

COMPANY PROFILE

Powering a Greener Tomorrow

CBG, Bio-Fuels & Sustainable Infrastructure Solutions



ZILOXIS PRIVATE LIMITED

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Company Profile

Integrated multi-services platform with a dedicated CBG & Bio-Fuels vertical

ZILOXIS PRIVATE LIMITED is a multi-services company operating across Real Estate, CBG & Bio-Fuels, EV, Solar, HR and IT. Within the CBG & Bio-Fuels vertical, our focus is on project development support, technology coordination, EPC-oriented delivery, feedstock planning, process integration, regulatory documentation and post-commissioning support. We aim to combine commercial discipline with practical engineering so that renewable-energy projects are designed for reliability, safety and long-term operating performance.

CBG VALUE CHAIN

- 1 Feedstock assessment
- 2 Anaerobic digestion
- 3 Gas purification
- 4 Compression & storage
- 5 Offtake & operations support

Founder & MD's Message

At ZILOXIS, we see clean energy as both an environmental responsibility and a long-term business opportunity. Our CBG & Bio-Fuels vertical is being developed to help clients move from concept to commissioning through structured project planning, appropriate technology, dependable execution and transparent commercial engagement. Our aim is to build partnerships that create measurable value - for investors, farmers, communities and the environment.

Anurag Singh

Founder & Managing Director

ZILOXIS PRIVATE LIMITED

Our Mission

Clean energy delivery

Support practical, reliable and scalable CBG / Bio-Fuels projects.

Resource efficiency

Convert organic residues and waste streams into useful fuel and bio-fertilizer.

Responsible execution

Prioritize safety, regulatory compliance, transparency and quality.

Long-term value

Design for operational reliability, measurable economics and sustained stakeholder value.

Our Commitment

- Quality and safety across design, procurement, construction and commissioning.
- Transparent commercial documentation and clearly defined project stages.
- Technology selection aligned with feedstock characteristics and production objectives.
- Support for statutory documentation, plant stabilization, training and operating handover.
- Responsible use of resources with focus on waste utilization, circular economy and cleaner fuel.

Unique Selling Proposition (USP)

End-to-end coordination

From feasibility and DPR through engineering, installation, commissioning and support.

Technology-led approach

CSTR / high-load reactor options, gas purification, compression, instrumentation and automation.

Commercial support

Project economics, financing support, SATAT-related assistance and offtake/buy-back facilitation where applicable.

Multi-vertical ecosystem

Access to allied capabilities across construction, solar, financing, HR and technology services.

What is Biogas?

Biogas is an energy-rich gas produced by anaerobic decomposition of biomass and organic waste. Raw biogas typically contains methane, carbon dioxide and small quantities of hydrogen sulphide, moisture and other impurities. After purification and compression, it becomes Compressed Biogas (CBG), a cleaner gaseous fuel suitable for transport and industrial use.

CH₄

55-65%

CO₂

30-40%

H₂S

trace / low

Moisture

controlled

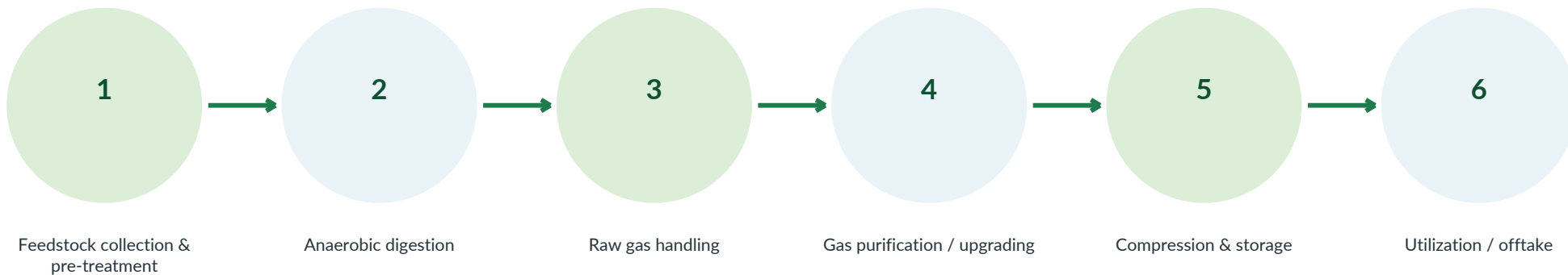
Typical CBG Quality Targets

Illustrative composition and quality expectations

Parameter	Typical target / limit
Methane (CH4)	~90% or higher
Carbon dioxide (CO2)	Low / controlled after upgrading
Hydrogen sulphide (H2S)	Very low (ppm range)
Oxygen (O2)	Low
Moisture	Controlled for compression / storage
Particulate matter	Minimal / filtered

Final gas specifications should be validated against the applicable offtake, PESO, OMC and statutory requirements.

Compressed Biogas Generation Process



Feedstock & Reactor Options

Agricultural residues

Food & vegetable waste

Animal manure

Press mud / process residues

Sewage / organic sludge

Energy crops / green fodder

CSTR

Continuous Stirred Tank Reactor: suited to pumpable organic slurry and steady mixing, with temperature / pH / organic loading control.

High-load reactor options

Advanced anaerobic configurations may be selected for specific high-organic-load or wastewater applications based on feedstock and project design.

Chemical Composition - Raw Biogas vs CBG

Component	Raw biogas (typical)	CBG after upgrading
Methane (CH ₄)	55-65%	>90%
Carbon dioxide (CO ₂)	30-40%	low / controlled
Hydrogen sulphide	trace to low %	ppm range
Nitrogen / Oxygen	small quantities	low
Moisture	present	controlled / removed

CBG vs CNG

Parameter	CBG	CNG
Primary source	Organic waste / biomass	Fossil natural gas
Renewability	Renewable when sustainably sourced	Non-renewable
Production route	Anaerobic digestion + upgrading	Natural-gas extraction / processing
Circular-economy value	Converts waste into fuel and digestate	Limited waste-management linkage
Methane content	Typically high after upgrading	Typically high
Use	Transport, industrial fuel, other gas applications	Transport and industrial fuel

Potential Project Impacts

Environmental

- Waste diversion
- Lower dependence on fossil fuel
- Potential GHG reduction
- Nutrient recycling through digestate

Economic

- Local procurement and logistics
- Plant operations and maintenance jobs
- Revenue from CBG / by-products
- Rural value-chain development

Social

- Direct and indirect employment
- Cleaner local fuel ecosystem
- Farmer / aggregator participation
- Community infrastructure linkages

Process Flow

1. Feedstock collection

Organic residues are received, sorted, sized and prepared.

2. Anaerobic digestion

Microorganisms convert organic matter into raw biogas in oxygen-free conditions.

3. Gas collection

Raw gas is captured and conditioned before upgrading.

4. Purification / upgrading

CO₂, H₂S and moisture are reduced to reach the required methane quality.

5. Compression & storage

Purified gas is compressed and stored / cascaded for dispatch or pipeline use.

6. Digestate utilization

Residual slurry can be separated and used or processed as bio-fertilizer subject to quality compliance.

Government Support - Illustrative

Actual eligibility, amount and policy status must be verified at the time of application

Support route	Illustrative benefit
SATAT / OMC offtake	Market linkage / offtake opportunities for compliant CBG projects
National Bioenergy / Waste-to-Energy support	Central financial assistance may be available for eligible projects
Priority-sector / project lending	Financing support through eligible banking routes
Biomass aggregation support	Assistance may be available for eligible collection / aggregation machinery
State incentives	Capital, land, electricity duty, stamp duty or other incentives may vary by state

Get in touch

Tell us about your CBG / Bio-Fuels project. We aim to respond within one business day.

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