DETAILED PROJECT REPORT — AUGUST 2025

6 TPD Napier Grass-Based Bio-CNG Plant

Parsawan Village, Milkipur Tehsil, Ayodhya District

Proposed by **Sanatan Saket Divya Dham Trust, Ayodhya Dham**
In collaboration with **Winezze 360-Degree Bharat Pvt Ltd** (Startup India Certified)

AGENDA

What This Presentation Covers

A comprehensive overview of the proposed Bio-CNG plant — from technical specifications and financial feasibility to social impact and investment opportunity.

EXECUTIVE SUMMARY

A Self-Sustaining Circular Rural Economy

The Sanatan Saket Divya Dham Trust, in collaboration with Winezze 360-Degree Bharat Pvt Ltd, proposes to establish a **6 TPD Napier Grass-based Compressed Bio-Gas (CBG) plant** at Parsawan Village, Ayodhya District. The plant will utilise Napier Grass cultivated by local Farmer Producer Organisations and cattle manure from the adjoining government gaushala (400+ cows) to produce renewable CBG and high-quality organic fertilisers.

With a GAIL 25-year Gas Sales Agreement (GSA) secured for offtake at a **fixed buy-back price of ₹108/kg**, government subsidies totalling **₹16.5 Cr**, and 80% PSU bank financing under the Credit Guarantee Scheme, this project offers a de-risked, high-return investment model for rural India.

6 TPD

CBG Production

Daily output of high-purity compressed biogas

₹108

Buy-Back Rate

Per kg, fixed under GAIL's 25-year GSA

₹30 Cr

Total Project Cost

Overall capital investment including all components

₹16.5 Cr

Government Subsidies

₹12 Cr (GOI) + ₹4.5 Cr (UP Govt)

PROJECT BACKGROUND & LOCATION

Parsawan Village, Ayodhya District

The project is strategically located on **6.3 acres** in Parsawan Village, Milkipur Tehsil — with **4 acres purchased in the company's name** (factory site) and the remaining **2.3 acres on long-term lease**. The location provides an ideal ecosystem for sustainable energy production.

Adjacent Government Gaushala

Over 400 cows provide a consistent, zero-cost-transport supply of cattle manure — a critical feedstock component that reduces both carbon footprint and input costs.

FPO Napier Grass Network

Local Farmer Producer Organisations have agreed to cultivate **225 acres of Napier grass** on a guaranteed buy-back model, securing the primary feedstock supply within a 10 km radius.

Strategic Connectivity

Situated in Ayodhya district with developing infrastructure, ensuring efficient distribution of Bio-CNG and organic fertilisers to market centres and GAIL's network.

Community Access

Easy access to **25 surrounding villages**, enabling implementation of educational, healthcare, and skill development programmes as part of the rural development mandate.

PROJECT PROMOTERS

Two Organisations, One Mission

This collaboration brings together deep community roots and technical innovation to create a replicable model of rural transformation through renewable energy.

Sanatan Saket Divya Dham Trust

Led by Founder & Chief Trustee **Lokesh Rao Chavan**, the Trust is committed to rural transformation and green energy in Ayodhya Dham. Their vision integrates spiritual values with modern technological solutions — encompassing education, healthcare, sustainable agriculture, and renewable energy.

www.ssddhamtrust.org.in

Winezze 360-Degree Bharat Pvt Ltd

A **Startup India certified** agritech company specialising in bio-energy and circular economy-based rural development. The company holds all certifications required to avail government schemes and subsidies, and brings cutting-edge technology solutions adapted for rural Indian contexts.

- Proven track record in bio-energy project implementation
- Technical expertise in VPSA biogas upgradation systems
- Experienced in navigating PSU bank and subsidy processes

TECHNICAL SPECIFICATIONS

Plant Parameters at a Glance

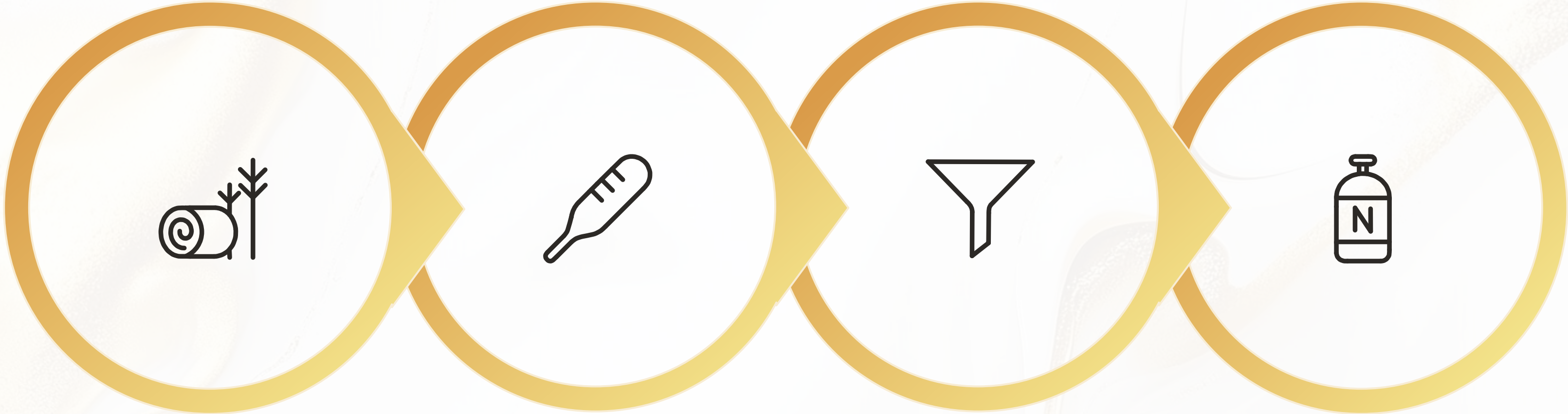
The plant specifications have been optimised through extensive feedstock analysis and process simulations to ensure maximum biogas yield and operational efficiency. Design incorporates redundancy in critical systems to maintain continuous operation.

Parameter	Specification	Notes
Feedstock Consumption	130 TPD Napier Grass + 20 TPD Cattle Manure	Optimised ratio for maximum biogas yield
Biogas Generation	15,750 – 17,250 m^3/day	Varies based on feedstock quality
CBG Output	5.8 – 6.4 TPD (6,000 kg/day avg.)	After purification and compression
Methane Content	>96%	Exceeds minimum OMC requirements
By-products	30 TPD Solid + 90–95 KLPD Liquid Bio-fertiliser	Additional revenue streams
Power Requirement	~532 kW (6,481 kWh/day)	Grid power with backup generation
Land (Owned)	4 acres — purchased in company name	Factory and core plant area
Land (Leased)	2.3 acres — long-term lease	Buffer zones and ancillary operations

The AtmosPower VPSA (Vacuum Pressure Swing Adsorption) upgradation system recovers >98% of methane from raw biogas, achieving 96%+ purity — exceeding all OMC quality standards.

PROCESS FLOW & TECHNOLOGY

From Napier Grass to Compressed Bio-CNG



Feedstock Prep

Anaerobic Digestion

VPSA Upgradation

Compression & Storage

The complete production cycle transforms raw agricultural biomass into high-purity Bio-CNG through a proven four-stage process. The AtmosPower VPSA system selectively adsorbs CO_2 while allowing methane to pass through — achieving 96%+ purity. Purified biomethane is then compressed in a three-stage process to 250 bar and dispensed directly into GAIL's distribution network.

FEEDSTOCK STRATEGY

Napier Grass — Secured via FPO Buy-Back Model

Local Farmer Producer Organisations (FPOs) have formally agreed to cultivate **225 acres of Napier grass** under a guaranteed buy-back arrangement. The company pays ₹75,000/acre as buy-back to farmers and bears an additional ₹25,000/acre towards seeds, fertilisers, and electricity — making the total feedstock cost **₹1 lakh per acre per annum**, or **₹2.25 Cr annually** for 225 acres.

₹75,000/acre

Buy-back payment to FPO farmers, guaranteed annually

₹25,000/acre

Company bears cost of seeds, fertilisers & electricity

₹1 Lakh/acre

Total Napier grass OPEX per acre per year

₹2.25 Cr/year

Total annual feedstock cost for 225 acres

Napier grass yields 80–100 tonnes per acre annually with 4–6 harvests, produces 300–350 m^3 of biogas per tonne, and requires **40–50% less irrigation water** than conventional crops. Its perennial lifecycle of 5–7 years minimises replanting and ensures year-round supply stability.

FINANCIAL FEASIBILITY

Project Cost & Subsidy Structure

The overall project cost is estimated at **₹30 Crores**. Substantial government support — both from the Government of India and the Uttar Pradesh Government — significantly reduces the effective investment burden, making this a highly attractive proposition for strategic partners.

Government of India Subsidy

₹2 Crore per TPD production capacity under MNRE's Central Financial Assistance scheme.

6 TPD × ₹2 Cr = **₹12 Crore** from GOI

UP Government Subsidy

Additional **₹4.5 Crore** from the Uttar Pradesh Government under the UP Bioenergy Policy.

Total Subsidies

₹12 Cr + ₹4.5 Cr = ₹16.5 Crores in non-repayable government grants

Financing Structure

Component	Amount
Total Project Cost	₹30 Cr
GOI Subsidy	₹12 Cr
UP Govt Subsidy	₹4.5 Cr
PSU Bank Loan (80%)	₹24 Cr
Equity / Partner Investment	**₹5 Cr**

PSU bank financing of **₹24 Crores (80%)** is being secured under the **Credit Guarantee Scheme** of the Government of India, backed by the GAIL 25-year

FINANCIAL OUTLOOK

Revenue Model & Annual Operating Costs

This project demonstrates robust financial viability, generating substantial revenue from multiple streams while maintaining a lean operational expenditure.

Revenue Streams

CBG Sales: ₹21.38 Cr/year (6,000 kg/day at ₹108/kg)

Solid Bio-fertiliser: ₹4.95 Cr/year (30 TPD at ₹5,000/tonne)

Liquid Bio-fertiliser: ₹0.59 Cr/year (90 KLPD at ₹2/litre)

Total Annual Revenue: ₹26.92 Cr/year

Annual Operating Costs (OPEX)

Napier Grass Feedstock: ₹2.25 Cr

Cattle Manure: Zero Cost (from adjacent gaushala)

Power: ₹1.49 Cr (6,481 kWh/day at ₹7/unit)

Labour: ₹0.90 Cr (30 staff)

Maintenance & Consumables: ₹0.75 Cr

Loan Repayment: ₹3.65 Cr (EMI on ₹24 Cr @ 9% over 10 years)

Total Annual OPEX: ₹9.04 Cr

FINANCIAL OUTLOOK

Profitability & Return on Investment

This project offers an attractive financial profile, combining substantial profitability with a rapid return on equity investment and long-term revenue stability.

₹26.92 Cr

Annual Revenue

Strong top-line generation

₹9.04 Cr

Annual OPEX

Lean operational expenditure

₹17.88 Cr

Net Annual Profit

After loan repayment

₹5 Cr

Equity Required

Minimal partner investment

~3.4

Payback Period

Years on equity investment

~35%

IRR

Internal Rate of Return

>3x

DSCR

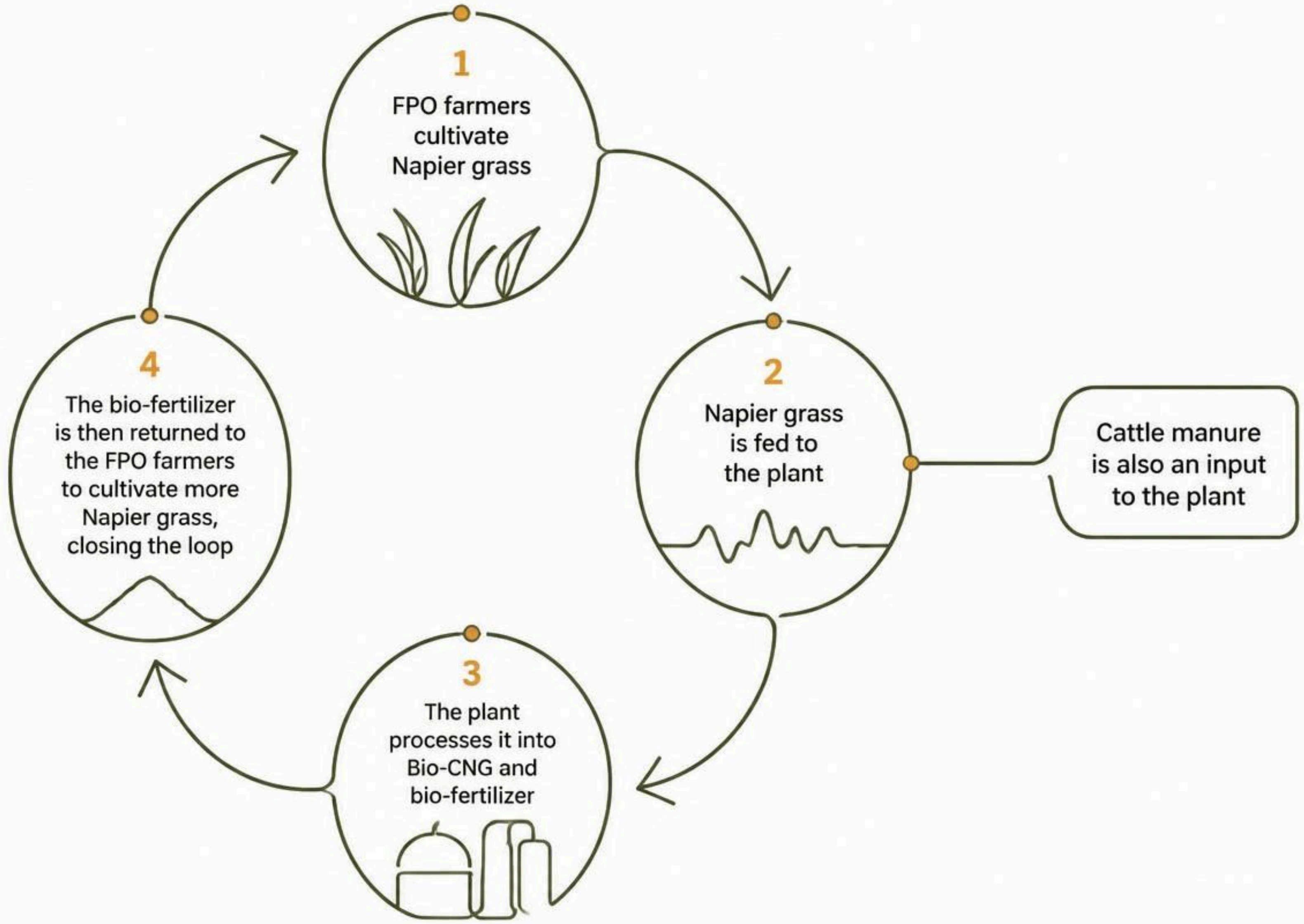
Highly bankable debt coverage

The **GAIL 25-year Gas Supply Agreement (GSA)** provides unparalleled revenue certainty for the entire loan tenure and significantly beyond, de-risking the investment for all stakeholders.

CIRCULAR ECONOMY

Circular Economy Model — Zero Waste, Maximum Value

This plant embodies a true circular economy, transforming agricultural waste into valuable resources while minimizing environmental impact and fostering local sustainability.



- **FPO Farmers:** Cultivate 130 TPD Napier Grass across 225 acres, ensuring consistent feedstock supply.
- **Biogas Plant:** Converts Napier Grass and 20 TPD cattle manure (from an adjacent gaushala) into valuable outputs.
- **Outputs:** 6,000 kg/day Bio-CNG sold to GAIL, 30 TPD solid bio-fertiliser, and 90 KLPD liquid bio-fertiliser.
- **Closed Loop:** Bio-fertiliser returns to FPO farmers, reducing their input costs and enhancing soil health, perpetuating the growth of Napier grass.

This model benefits the local community through clean energy, income generation for farmers, and sustainable agricultural practices, while reducing waste to zero.

COMMUNITY IMPACT

Rural Development Integration — Transforming 25 Villages

This project extends beyond energy production, fostering significant socio-economic development across 25 surrounding villages through a multi-faceted approach.

Farmer Income Enhancement

225 FPO farmers earn guaranteed ₹75,000/acre/year from Napier grass, a 40–60% income increase over conventional crops.

Direct Employment

30 permanent plant jobs (operators, technicians, admin) for local youth, providing stable career opportunities.

Indirect Employment

500+ seasonal and ancillary jobs in feedstock harvesting, transport, and bio-fertiliser distribution.

Women's Self-Help Groups

Liquid bio-fertiliser packaging and distribution managed by local SHGs, empowering women entrepreneurs.

Skill Development

ITI-level training programmes in biogas plant operations, renewable energy, and agri-tech for community members.

Education & Healthcare

Trust's mandate includes establishing a school and primary health centre in Parsawan Village, improving essential services.

Carbon Credits

Project qualifies for carbon credits under UNFCCC, creating an additional revenue stream estimated at ₹1–2 Cr/year.

REGULATORY ROADMAP

Statutory Approvals & Clearances

A comprehensive overview of our progress in securing essential regulatory approvals and clearances, ensuring a smooth project rollout.

Approval / Clearance	Status
Obtained / In Progress	
Land Registration	Obtained ✓
Startup India Certification (Winezze 360)	Obtained ✓
GAIL Letter of Intent / GSA	Obtained ✓ (25-year agreement)
FPO Buy-Back Agreements	Obtained ✓ (225 acres committed)
Company Incorporation (Winezze 360-Degree Bharat Pvt Ltd)	Obtained ✓
Pending / In Process	
MNRE Subsidy Application (₹12 Cr GOI)	In Process
UP Bioenergy Policy Subsidy (₹4.5 Cr)	In Process
PSU Bank Loan Sanction (₹24 Cr under Credit Guarantee Scheme)	In Process
Environmental Clearance (MoEFCC)	To be applied
Consent to Establish (UP Pollution Control Board)	To be applied
Factory License (UP Labour Department)	To be applied
Fire NOC	To be applied
Electricity Connection (UPPCL)	To be applied

Our dedicated legal and administrative teams are actively managing the remaining applications to ensure all necessary clearances are secured promptly.

PROJECT TIMELINE

Implementation Timeline — 12-Month Execution Plan

Our detailed 12-month plan outlines a streamlined and efficient pathway from project inception to full commercial operation, ensuring timely delivery and value creation.

1 Phase 1 — Pre-Construction (Months 1–2)

- Finalise all statutory approvals and clearances
- Complete PSU bank loan sanction
- Appoint EPC contractor and equipment vendors
- Finalise FPO agreements and begin Napier grass cultivation on 225 acres

2 Phase 2 — Civil & Infrastructure (Months 3–5)

- Site preparation and boundary wall construction
- Civil works: digester foundation, equipment pads, roads
- Utility connections: power, water, drainage
- Construction of administrative building and lab

3 Phase 3 — Equipment Installation (Months 4–8)

- Delivery and installation of anaerobic digesters
- AtmosPower VPSA upgradation system installation
- Compressor and storage system installation
- Instrumentation, control systems, and safety systems

4 Phase 4 — Commissioning & Trial Run (Months 9–11)

- System integration and testing
- Trial run with partial feedstock load
- GAIL quality certification and metering installation
- Staff training and SOPs finalisation

5 Phase 5 — Commercial Operations (Month 12 onwards)

- Full commercial production at 6 TPD
- First CBG delivery to GAIL network
- Bio-fertiliser sales commence

Investment Opportunity — Partner With Us

Co-invest ₹5 Crores in a High-Return Bio-CNG Project

We are seeking a strategic equity partner to unlock the full potential of this de-risked, high-impact venture.

Significant Returns & Security

Equity stake in a **₹30 Cr project** with **₹16.5 Cr in government subsidies** already secured. Enjoy a net annual profit share of **₹17.88 Cr** and an **IRR of ~35%+**, with a payback period of **~3.4 years**.

De-risked Revenue Stream

Benefit from **25-year revenue certainty** via a GAIL Gas Supply Agreement at a **fixed buy-back rate of ₹108/kg**, ensuring stable and predictable income. Our DSCR of **>3x** highlights the project's robust financial health.

Sustainable Growth & Impact

Tap into additional revenue from **Carbon Credits (₹1–2 Cr/year)**. Associate with a nationally recognised Trust and Startup India certified company, contributing to rural development and a circular economy.

Scalable & Replicable Model

This proven model is designed for replication across **50+ villages in Uttar Pradesh**, offering future expansion opportunities and widespread positive impact.

Next Steps

1. Sign NDA and receive detailed financial model
2. Site visit to Parsawan Village, Ayodhya
3. Due diligence and term sheet finalization
4. Financial close and project commencement

Contact Us

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