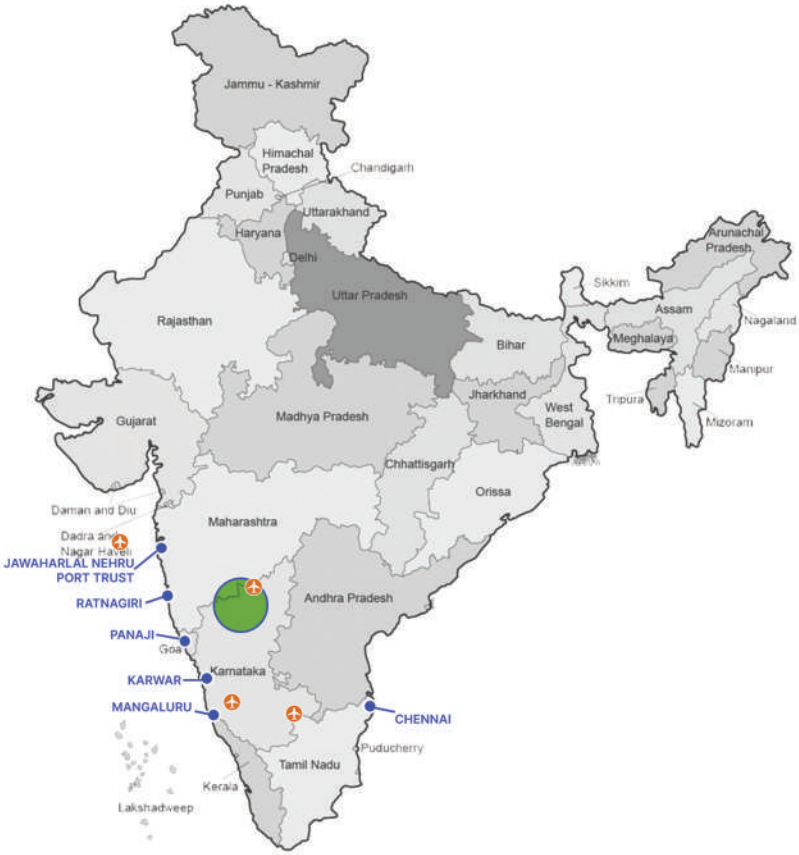
Strategic Location:
Strategically located within 500 km of three major airports—Bangalore, Hyderabad, and Mumbai as well as sea ports in Mumbai, Ratnagiri, Goa, Mangalore, and Karwar.

Largest Ethanol Producer:

TruAlt Bioenergy has the largest ethanol production capacity in India.

Robust Feedstock Management:

Ensures consistent and cost-efficient supply of raw materials.



- **OUR UNITS**
- **MAJOR INTERNATIONAL AIRPORTS**
- **MAJOR PORTS**

Second Generation (2G) Ethanol

Applications

- Sustainable Aviation Fuel (SAF) and By-products
- Transportation Fuel

INDIA'S UNTAPPED
ENERGY GOLDMINE

India generates **12-16 crore tons** of surplus biomass every year

If utilized, this can produce **3,000 crore liters of ethanol annually,** cutting crude oil imports and boosting energy independence!

CONVERTING BIOMASS INTO
POWER, PROGRESS, AND PROSPERITY!

Mevalonolactone / Mevalonic acid (MVL)

Applications

- Elastomers
- Specialty Fuels
- SAF Molecules

Green Hydrogen

- Industrial Applications
- Green Fuel for Transportation & Mobility
- Power & Energy Storage
- Residential & Commercial Use Power Systems
- Chemical & Synthetic Fuel Production

Polylactic Acid (PLA)

- Biodegradable packaging material
- Compostable cutlery
- Eco-friendly fabrics and fibers
- Biodegradable sutures
- 3D Printing & Manufacturing
- Sustainable prototyping materials
- Lightweight interior components
- Disposable Hygiene Products
- Compostable sanitary products

CHARTING NEW HORIZONS TO MINIMIZE FOSSIL FUEL DEPENDENCY

Ethanol as a Cooking Fuel

At TruAlt Bioenergy, we are exploring the potential of ethanol as a clean and sustainable cooking fuel, aiming to address the global challenge of access to clean cooking.

Global Need:

2.3 billion people still rely on traditional woodfuel, leading to indoor air pollution, deforestation, and GHG emissions (FAO).

Global Momentum:

African nations like Ethiopia and Nigeria are already adopting ethanol as a cooking fuel to diversify energy options and combat supply disruptions.

Ethanol Solution:

Clean-burning, efficient, and affordable ethanol cookstoves reduce emissions, improve air quality, and lower environmental impact.

India's Opportunity:

Ethanol-powered cookstoves are set to reduce dependence on LPG, leveraging India's growing ethanol supply and blending targets.

By introducing ethanol cookstoves, TruAlt Bioenergy aims to offer a sustainable, cost-effective, and accessible cooking solution for Indian households.

Dual-Fuel Tractors

TruAlt Bioenergy, in collaboration with its subsidiary Leafiniti Bioenergy Pvt. Ltd., is transforming traditional diesel tractors into dual-fuel vehicles that run on both high-speed diesel and compressed natural gas (CNG). This groundbreaking initiative targets the high tractor usage in farming, such as sugarcane transportation, offering farmers both economic efficiency and a more sustainable fuel option.

Progress:

Few tractors have already been successfully converted using dual-fuel CNG kits, with plans for further expansion.

Cost Savings:

Dual-fuel technology offers farmers substantial savings by reducing diesel consumption, with CNG being a more affordable and efficient fuel option.

Enhanced Performance:

Lower Engine Vibrations: Smoother operation and reduced wear and tear extend engine life and lower maintenance costs.

Quieter Operation: Reduced noise levels improve operator comfort, allowing for longer working hours with less fatigue.

Versatility: Ideal for both farm and non-farm applications, offering greater flexibility for farmers.

Environmental Benefits:

CNG tractors reduce emissions significantly, supporting India's clean energy goals and lowering the agricultural carbon footprint.

Economic Impact:

Along with fuel savings, reduced maintenance costs make dual-fuel tractors an economically viable and sustainable choice for farmers.

This initiative empowers farmers with a more cost-efficient and eco-friendly solution, contributing to a greener future while enhancing agricultural productivity.

EMPOWERING RURAL ECONOMIES

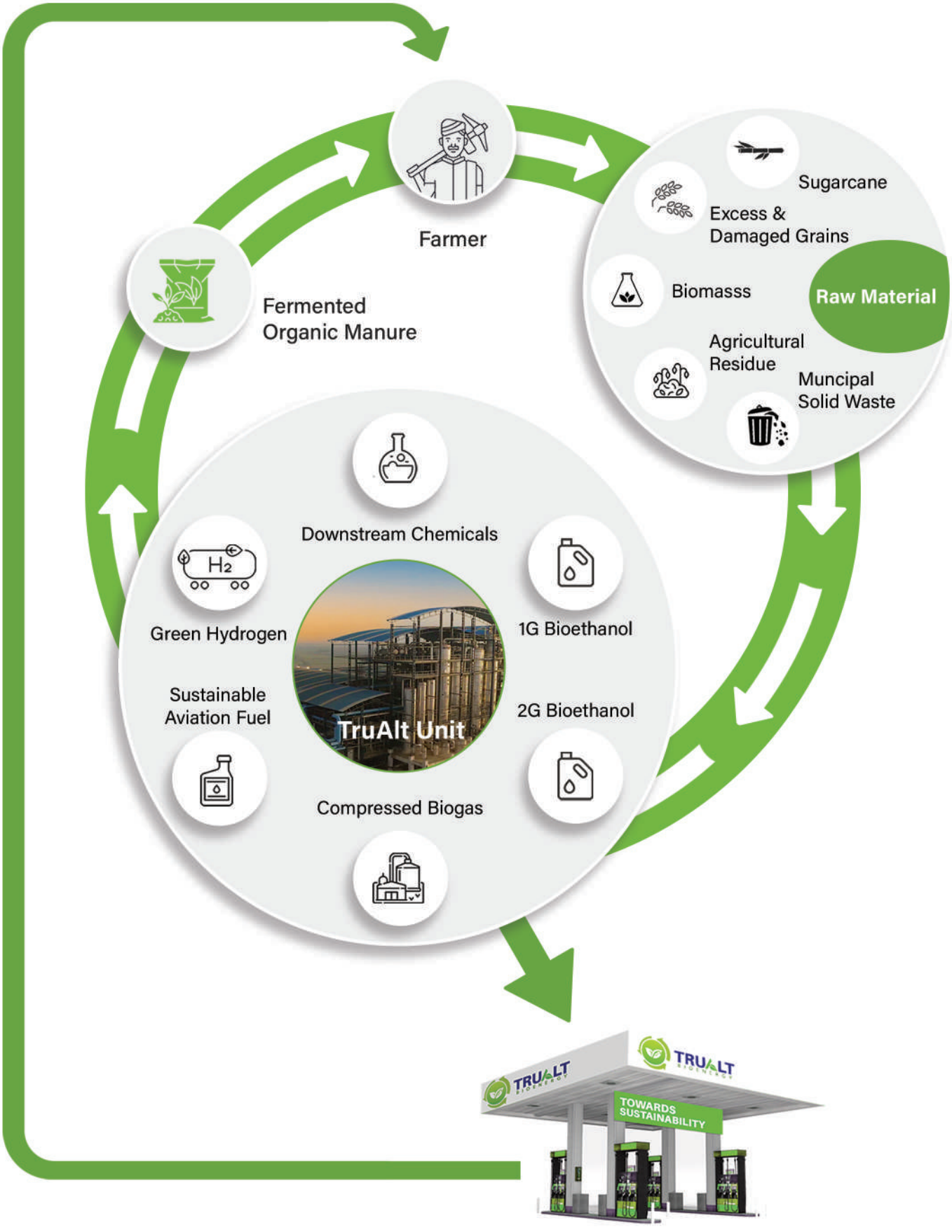
STRENGTHENING ENTREPRENEURSHIP

TruAlt Bioenergy supports over

350,000 Farmer Families in India

A strong focus on empowering our farmers by creating opportunities of entrepreneurship.

Enabling Local Economies to Transition to Impactful Ones



TRUALT BIOENERGY

BIOFUELS

A Smart Investment for **Prosperous Farmers**,
a **Stronger Economy**, and **Sustainable Savings**
on Fuel Costs

THE FUTURE IS
GREEN AND PROFITABLE

FOR FURTHER DISCUSSIONS

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