

TENDER
for
Supply, Installation, and Commissioning of a 5-TPD Biogas plant with Operation and
Maintenance for 06 months in Patna, Bihar

Tender Number: 10005643

Date: 05.10.2026

(Single Envelop Bid System)

Particulars	Description
Purpose of Tender	To select an experienced company for the Supply, Installation, and Commissioning of a 05-TPD Biogas plant with Operation and Maintenance for 06 months in Patna, Bihar as per approved design conforming to the Technical Specifications.
Tender reference number	10005643
Date of tender announcement	05/10/2026
Last date to submit pre-bid queries by the interested bidders	12/10/2026
Last date to provide clarification to the queries. All the queries will be answered in the form of (Frequently asked question) FAQ and will be uploaded on the website www.tendernews.com	15/10/2026
Last Date and time for submission of bids	24/10/2026 ; 11:59 pm
Mode of Submission	Techno-commercial proposal must be submitted in a sealed envelope.
Validity of Bids/ Offered Price	60 days from the last date of submission of bids i.e. 24th October 2026 The selected supplier shall not be able to vary from their financial bid until the completion of the Order, if awarded by GIZ.
Address for Bid Submission	The techno-commercial bid needs to be submitted in sealed envelope on the address mentioned below – Submission of Bids. The bidder must submit documentary evidence against “Clause 3.1” along with the techno-commercial bid.
Location of Site	Baazar Samiti, Patna, Bihar

GIZ Country Office (India) is soliciting bids from interested suppliers/companies for the Supply, Installation, and Commissioning of a 5-TPD Biogas plant with Operation and Maintenance for 06 months in Patna, Bihar as per approved design conforming to the Technical Specifications.

Purpose of the Bid

Supply, Installation, and Commissioning of a 5-TPD Biogas plant with Operation and Maintenance for 06 months in Patna, Bihar for processing of Municipal organic waste

Process of tender submission

The bid may be prepared as per the provisions mentioned in the following documents available:

1. Invitation to Tender- Scope of work and bidding conditions
2. Checklist of documents
3. Covering Letter from Bidder – Annexure “A”
4. Declaration by bidder – Annexure “B”
5. Technical Criteria – Annexure “C”
6. Bills of Material / Financial Format – Annexure “D”
7. Delivery Schedule – Annexure “E”
8. Soil Testing and Geo Technical Report – Annexure “F”
9. Layout and Architectural Drawing for the Plant – Annexure “G”
10. GSOP – Annexure “H”
11. General Terms & Conditions (GTCC)
12. Legal Inferences
13. Self-declaration to determine the origin or source of the goods offered

Interested bidders are requested to carefully examine all documents and submit the entire tender proposal as instructed in above mentioned documents. Any deviation/ differentiation from the instruction will lead to the disqualification of the tenderer from the bidding process.

The bid must reach GIZ Country Office **on or before 24th October 2026 ; 11:59 pm** on the below-mentioned address.

Covering letter must be addressed to: **Head of Procurement, GIZ Country Office, German Development Cooperation office, B5/5, Safdarjung Enclave, New Delhi-110029**

Please mark your bid -

Tender Ref: “Supply, Installation, and Commissioning of a 5-TPD Biogas plant with Operation and Maintenance for 06 months in Patna, Bihar, REF Tender INQ. 10005643

Bids received in any other manner, ie- email ids, fax or any other email ID shall be summarily rejected

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1. Project description

1.1. About GIZ

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH is a German Government enterprise that provides services in the field of international cooperation in sustainable development worldwide.

GIZ is implementing a “Waste solutions for Circular Economy in India” project which is being supported by a joint climate action program- MAF (Mitigation Action Facility) formerly known as NAMA (Nationally Appropriate Mitigation Action) Facility-set up by the German Federal Ministry for Economic Affairs and Climate Action (BMWK), Department for Business, Energy and Industrial Strategy (BEIS) of the United Kingdom (UK), European Commission (EU Commission) and the Children’s Investment Fund Foundation (CIFF). This is a 5-year project which will operate in 5 lighthouse locations- Patna, Varanasi, State of Goa, Bengaluru & Tiruchirappalli with local and state governments as partners. GIZ will act as the NAMA Support Organization (NSO) for the project and will be responsible for the delivery of funds, services, financial and administrative management of the project. The project includes the following key components:

- i. Technical Assistance: At the city level it includes supporting setting up a role-model Source Segregation System, integration of the informal sector and capacity building of relevant stakeholders on effective MSW Management and support for accessing SBM etc.
- ii. Grant Funding Mechanism: This component includes providing partial CAPEX or OPEX financing for composting plants, Refuse Derived Fuel (RDF) plants, Material Recovery Facilities, Recycling facilities and Bio-methanation Plants.
- iii. Risk Sharing Facility: This facility will be managed by a Financial Institution and provides guarantees for debt financing for MSW management facilities

GIZ, under the Mitigation Action Facility (formerly NAMA Facility) funded project titled “Waste Solutions for a Circular Economy in India”, is supporting Patna Municipal Corporation (PMC) in implementing low-carbon waste management solutions through grant-based infrastructure support, technical assistance, and private sector engagement.

The project is currently operational in Kankarbagh and Bankipur circles of Patna, and is extending support to PMC for the development of a 5 TPD Biogas/Biomethanation plant. This plant will process segregated organic waste generated from the Bazaar Samiti, wholesale fruit and vegetable market located in the same vicinity, and aims to demonstrate a sustainable circular economy model.

1.2. Product Description

Biogas is produced by anaerobic digestion of wet waste. It consists of methane, carbon dioxide, a small amount of hydrogen sulphide and other gases in small quantities. The methane present in biogas is combustible, thus it can be used as a source of energy instead of other conventional fuels. Biogas is thus an alternate source of energy that meets the basic need for cooking fuel in rural and urban India.

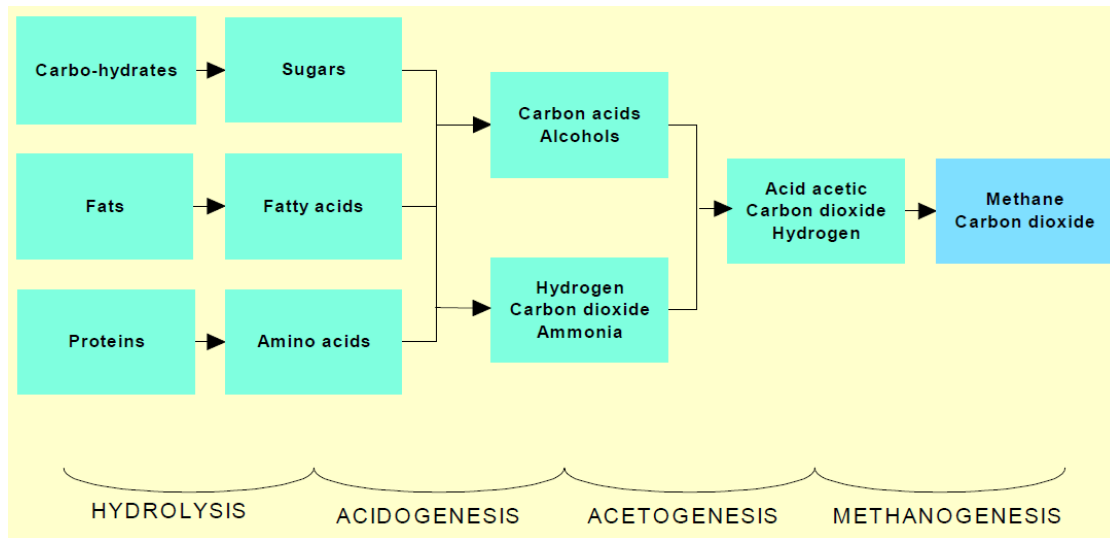


Figure 1 Chemical process of Biogas production

Features of a Biogas plant

The main features of a biogas plant are as follows.

- i. **Receiving platform:** The receiving station consists of a receiving and manual sorting area. The platform also serves as a storage area for the feedstock.
- ii. **Crusher:** The feedstock is fed to the crushers along with water/ recycled slurry in order to increase the surface area and to promote an accelerated degradation of the organic matter.
- iii. **Anaerobic Digester:** The digester is the core of a biogas plant. It is an air proof reactor tank, where the decomposition of feedstock takes place, in absence of oxygen, and where biogas is produced. Digesters can be made of concrete, steel, brick or plastic, shaped like silos, troughs, basins or ponds, and they may be placed underground or on the surface.
- iv. **Gas storage and purification:** Inside the digester, biogas is formed in fluctuating quantities throughout the day. To maintain a steady supply of the gas, the gas is stored. The simplest solution for storage is established on top of digesters, using a gas tight membrane, which also functions as a digester cover. The gas may then be subjected to purification to increase the methane concentration in gas depending on the application. This purified has a calorific value comparable to fossil fuels when compressed.



Figure 2 Broad steps in a biogas plant



Figure 3 Receiving platform and crusher and Fixed Dome Digester



Figure 4 Gas Holder and Purification Unit

1.3. Design

Supply, Installation, and Commissioning of a 5-TPD Biogas plant with Operation and Maintenance for 06 months in Patna, Bihar as per approved design conforming to the Technical Specifications.

The Biogas–CBG Plant shall be designed for processing 5 TPD of segregated organic municipal solid waste to produce biogas, which will be upgraded to Compressed Biogas (CBG) with $\geq 90\%$ methane content and bottled at 200–250 bar pressure. The design shall ensure safe, efficient, and environment-friendly operations, incorporating all relevant Indian Standards (IS), BIS codes, and applicable safety norms.

All the steel and civil work shall be properly painted with approved paint and color after application of primer as per approved drawing.

The plant design must include the following process as mentioned in figure 5,

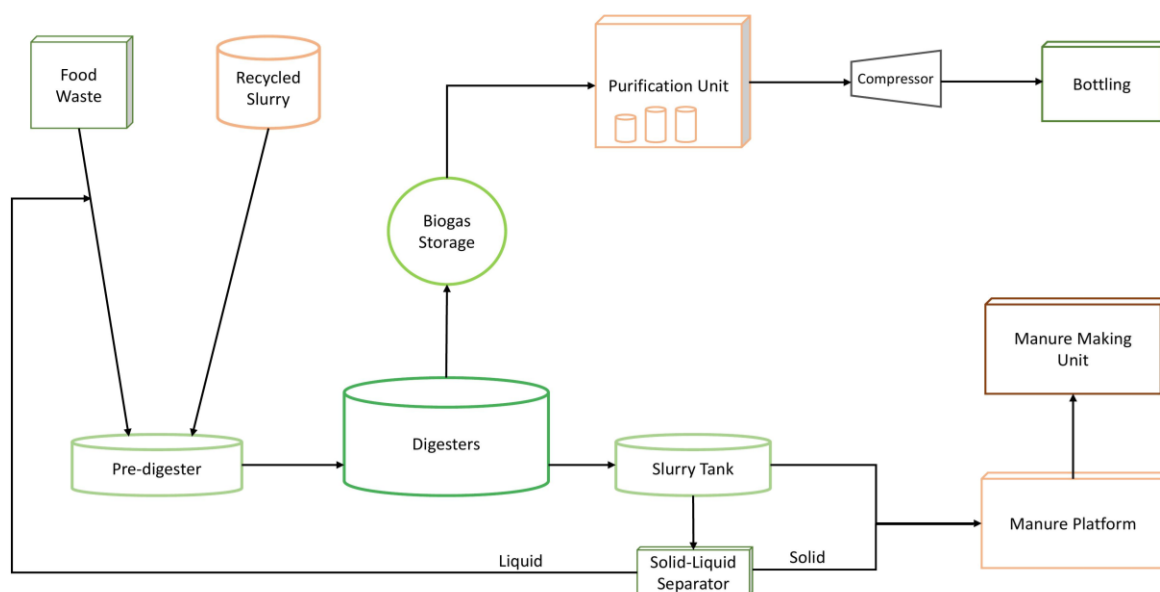


Figure 5 Bio-CNG plant process flow diagram

Project Completion Timeline:

The “Waste Solutions for a Circular Economy in India” project is scheduled to conclude by November 2027. Therefore, the construction, commissioning, and initial six-months operation of the biogas plant must be completed before November 2027, to ensure timely closure and support under the project scope.

2. Project Location

The proposed demonstration of the Biogas plant is to be set up in Ward 47, Bazaar Samiti Area, Patna. The land has been transferred by Patna Agriculture Department to Patna Municipal Corporation. The location has been identified in Figure 6 with zoomed in location in Figure 7.

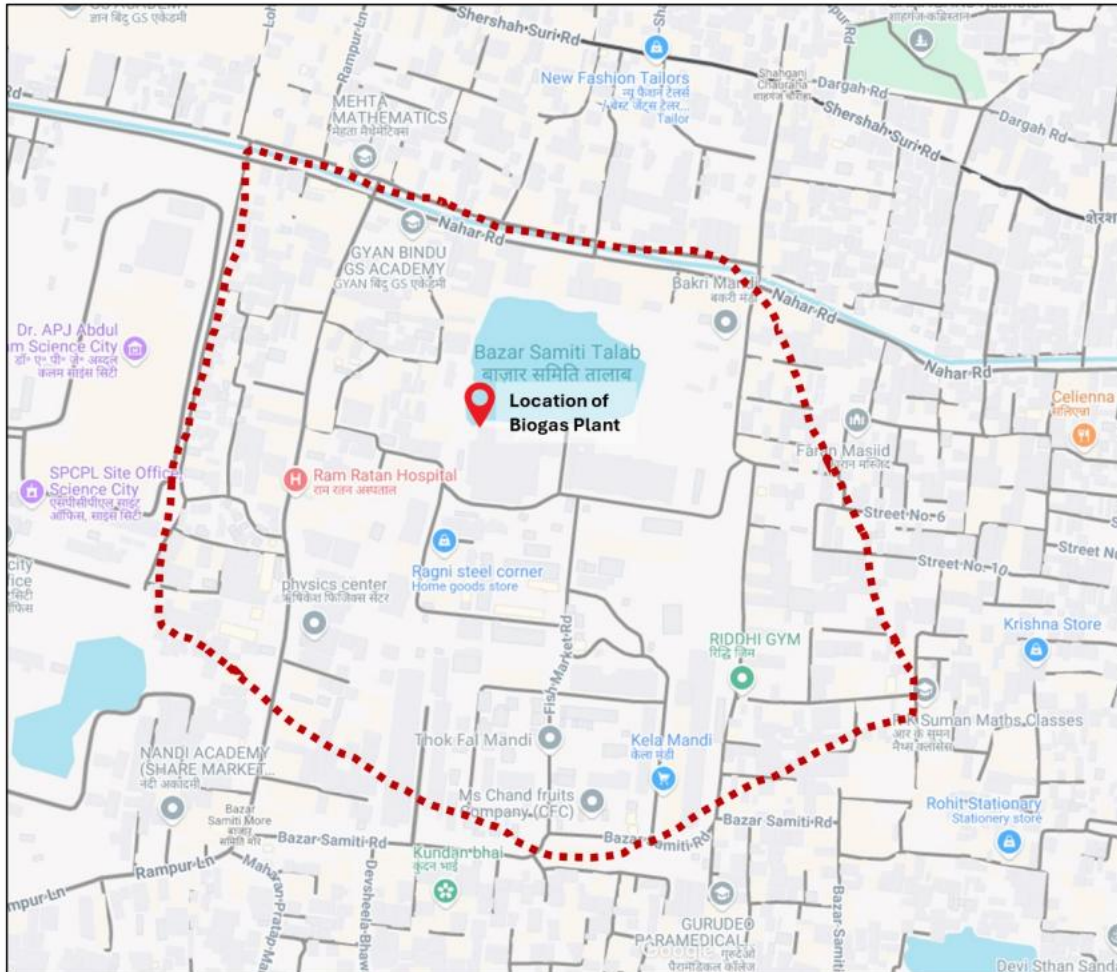


Figure 6 : Location of Bazaar Samiti, Ward 47, Patna

Figure 7 showcases the location of site in the Patna Redevelopment Plan with surrounding land use and physical infrastructure.

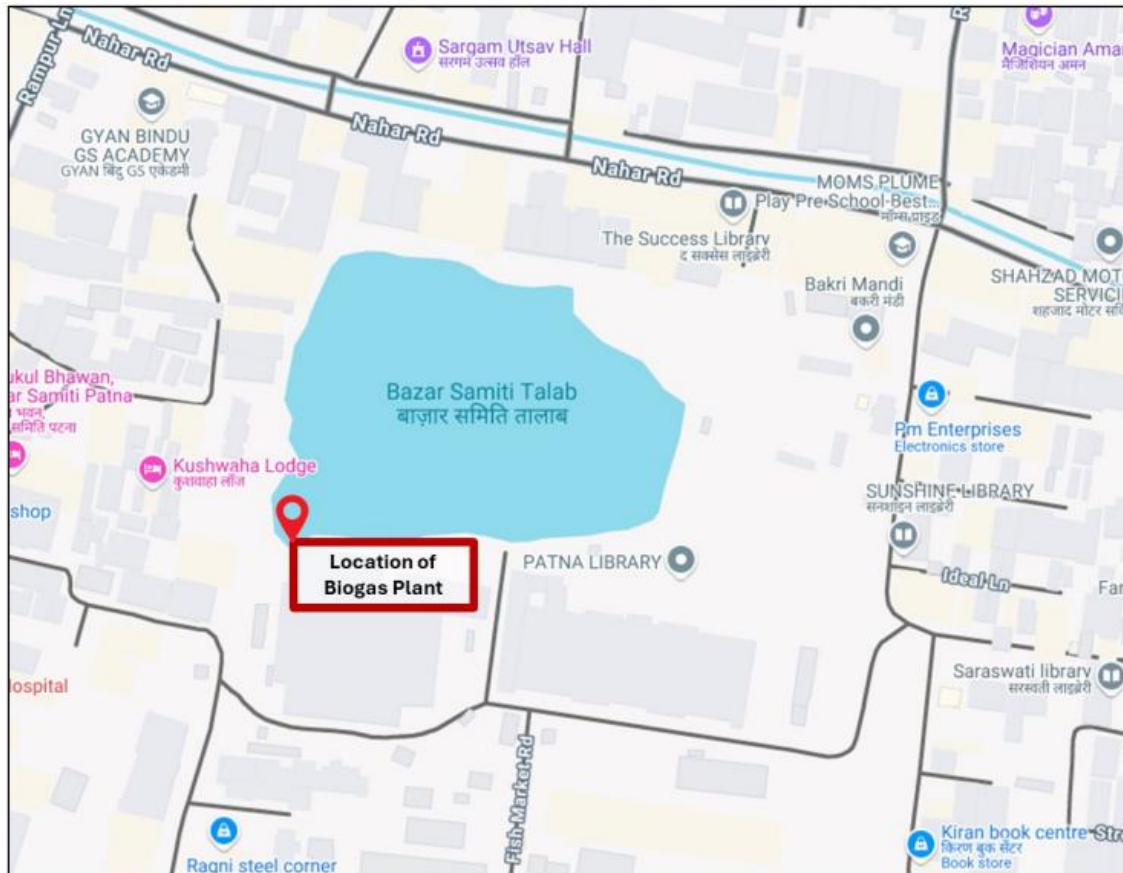


Figure 7 Zoomed in Location of Proposed Biogas Plant

3. Plant Layout and Land Area Requirement

The total land area requirement of the plant is approximately 850 sq.mtr. which includes all the necessary access roads and amenities.

The below mentioned diagram shows typical layout of the 5-TPD CBG Plant; however the successful bidder may suggest the required changes as per their design and technology that should also meet the PESO norms, and it must be justified through layout drawings and approval during the inception phase.

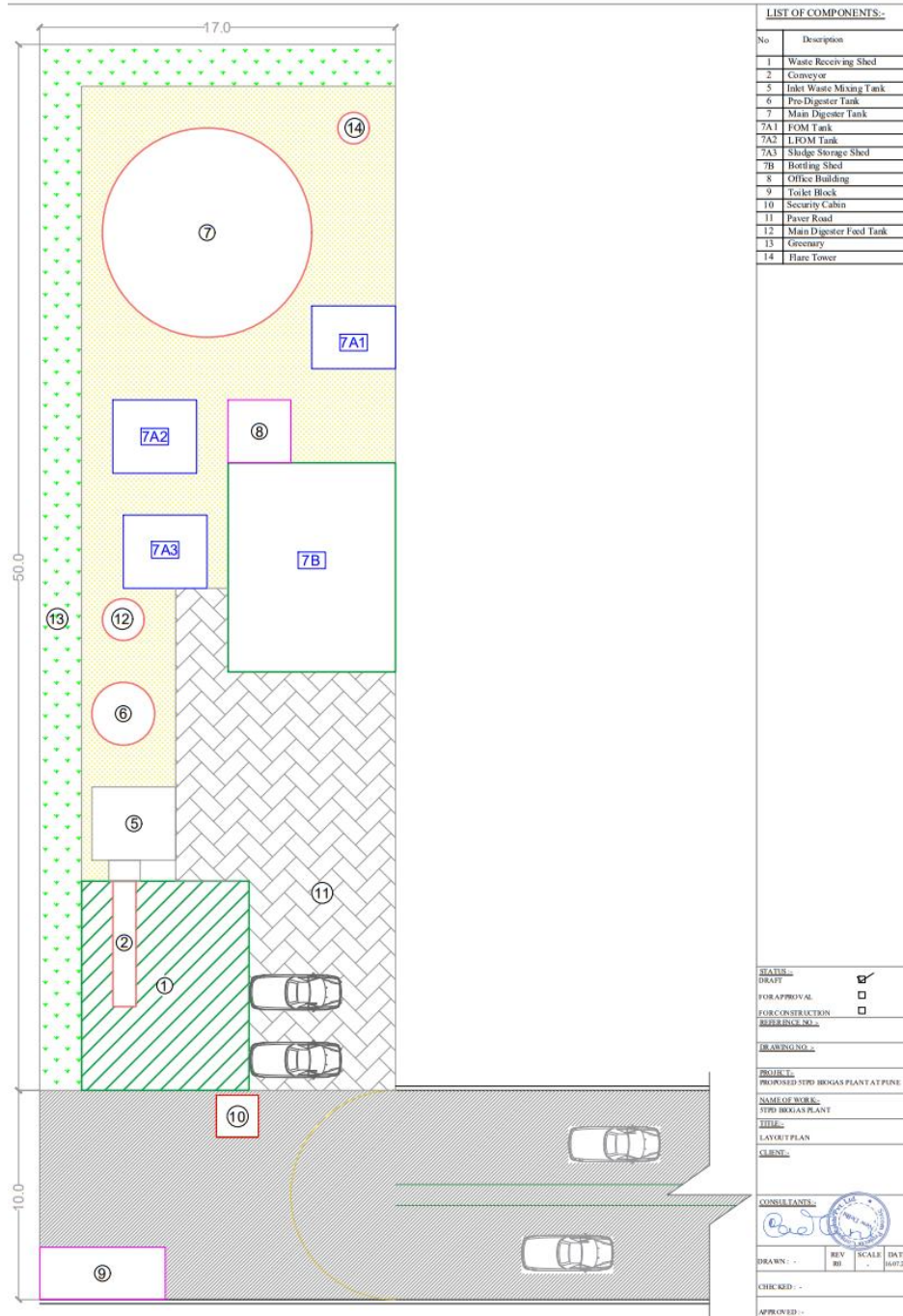


Figure 8 Typical Layout of the 5-TPD Biogas plant

Note: - The plant site area is limited to **850 sq. meters (17m × 50m)**. Bidders must account for all required infrastructure—including digesters, compressor units, purification systems, road access, fire safety clearances, PESO zones, vehicle turning radius, etc.—within this area. Efficient space utilization through modular equipment, vertical structures, or optimized layout is encouraged. Any deviation must be justified through layout drawings and approval.

The site for establishment of the biogas plant is located at Baazar Samiti, Patna, measuring 850 m² (17m × 50m), and is under the ownership of Patna Municipal Corporation (PMC). The boundary wall, site entrance gate, and approach road (RCC) have already been constructed by PMC. Accordingly, the bidder shall not include these works in their financial proposal. The bidder shall be responsible for internal layout, utility installation, and all works related to biogas plant equipment, civil foundations, drainage, and safety zones within the designated plot.

Biogas Composition

The raw biogas resulting from anaerobic digestion then undergoes a purification process that separates carbon dioxide, hydrogen sulphide, and moisture from the mixture. The resulting output is 90-92% methane, which is then pressurized into cylinders and used for various applications.

Components	Symbol	Percentage
Methane	CH ₄	~90%
Carbon dioxide	CO ₂	<5-6-%
Hydrogen sulfide	H ₂ S	< 0.1%

The operations will be done in continuous mode. Every day waste is received and processed. The waste is fed into the digester for 24 hours in a distributed mode depending on the arrival of waste from the source.

3.1. General Condition-

- i. The bidder shall be responsible for obtaining PESO (Petroleum and Explosives Safety Organization) approval for the biogas plant setup, including the high-pressure gas compressor and gas storage cylinders. All documentation, safety tests, third-party certifications, and liaison with PESO shall be included in the bid. The cost of PESO approval must be included in the financial proposal.
- ii. The contractor must demonstrate a sustainable operational model that supports cost recovery through sale of compressed biogas (CBG), compost or digestate, and other byproducts. The plant must be operated to optimize gas yield, ensure consistent quality, and comply with BIS 16087:2016 standards.
- iii. The Patna Municipal Corporation (PMC) will facilitate the permission process for obtaining the electricity connection required for the biogas plant. However, the contractor shall bear the cost of the connection, including security deposit, wiring, and metering. The bidder is required to include this cost in their financial proposal.
- iv. The contractor will be responsible for maintaining the cleanliness at the weighbridge, admin room, compost plant, and the working (active) plant area only. Also, the landscaping and beautification of the Plant open space area.
- v. PMC shall help the successful bidder to get the necessary government approvals. However, the bidder has to provide the proper documentation for the same at no additional cost.
- vi. The bidder shall be solely responsible for arranging and maintaining comprehensive insurance coverage during the entire project period, including installation, commissioning, and 6-months operation and maintenance phase. The insurance shall cover:
 - Plant and machinery against fire, theft, vandalism, and natural disasters
 - Third-party liability
 - On-site staff and contract labor under relevant Workmen Compensation Act and ESI/EPF regulations
 - Proof of valid insurance shall be submitted before commencement of installation.

4. Technical Specification

- i. Design, Supply, Installation, Commissioning, and Construction of 05 TPD capacity Biogas plant with 06 months of Operation and Maintenance at open space in Patna, to treat Municipal Corporation's wet waste 05 MT/day at the project site.
- ii. The Contractor will have to take minimum of 05 TPD (input wet waste capacity) waste for processing and generation of CBG from wet waste.
- iii. The CBG should be as per BIS standards (**IS 16087: 2016 Standard**) and compost production should be as per FCO Standards from bio-degradable waste. The Contractor is to sell the products and keep the proceeds with them and demonstrate a viable business model to sustain a 5 TPD facility.

iv. **Soil Investigation**

A geotechnical investigation has been conducted for the proposed site and the full report is provided in **Annexure F**. Based on the findings:

The geotechnical investigation establishes a **safe bearing capacity of 75–93 KN/m²** for shallow foundations (strip/square/raft) at 2.0–3.0 m depth, with pile foundations recommended for higher loads (safe capacity: 107–434 KN per pile). The subsoil comprises clayey silt (ML) and silty clay (CL), with a groundwater table at 6.0 m bgl. No expansive soils or chemical risks were detected. Foundations shall comply with IS 456:2000, IS 3370, and relevant geotechnical codes (IS 6403, IS 8009)."

- v. All the recurring costs like the use of chemicals, inoculums, and sanitizer; salaries of staff deployed, etc. will be borne by the successful bidder from the date of commencement of the operations of the plant.
- vi. All the equipment will have to be maintained as per their schedule. Any breakdown of an equipment (in any section like Digester, Agitator, Compressor etc.) more than 2 times in a week will be liable for a penalty of Rs. 5000/day. It should be repaired in 24 hours' time period.
- vii. The leachate/ sludge gutters must be clean, and the leachate/ sludge should properly flow to the collection point.
- viii. The contractor will be responsible for maintaining the cleanliness at the weighbridge, admin room, compost plant, and the working (active) plant area only. Also, the landscaping and Beautification of the Plant open space area.
- ix. The Contractor will paint the plant completely after monsoon once a year and is kept clean all throughout the contract period. The steelwork will be painted with anti-rust 69 paint and then painted with epoxy paint. (After the rainy season)
- x. The plant area must have lighting flux as required. Any existing light/ fixtures not working must be changed/ repaired immediately by the Contractor.
- xi. Technical Specifications: The contractor has to procure and install the following items but not limited to this, to a fully functional Bio-CBG Plant:

Table 1 Technical Specifications of the biogas plant

S No	Component	Item Description	Quantity
1	Conveyor Belt	Provision of Conveyor for Sorting Type: belt conveyor, Belt Width: 900 mm Length: 6 m, Material: MS frame, rubber belt (3 ply) Drive: 0.75Kw HP geared motor	01 set
2	Magnetic Separator	Provision of a belt type overhead magnetic separator to be Placed on top of segregation conveyor with a width of 6 m to remove all magnetic material present in the incoming waste then transfer it to the plastic bin	01 set
3	Crusher	Provision of Waste Crusher, double shaft or blade type, shredding/crushing unit made from Material: AR600/SS304. The crusher shall reduce the waste dimension to sub 5mm. The system shall be powered by a motor of not less than 5Kw, 7.5 Hp and shall be capable of handling 1.0TPH waste. Control: Star-	01 set

		delta starter with overload protection- IS Compliance: IS 2974 for rotating equipment.	
4	Stirrer	Provision of impeller type Stirrer for Input Waste Slurry Mixing. The impeller shall be powered by not less than 2.1Kw geared motor. The location of stirring impeller shall be within the slurry tank at a depth of not less than 1.20m from the top. The shaft of the stirrer and the placement of motor shall be sturdy to meet the torque requirements. Material: SS304	01 set
5	Centrifugal Pump- to transfer waste into the digester	Provision of Pumps to transfer Input waste slurry to the digester (2+2) of capacity not less than 2.1Kw Type: Monoblock centrifugal- Head: 10–15 m- Material: CI/SS wetted parts	01 set
6	Agitator- For Mixing waste in digester	Horizontal Agitator Type: Shaft-type agitator with motor & gearbox Motor: 2.1Kw, 1440 RPM, TEFC type Agitator Length: 1.5 m to 2 m (custom to digester size) Material: Shaft – SS304; Blades – SS316 Gearbox: Helical type, heavy-duty Mounting: Flanged with sealing to prevent leakage	02 set
7	Centrifugal Pump	Provision of Outlet Pumps to transfer slurry from digester tank to the fermented organic matter tank (FOM) (1+1) of capacity not less than 2.1Kw Type: Monoblock centrifugal- Head: 10–15 m- Material: CI/SS wetted parts	01 set
8	Centrifugal Pump	Provision of horizontal centrifuge of capacity - 1000ltr/hr for separation of the digested Slurry into dry solid and liquids including pumping system and solids conveyer	01 set
9	HDPE Piping	Provision of all liquid Piping in GI/HDPE from the input slurry tank to the pre-digester, main digester, recirculation, removal of slurry from digester, liquid from dewatering unit to tanks and any other liquid piping required for the project. Provision of all gas piping in HDPE from the main digester, pre digester to the gas purification unit and gas flare and any	Lump sum job

		other piping required including all necessary valves. Sensors and instrumentation for level, temperature, pressure, on & off as required shall be provided.	
10	Biogas Flare Tower	Provision of Biogas flare with automated pilot lamp for burning the excess biogas will be provided of capacity not less than 100m ³ /hr to meet all safety and height requirement. Type: Open or Enclosed Flare System Structure: MS body, ceramic insulation, flame arrestor Ignition: Auto spark ignition with flame detector Safety: Pressure relief valve & flame arrester Height: 5-6 meters as per site layout	01 set
11	Centrifugal Pump	Recirculation Pump for circulation of liquid in the Main & Pre-digester (1+1) Type: Monoblock centrifugal- Capacity: 2.1Kw- Head: 10–15 m- Material: CI/SS wetted parts	01 set
12	Electric wiring and cabling	Electric Cabling & Lighting Cable: approximately 500 metre copper, multi-core, FRLS, ISI certified- Lighting: Flameproof (Zone 1/2 compliant). Standard Industrial lighting for primary and secondary digester, cleaning, purification, admin and waste receiving area	~500 mtrs
13	Control Panel for Biogas Plant	Provision of Control panel as per IS 2148 (flameproof panels), for operation of BIOGAS plant including all switching, safety and PLC for data monitoring. All motors, sensors and other control components shall be managed from the panel. The panel shall be suitable for integration to remote monitoring system ion the internet. Qty-1 Type: Modular, industrial PLC-based- Enclosure: IP55, powder coated- Components: MCBs, contactors, relays (ABB/Schneider or equivalent). Digester liquid level Sensor, Temperature indicator and PH indicator for primary and main digester	01 set
14	Control Panel for Biogas Purification	Provision of Control panel as per IS 2148 (flameproof panels) for operation of BIOGAS purification and bottling system including all switching, safety and PLC for data monitoring. All motors, sensors and	01 set

		other control components shall be managed by the panel. The panel shall be suitable for integration into a remote monitoring system on the internet. Qty-1 Type: Modular, industrial PLC-based- Enclosure: IP55, powder coated- Components: MCBs, contactors, relays (ABB/Schneider or equivalent). Digester liquid level Sensor, Temperature indicator and PH indicator for primary and main digester	
15	MS Tank	Provision of 4cum capacity MS tank with epoxy coating including foundation.	01 set
16	Biogas Blower	Provision of Biogas Blower for extraction of the biogas from the digester and transfer to gas purification system. The blower shall have a flow rate of not less than 100m ³ /hr. Motor Power not less than 5Kw.	01 set
17	Gas Purification Scrubber	Gas Purification Scrubber- IS 16087:2016 (CBG quality) Co ₂ Scrubber Type: VPSA or PSA-C3 Capacity: 75 Nm ³ /hour, Output CH ₄ concentration: ≥ 92%- CO ₂ : ≤ 4%; H ₂ S scrubber shall be of ferric type or biological type to reduce H ₂ S to less than 50ppm Gas Drying shall be done with silica gel in suitable cylindrical vessels to reduce the moisture less than 5ppm. - Pressure: 7 to 8 bar input, < 1 bar output-	01 set
18	Biogas Compressor with pressure regulator	Biogas Compressor with pressure regulator for loading the cascade Oil-lubricated reciprocating, multi-stage (typically 3 to 4 stages)- Max Outlet Pressure: 250 bar- Capacity: 80 m ³ /hour- Motor Power: 30 to 40 HP (22 to 30 kW)- Duty: Continuous, industrial grade Compliance: IS 7284, PESO approved. Suitable compressor which provides compression pressure up to 250 bar	01 set
19	CBG Quality Analyzer	CBG Quality Analyzer including Flow Meter Parameters: CH ₄ (0–100%), CO ₂ (0–25%), H ₂ S (0–100 ppm), O ₂ (0–10%)- Technology: IR + Electrochemical sensors- Output: Digital readout + SCADA- Certification: ATEX / CE. It should also measure the flow. Must have emergency shut-off logic.	01 set

20	Safety Valves & Accessories	Safety Valves & Accessories Pressure Relief Valves (set at 250 bar)- Flashback Arrestors- Isolation Valves- Gas Leak Detectors- Compliant with Gas Cylinder Rules 2016	01 set
21	Internal Piping	Internal Piping Diameter: 25 to 80 mm depending on flow zone- Material: HDPE, threaded/flanged-Surface	Lum sum job
22	PESO approved high pressure Cascade	Cascade Type: PESO-approved high-pressure cascade, suitable for CBG output Capacity: 60 kg storage per cylinder x 2 nos for each cascade..30 such cascade to be provided. Material: Seamless steel (IS 7285 Part II compliant) Pressure Rating:- 250 bar working pressure Connections: SS tubing, ball valves, manifold with NRV and safety relief. Mounting: Skid mounted with lifting hooks and anchoring bolts Standards: PESO certified, ISO 9809 compliant 60 kg cascade as per PESO norms. All the connecting line from compressor to filling area will be done by contractor.	1 set
23	Lab Equipment	Lab Equipment Gas Analyzer: CH ₄ , CO ₂ , H ₂ S, O ₂ measurement (0–100% CH ₄ range) pH Meter: Digital with calibration buffers Moisture Meter: Portable, digital readout Temperature Probe: Stainless steel, PT100 sensor TDS Meter: With calibration certificate Sampling Tools: Glass vials, syringes, test tubes, etc.	01 set
24	Fire and Safety Equipment	Provision of Safety equipment including fire extinguisher (As per IS 15683 Standard), biogas leak detectors, fire safety gloves- 4 nos, PPE kit for 20 nos staff for a period of one-year, medical kit, basic tools and tackles required for 1 year of operation. Fire safety layout to be in line with PESO and local fire norms. Install lightning arrestors as per IS 2309 and earthing system as per IS 3043 for all critical	01 set

		equipment including control panels, gas compressors, and cascades.	
25	Pre-Digester including flexible membrane roof for gas collection	Providing and construction of Pre-Digester tank of dia: 3.0m , Height : 4.0m with flexible membrane roof . The tank shall be constructed using M-30 grade for raft slab and walls. The steel shall be of Fe-550 TMT barsn. The tank shall be plastered inside with cement mortar along with suitable water proofing compound. The top of tank shall be covered with provision & installation of Roof Balloon. Type: Double membrane gas holder (balloon type) Capacity: 25-30 m³, Material: PVC coated polyester fabric, UV resistant. Inner Membrane: Gas-tight. Outer Membrane: Weather protection, Operating Pressure: 2–4 mbar. As per the given layout (Figure no. 8) and design attached in the annexure G	01 set
26	CSTR RCC Digester including flexible membrane roof for gas collection	Providing and construction of Main-Digester tank of dia: 10.0m , Height: 4.50m with flexible membrane roof. The tank shall be constructed in RCC using M-30 grade concrete for foundation and walls. The steel shall be of Fe-550 TMT bar. The tank shall be plastered inside with cement mortar along with suitable water proofing compound. The roof shall be of double membrane gas holder (balloon type) of PVC coated polyester fabric, UV resistant with Gas-tight Inner Membrane and Weather protected Outer Membrane and Operating Pressure at 2–4 mbar. As per the given layout (Figure no. 8) and design attached in the annexure G	01 set
27	Provision of Waste Receipt and Segregation Shed	Providing and construction of Waste Receiving shed of L: 10.0m, B : 8.0m & H: 2.40m. The structural members shall be constructed in RCC using M-25 grade concrete for foundation, columns, beams and lintel. The steel shall be of Fe-550 TMT bar. The walls shall be supported on Size stone masonry along with PCC. The walls shall be of 200mm thick solid blocks with plastering both inside and outside using cement mortar. The walls shall have openings of window and rolling shutter. The inside & outside plastered walls shall be applied with oil bound distemper and waterproofing cement	01 set

		paint respectively. The lean-to roof with suitable painted MS structural members such as plates, rafter and purlin shall be covered with 0.45mm thick galvalume sheet. The flooring shall be 150mm thick vacuum dewatering concrete flooring with suitable floor hardener of grade M20 including reinforcement as per design. As per the given layout (Figure no. 8) and design attached in the annexure G	
28	Provision of Inlet Waste Mixing tank	Providing and construction of Inlet Waste Mixing Tank of L: 4.0m, B: 2.50m and H: 2.30m. The tank shall be constructed in RCC using M-30 grade concrete for foundation, walls & slab. The steel shall be of Fe-550 TMT bar. The tank shall be plastered inside with cement mortar along with suitable water proofing compound. Top slab shall be provided with 2 FRP manhole. As per the given layout (Figure no. 8) and design attached in the annexure G	01 set
29	Main Digester Feed Tank	Providing and construction of Main Digester Feed Tank of D: 2.0m and H: 1.50m. The tank shall be constructed in RCC using M-30 grade concrete for foundation, walls & slab. The tank shall be plastered inside with cement mortar along with suitable water proofing compound. As per the given layout (Figure no. 8) and design attached in the annexure G	01 set
30	Provision of Shed for Biogas cleaning and Bottling System	Providing and construction of Bottling shed of L: 10.0m, B: 8.0m & H: 2.40m. The structural members shall be constructed in RCC using M-25 grade concrete for foundation, columns, beams and lintel. The steel shall be of Fe-550 TMT bar. The walls shall be supported on Size stone masonry along with PCC. The walls shall be 200mm thk of Fe locks with plastering both inside and outside using cement mortar. The walls shall have openings of window and rolling shutter. The inside & outside plastered walls shall be applied with oil bound distemper and waterproofing cement paint respectively. The lean-to roof with suitable painted MS structural members such as plates, rafter and purlin shall be covered with 0.45mm thk galvalume sheet. The flooring shall be 150mm thk vacuum dewatering concrete flooring with suitable floor hardener of grade M20 including reinforcement as	01 set

		per design. As per the given layout (Figure no. 8) and design attached in the annexure G	
31	Provision of Over Head Tank of 5000 ltrs for fresh water	Providing and placing on roof slab, polyethylene water storage tanks as per IS 12701: 1906 with manhole lid and suitable locking arrangements, making holes of suitable diameter for inlet, outlet and overflow pipes, including cost of all materials, labor, transport charges, HOM of equipment and testing complete as per specifications. (For 5000 litre capacity). As per the given layout (Figure no. 8) and design attached in the annexure G	01 set
32	Provision of Over Head Tank of 5000 ltrs for LFOM	Providing and placing on MS stand, polyethylene water storage tanks as per IS 12701 : 1906 with manhole lid and suitable locking arrangements, making holes of suitable diameter for inlet, outlet and overflow pipes, including cost of all materials, labor, transport charges, HOM of equipment and testing complete as per specifications. (For 5000 litre capacity). As per the given layout (Figure no. 8) and design attached in the annexure G	01 set
33	Office Building -3.0m X 3.0m	Providing and construction of Office Building of L: 3.0m , B : 3.0m & H : 3.0m. The structural members shall be constructed in RCC using M-25 grade concrete for foundation, columns, beams, lintel and slab. The steel shall be of Fe-550 TMT bar. The walls shall be supported on Size stone masonry along with PCC. The walls shall be 200mm thk solid blocks with plastering both inside and outside, ceiling using cement mortar. The walls shall have openings of window and doors. The inside & outside plastered walls shall be applied with oil bound distemper and waterproofing cement paint respectively. The roof shall be finished ceiling using concrete along with suitable water proofing compound. The flooring shall be plain cement concrete for levelling with vitrified tile on top. As per the given layout (Figure no. 8) and design attached in the annexure G	01 set

34	Provision of Water supply line	Providing and fixing chlorinated poly vinyl chloride (CPVC) pipes including all CPVC plain and brass threaded fittings, this includes jointing of pipes and fittings with one step solvent cement, trenching, refilling & testing of joints conforming to IS 15778, for water supply to different points. 25 mm dia pipe nominal OD pipes. As per the given layout (Figure no. 8).	Lump sum job
35	LFOM Tank	Providing and construction of LFOM Tank of L: 4.0m , B: 3.50m and H : 3.0m . The tank shall be constructed in RCC using M-30 grade concrete for foundation, walls & slab. The tank shall be plastered inside with cement mortar along with suitable water proofing compound. Top slab shall be provided with 2 FRP manhole. As per the given layout (Figure no. 8) and design attached in the annexure G	01 set
36	FOM Tank	Providing and construction of FOM Tank of L: 4.0m , B: 3.0m and H : 3.0m .The tank shall be constructed in RCC using M-30 grade concrete for foundation, walls & slab. The steel shall be of Fe-550 TMT bar. The tank shall be plastered inside with cement mortar along with suitable water proofing compound. Top slab shall be provided with 2 FRP manhole. As per the given layout (Figure no. 8) and design attached in the annexure G	01 set
37	Sludge Storage Shed	Providing and construction of Sludge Storage shed of L: 4.0m, B: 3.50m & H:2.70m. The structural members shall be constructed in RCC using M-25 grade concrete for foundation, columns and beams. The steel shall be of Fe-550 TMT bar. The lean-to roof with suitable painted MS structural members such as plates, rafter and purlin shall be covered with 0.45mm thk galvalume sheet. The flooring shall be Plain Cement concrete of 40 mm thk finished with a floating coat of neat cement. As per the given layout (Figure no. 8) and design attached in the annexure G	01 set
38	Provision of Paver Block	Providing and laying 60mm thick factory-made cement concrete paver block of approved shape and color of M -30 grade by block making machine with vibratory compaction laid in required pattern	

	Road as per Layout	and including over 50mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in charge. As per the given layout (Figure no. 8) and design attached in the annexure G	
39	Prefabricated Security Cabin of 1.20m X 1.20m with door, light & Fan	Supply & Installation of Prefabricated Security Cabin of 1.20m X 1.20m with door, light & Fan and other accessories. As per the given layout (Figure no. 8) and design attached in the annexure G	01 set
40	Provision of Portable Toilet with 2 Water Closet and wash basin outside	Supply & installation of Portable Toilet with 2 Water Closet and wash basin outside including piping and other accessories. As per the given layout (Figure no. 8) and design attached in the annexure G	01 set
41	Borewell with submersible pump	Drilling and commissioning of borewell with submersible pump — Supply, installation, and commissioning of a borewell at the project site (depth: approx. 250 ft / 76 m) as per soil investigation report. Includes rotary drilling, gravel packing, flushing and development, and installation of 6" dia ISI-marked PVC casing pipe. A 1.5 HP stainless steel submersible pump (single/three-phase) with starter panel, safety rope, and ~30 m of 32 mm HDPE water pipeline shall be provided for water distribution to the plant and staff use. Scope includes construction of platform, protective borewell cover, and basic electrical connection work.	01 set
42	Provision of Electrical line to the facility of capacity 125Kva	As per the given layout (Figure no. 8) and design attached in the annexure G	01 set
43	Backup Bio-CNG Genset	125 KVA bio-CNG genset for Backup power for the plant	1 unit

44	Operation and Maintenance	To operate and maintain the operations of the biogas plant. 6-months O&M support by bidder includes manpower (1 supervisor + 4 operators/workers), daily logbook (feed input, gas output, pressure, CH ₄ %, slurry discharge), and monthly performance reports to PMC/GIZ.	06 months
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Sl. No	Description	Specifications
1	Plant Feed. Should accept all types of organic waste as feedstock	- Organic Fraction of MSW. - Market Waste - Vegetables & Fruits - Food Waste. (With Fats and Oils) - Dry & Green Leaves. Note: Cow dung is allowed as Feed Stock only during Start-up and as small proportion to maintain the health of the plant and a minimum 5 TPD of organic fraction of MSW/During Non - Availability of organic waste to the Plant.
2	Design criteria. Zero waste discharge system (fermented liquid organic manure is allowed)	- Organic loading rates in the range of 2 to 4 kg VS / cubic m / day. - Should create optimal process and mixing conditions for anaerobic degradation of organic matter with Continuous Stirred Tank Reactors (CSTRs) technology - With supplemental heating, having uniform feeding rates and sludge thickening before digestion while maintaining a high rate of digestion & higher gas production. - Digester system with Pumps for force-feeding & recirculation of digestate - Sludge removal mechanism in the digester - Solids retention time (SRT) should be higher than Hydraulic retention time (HRT). Solid retention time (SRT) = Bio-degradable waste held in the reactor. Hydraulic retention time (HRT) = Quantity of Fresh/recycled water used for dilution.
3	Semi-automated monitoring System. digital	Electrical instrumentation & Control panel. Automation and process instruments to monitor/control the

		production conditions during fermentation, • Monitor/control pH, temperature, foam formation, and gas pressure. • Mechanical components such as motors, pumps, valves, & heat exchangers are also to be supervised. • Continuous analysis & to provide a full range of diagnostic options. • Ensure all systems function 24 x 7 and deliver peak performance consistently & seamless productivity.	
4	Parameters to be Monitored (on a regular basis) and biogas quality to be monitored on a daily basis	Inlet	• Feed rate - m3 /day. Total solids - % • Volatile solids - %
		Digester	• Temperature °C • pH • Mixing cycles. • Volatile fatty acids - mg/lit. • Alkalinity - mg/lit.
		Digester Outlet	Total Solids % reduction. Volatile Solids % reduction
		Biogas	CH4~ 90% CO2 <5-6% H2S < 0.1%

Force Majeure

Force Majeure Events shall include the following events to the extent they satisfy the foregoing requirements:

- Natural disasters, including but not limited to lightning, earthquake, volcanic eruption, landslide, flood, cyclone, typhoon, tornado
- any act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action
- any requirement, action or omission to act pursuant to any judgment or order of any court or judicial authority or Statutory Entity in India of any Law or any of their respective obligations under this Agreement
- expropriation and/or compulsory acquisition of the Project in whole or in part by any Government or Statutory Entity
- radioactive contamination or ionising radiation originating from a source in India or resulting from another Force Majeure Event excluding circumstances where the source or cause of contamination or radiation is brought or has been brought into or near the Project Site by the Affected Party or those employed or engaged by the Affected Party
- industry wide strikes and labour disturbances having a nationwide impact in India.

Force Majeure Event shall not include the following conditions, except to the extent that they are consequences of a Force Majeure Event:

- unavailability, late delivery or change in cost of steel, equipment, materials, spares parts or consumables in local market
- delay in performance of any contractor or sub-contractor or their agents
- non-performance resulting from normal wear and tear of plant, materials or equipment at the bidder's facility
- strike or labour disturbances at the facilities of the bidder
- insufficiency of finances or funds or the agreement becoming onerous to perform
- non-performance caused by, or concerned with, the bidder negligent and
- intentional acts, errors or omissions
- failure to comply with Law, or
- breach of, or default under this Agreement

5. Packing

- i. The internal shape and surface of the container shall be such that it will not trap the contents.
- ii. There shall be no sharp edges anywhere on the container.
- iii. The internal & external surfaces shall be smooth and non-porous, free from cracks, splits, dents, distortion, blisters, voids and other surface blemishes or defects.

5.1. Shipment & Export of Biogas plant (only applicable for the successful bidder outside the India)

- i. Only after GIZ's written go-ahead for a site based on the feasibility assessment, the bidder shall initiate the shipping of all components of the Biogas Plant. Shipping of each component of the Biogas Plant shall be in coordination with the designated GIZ officer/agency.
- ii. The supplier/agency shall be responsible for all logistics, export clearance and transit formalities to ensure smooth and hassle-free movement of all the items to Patna, Bihar. The supplier is required to undertake the export of goods as prescribed under Customs law.
- iii. The supplier/agency should have its own IEC code/on which they have to carry out the export of the goods to Patna, Bihar, India. GIZ being a bilateral organization does not have an IEC code and can only provide fewer documents.

5.2. Testing & Checking

1. GIZ shall undertake inspection & testing of the biogas plant to verify the specifications provided to the bidders.
2. The selected bidder shall intimate GIZ on completion of the installation of a 5-tpd biogas plant by submitting the completion report for each component of the biogas plant installed. GIZ on receipt of the Project Completion Reports will coordinate with the selected bidder and may undertake the inspection of the installed biogas plant in the presence of the selected bidder.
3. During the inspection & testing if the biogas plant is not found as per the provided specifications, the bidder shall rectify the shortcomings and shall again communicate to the designated officer of GIZ the probable date for inspection/testing. GIZ shall undertake inspection & testing of the biogas plant regarding the specifications provided to the bidders. During such event, GIZ shall not be liable to compensate any additional cost incurred by the bidder and the bidder shall not be permitted to deviate from the time schedule it has proposed at the time of submitting the bid. A maximum of two attempts shall be provided for inspection and testing.
4. In case the biogas does not fulfil the tests and inspection requirements, the selected bidder will have time as per the agreed delivery schedule to rectify the shortcomings. In case the bidder fails to perform the rectifications within the time mentioned in the delivery schedule, liquidated damages as per clause 4.4.1 would apply. A second successful bidder may be asked by GIZ to develop the biogas plant with the same conditions as provided to the first bidder.
5. The selected bidder must present all test certificates as applicable to relevant standards.
6. The bidder in no way is relieved from any obligation of this tender.
7. Once the biogas plant is found satisfactory by GIZ or an expert/agency appointed by GIZ, the commissioning certificate would be signed by GIZ or an expert/agency appointed by GIZ and the selected bidder.

5.3. O&M and Warrantee

1. The bidder shall be responsible for Operation and Maintenance of the biogas plant for a period of **6 months**, during which GIZ or its designated agency will monitor the project for effective performance. The supplier can mention the cost for O&M separately in the financial proposal., which should be covered through the sale of biogas and any viability gap-funding required.
2. During the 6-months of Operation the plant, the plant should recover the cost of Operation and Maintenance from the sale of CBG and liquid/solid compost, which shows that the plant is self-sustained.
3. The contractor must maintain a daily logbook, gas output records, and submit monthly reports to GIZ/PMC during O&M.
4. After the 6-months period, an agreement will be signed between the selected agency and Patna Municipal Corporation (PMC) for continued O&M.

5. The contractor must demonstrate a sustainable operational model that supports cost recovery through sale of compressed biogas (CBG), compost or digestate, and other byproducts. The plant must be operated to optimize gas yield, ensure consistent quality, and comply with BIS 16087:2016 standards.
6. During this warranty period, the bidder shall be responsible for supply of all spare parts as required from time to time for scheduled and preventive maintenance, major overhauling of the system, replacement of defective modules and maintaining common online monitoring system which contains log for operation detail, deployment of staff for continuous operations and qualified engineer for supervision, complaint logging & its attending.
7. In case of malfunction or failure of critical equipment (e.g. digester, compressor, PSA unit, or cascade filling system), the bidder must:
 - a. Notify the GIZ technical team and PMC within 24 hours of incident detection
 - b. Submit an incident report and expected restoration timeline within 48 hours
 - c. Ensure restoration of full functionality within 7 working days or submit an alternate arrangement plan
8. GIZ reserves the right to withhold milestone payments in case of repeated unresolved failures
9. The bidder must also provide a detailed operation and maintenance manual specific to the installed Biogas plant in English.
10. The bidder shall prepare and submit a comprehensive Operation and Maintenance (O&M) Manual covering all major systems including anaerobic digestion, gas upgrading, compression, fire safety, and slurry handling. The O&M Manual must be submitted in both hard and soft copy formats prior to final commissioning. It shall include:
 - a. Safety SOPs
 - b. Daily/weekly/monthly maintenance tasks
 - c. Troubleshooting guide
 - d. Manufacturer datasheets and warranty details
 - e. Preventive maintenance calendar
 - f. The manual shall be used for capacity building of local PMC staff post-handover
11. The successful bidder shall provide warranties for components of the biogas plant for a period not less than 1 year.
12. After the erection of the biogas plant, the successful bidder shall ensure satisfactory performance of the equipment for a period of 1 Year.

6. Tender Conditions

6.1. Minimum Eligibility Criteria for Participation in the tender process

Note: The supplier have to submit the documentary evidence for all the below given criteria's, failing which bid may be rejected.

S. No.	Particular	Document to be attached.
01	Company Registration	The agency must have a registered office in India with a minimum experience of 03 years in the field of installation and operation of biogas plant - manufacturing, supply and installations with various stakeholders. "The agency should be a manufacturer or an authorized dealer/distributor of particular/proposed brand and must submit copy of the respective certificate with the proposal/bid" (Mandatory)
02	Average Annual Turnover must be minimum of INR 5,00,00,000 (Four crores Only) in last three financial years.	CA Certificate (Mandatory) Computation of Income Tax for the last three financial years ((Mandatory) Audited P&L Account and Balance Sheet for last three F.Y including UDIN no. of CA (Mandatory)
03	Client List	The company must provide a client list of 3 medium / large size companies in the past 03 years having worked on the installation and operation of the biogas plant.
04	Working Experience	Prior work order/ purchase order will be attached for at least 03 companies demonstrating the similar nature of work undertaken in the past 03 years with a minimum value of INR 4,50,00,000 (INR Four crore and Fifty Lakhs) Prior work experience with Urban local body or State government department on the establishment of the biogas plant for municipal solid waste in the past 2 years with a minimum value of INR 2,00,00,000 (INR Two Crore)

05	Legal Status	Incorporation Certificate and /or other legal registration documents as per the nature of business (Mandatory)
06	PAN, TIN, GST	Copy of PAN, TIN and GST certificates (Mandatory)
07	Bank details	Copy of Cancelled cheque along with bank details (Mandatory)
08	Organizational Profile	Organisation may submit standard brochure/profile of the organization including the client list for reference purpose (Desirable)
09	References	Organization may provide reference of minimum 03 reputed clients from last 03 years (Desirable)
10	Quality Certifications	Any ISO, Quality or any Green certification – Desirable though not mandatory.
10	Ecological and sustainable parameters	The organization should briefly elaborate the business practices adopted towards the sustainability initiatives and highlight the experience in Sustainable Development Goals (SDGs) (Desirable, but strongly recommended to provide considering GIZ's overall commitment to sustainability initiative, especially SGD 13)

- **The company will also declare that no child labour engaged in their organisation directly or indirectly. (As per Annexure- B);**
- **Self-certification to the effect that the tenderer has not been blacklisted by any company or its contract has been terminated on account of poor performance. (As per Annexure-B);**

The financial proposal must be duly signed and stamped by the authorized signatory with a covering letter, mentioning complete details/coordinates of company. The agency is requested to quote inclusive of packing, loading, transportation, unloading costs in the financial format.

The financial proposal must also mention the following:

- Schedule and timelines for supply and installation*
- Warranty/Guarantee of equipment.*
- GST must be indicated separately with GST rate.*
- Payment terms if different from the GIZ proposed payment terms.*
- Freight/Packing/delivery charges (if any) must be mentioned separately.*

6.2. Technical Eligibility Criteria

The bidder shall provide sufficient evidence to support the following criteria,

1. The bidder should have a minimum experience of 5 years of experience in supplies of Biogas/Bio-CNG plants for Municipal Solid Waste.
2. The bidder should have a minimum of 3 years' experience in operating biogas plants for municipal solid waste management.
3. The bidder should have a minimum experience of 3 years in exporting procedures including Shipping (*only applicable for the bidders outside India*)
4. The bidder should have a minimum of 2 years of regional experience.
5. The bidder should have a minimum of 1 year of development projects.
6. The bidder should have an annual turnover of at least 100% of the quoted amount in the last two financial years.
7. It should possess the documents showing registration e.g. GST, PAN, etc. A self-attested copy of the documents should be furnished by the bidder along with the bid.

6.3. Validity of Bids

1. The bids shall be valid for a term of 60 days from the last date of submission of bids. The bids not accepting the term of validity shall be liable for rejection. The quoted price shall be firm in all respects till the completion period.
2. In exceptional circumstances, GIZ may solicit the bidder's consent for an extension of the period of validity, without any change in the quoted price. The request and the responses thereto shall be made in writing.

6.4. Preparation of Bids

1. The bidder is required to independently examine the eligibility criteria, terms & conditions and specifications of biogas plant specified at the relevant section of this tender. Failure to furnish all or any of the required information will be at risk of bidder and may result in the rejection of the bid.
2. The bids and submission of related document shall be submitted in English language. All correspondence between GIZ, bidder and other party related to the tendering process and common between GIZ and bidder shall also be in English language only.
3. The bid should be submitted with proper binding of documents with no loose paper.
4. The bid must be on company letter head, duly signed by authorized signatory, with full name and full address should be provided along with contact details (contact number, communication address and email)

5. Any alteration or corrections shall be treated valid only if they are authenticated by full signature by the person or persons authorized to sign the bid. The bids should be free from overwriting.
6. Documents to be submitted: ***Signed and stamped***
 - Covering letter as per prescribed format (Annexure A)
 - Declaration on Company's letterhead with complete contact details as per prescribed format (Annexure B)
 - Financial Format (sample) (Annexure C)
 - Delivery Schedule: Total time frame required for supply, installation and commissioning of biogas plant

6.5. Submission of Bids:

1. Participation in this tender as a Consortium is permitted.
2. The Consortium must designate one of its members as the Lead Member, who shall be solely responsible for all obligations under the contract, including execution of works, compliance, and coordination.
3. One bidder / members of the consortia can submit one bid only. The contract will be signed with Lead Partner only, and the Lead Partner must meet all the required criteria stipulated in the tender document (section 7.1)
4. The Consortium must submit:
 - a. A Consortium Agreement (signed by all members) clearly outlining the roles, responsibilities, and work distribution.
 - b. A Power of Attorney authorizing the Lead Member to act on behalf of the Consortium.
5. The bids shall be complete in all respect and the bidder shall submit all the relevant documents as described under this tender. If required, GIZ may solicit in writing further information from the bidder.
6. All the documents must be duly signed by the authorized signatory and the letter must provide the following information.
 - a. Name and designation of – Authorized Signatory
 - b. Complete address of Company / Firm
 - c. Email id and contact number of the Authorized signatory
7. The complete techno-commercial bid must be submitted in y in a sealed envelope only marked with "Bid Offer for Supply, Installation and Commissioning of a 5-TPD Biogas plant with Operation and Maintenance for 6 months for Patna, Bihar for processing of municipal organic waste, REF Tender "
8. The bids received after due Date and Time, or incomplete shape or bids submitted by Fax or in email ids will be summarily rejected.
9. A bid once submitted shall not be permitted to be altered or amended.

6.6. Price Submission

1. The price quoted should be inclusive of taxes (GST), freight, transit insurance, loading / unloading, and any such other levies/ taxes that may be applicable by appropriate authority towards delivery of material at project site specified in the scope of work of this tender document.
2. The tax rates should be clearly mentioned on the Price Sheet.
3. If no mention is made regarding taxes in the price bid, it will be presumed that your rate is inclusive of taxes.
4. The rate should be quoted for all the components in the prescribed format as per Annexure – C. If the rates are quoted for partial items as per Annexure – C, the tender will be liable to be rejected summarily
5. Price towards insurance and other cost should be clearly indicated. Please write NIL or inclusive, as applicable. Please DO NOT leave any column blank in the price sheet, without providing any specific reason(s).
6. The bidder may also in a separate format mention the requirement and price of any additional components required. The bidder will submit this sheet separately during the bid submission. GIZ may decide to use the mentioned components on site at the price provided by the bidder.
7. GIZ will communicate the installation of the additional components on site to the installer in writing, if required.

6.7. Clarification to the bidder(s)

- a) The bidders must submit the bids/queries on the below mentioned email id's -

<u>Description</u>	<u>Deadline</u>	<u>Email ID</u>	<u>Remarks</u>
Per-bid Queries from Bidders	12 th October 2026	Please send it to: Shimpa.kalra@giz.de and swarup.mallik@giz.de Mandatorily mark queries on both email id's	Please mention the subject line as – “QUERIES FOR TENDER Supply, Installation and Commissioning of 5-TPD Biogas Plant for processing municipal organic waste, REF : 10005643 <i>Pre-bid queries received after this deadline shall not be entertained.</i>
Clarifications given by GIZ	15 th October 2026		The FAQ/Clarifications shall be shared with all bidders on the online portals where the tender has been made live.
Bid Submission deadline	24 th October 2026 ; 11:59 pm	Please send the proposal only in hard copy on the below mentioned address	Don't send the bids on any email id else the bids shall be disqualified.

6.8. Opening of Bids

1. Bids will be opened on the next working day of last date of submission of bids by the GIZ Tender Committee (GTC).
2. There will be no public opening of the bids.

6.9. Evaluation of Tenders

1. The technical bids shall be evaluated following the criteria as specified under Section 5.1 and documentary evidence submitted as mentioned above.
2. In case GIZ requires further clarification from the bidders, the same shall be solicited in writing and the bidders shall furnish such information within three (3) working days from the date of such communication.
3. GIZ will examine the bids to determine whether they are complete, whether the documents have been properly signed, and whether the bids are substantially responsive in confirming to all terms and conditions of the bidding documents without material, quantity and quality deviations.
4. A bid determined as substantially non-responsive will be rejected by GIZ and may not subsequently be made responsive by the bidder by correction of the non-conformity.
5. The evaluation of a bid by GIZ will exclude and not take into account any allowance for price adjustment provided in the bid.
6. The evaluation of a bid by GIZ will take into account, in addition to the price bid, all relevant factors such as compliance with the following:

Technical specification

- 6.9.6.1. Acceptance to deliver the material at Project Site (Patna, Bihar)
- 6.9.6.2. All further conditions mentioned in the bidding documents.
- 6.9.6.3. Delivery schedule offered in the bid.

6.10. Acceptance of Bid

1. The final acceptance of the bid, waiver of any formalities thereof, is entirely vested with GIZ, who reserves the right to accept or reject any or all of the bid in full or in part
2. GIZ would issue the letter of the award only to the successful bidder.
3. GIZ will not share the evaluation result with any of the bidders. Bidders shall be informed of their request about the reasons why they were not successful. Such information shall be limited and categorized under the following:
 - 6.10.3.1. Technically not acceptable
 - 6.10.3.2. Higher price
 - 6.10.3.3. Incomplete bid
4. After acceptance of the bid, the bidder shall have no right to withdraw/modify its bid.
5. GIZ at its discretion may call for any additional clarification(s), document(s) from any or all the bidders during the process of evaluation of bids on short notice.

7. General Conditions

7.1. Delivery Schedule

- i. The bidder shall provide the detailed delivery schedule of supplies, starting from the availability of material in India, and exporting to Patna, Bihar **(door to door delivery)**.
- ii. The bidder shall ensure the Insurance for all the equipment of biogas plant from origin to the delivery destination **and personnel during construction and O&M phase.**

7.2. Payment Schedule (for local suppliers)

- a. Up to 30% advance payment shall be released against a Bank Guarantee of equal value, valid for a minimum period of one year, upon signing of the Purchase Order and submission of a Proforma Invoice (PI) by the supplier.
- b. 20% shall be released after the delivery of major components and material to Patna site after confirmation from GIZ representative(s).
- c. 40% of the payment shall be issued after successful after commissioning of the plant at Patna, Bihar and confirmation of the same from GIZ India Office.
- d. Final balance payment (10%) after successful 6 months of operation of the biogas plant at the site and hand-over it to Patna Municipal Corporation, and confirmation of the same from GIZ India Office.

7.3. Liquidated Damages and Termination of Contract

1. Except because of force majeure, if the bidder fails to perform the scope of work, to the satisfaction of GIZ, within the time period specified in the delivery schedule or within the extended time period if any, GIZ shall without prejudice to its other remedies under the contract, deduct from the contract price as liquidated damage, a sum equivalent to 1% of the price of the un-performed work/ services for each week of delay until actual completion of work, up to a maximum deduction of 10%. Once the maximum is reached GIZ may consider termination of the contract.

7.4. Delivery of Material

1. The Bidder should note that it must furnish and agree with GIZ, the delivery of the material at the project site (door to door delivery).
2. The Biogas plant to be delivered must be coordinated with GIZ/GIZ designated agency.

7.5. Miscellaneous

1. At any time prior to the submission of the bid, GIZ for any reason whatsoever, whether at its own motion or in response to the clarification to the prospective bidder may amend the conditions of the bid document through announcement of a notice. The responses to the clarifications of the bidders, if any, shall be made available at the www.tendersinfo.com/tender247.com. The bidders are advised to visit the website to get responses for their queries.
2. In case the amendment is notified after the submission of bids, the financial bids of the bidders shall be returned in the sealed condition through registered post or courier service for getting the revised offers according to the amendment in the terms and conditions
3. The bidder in no circumstances transfers its obligation or sublets the work to any other party without prior consent of GIZ
4. The bidder must refer to general terms and conditions of GIZ

3. Annexure A: Covering letter

Covering Letter
(To be submitted along with the Proposal/bid on company's Letter Head)

M/s

.....
.....
.....
.....

To,

The Head of Contracts and Procurement
GIZ India, GDCO Office
46, Paschimi Marg, Vasant Vihar
New Delhi – 110 057

Subject: Offer in response to Tender No. 10005643

Dear Sir/ Madam,

I/We the undersigned hereby offer to execute the scope of work and accordingly submit our offer in full compliance with terms & conditions of the bid.

The bid is being submitted as per the instructions mentioned in the tender documents.

Name of the Contact Person	
Mobile Number	
Email Id	
Land line Number if any	
Office address	

(Signature and stamp of Bidder)

4. Annexure B: Declaration by the bidder

Declaration by the bidder (to be submitted along with the bid)

I/We the undersigned (herein after referred to as manufacturer) having fully understood the nature of the work and having carefully noted design, specification, terms, and conditions, etc. as mentioned in the bid document do hereby declare that,

1. All the requirements of the bid document have been understood properly and accordingly agree with all provisions of the bid document and accept all risks, responsibilities and obligations directly or indirectly connected with the performance of the bid.
2. All the relevant information with regard to proper execution of the proposed work has been understood, with respect to the proposed specifications, its intended end use, availability of required materials and labour etc.
3. Are capable of executing and completing the work as required in the bid and are financially sound to execute the scope of work as per the work execution schedule. We have sufficient experience and are competent enough to perform the contract up to the satisfaction of GIZ. We also give the assurance to execute the scope of work as per the specifications, terms, and conditions on award of order.
4. We have no collusion with other bidders, any employee of GIZ or team engaged in executing the scope of work.
5. We have not been influenced by any statement or promises by any employee of GIZ or anyone from the team engaged by GIZ but only by the bid document.
6. We are familiar with all general and special laws, acts, ordinances, rules, and regulations of the Municipal, District, State and Central Government that may affect the work, its performance or personnel employed therein.
7. The submitted offer will remain valid for acceptance for 90 days from the last date of submission of bid.
8. All the information and the statements submitted with the bid are true to the best of knowledge.
9. We are not engaged in any kind of child labour nor any of our partners/suppliers indulge in any child labour activities.
10. We have never been debarred to undertake similar work by any Government undertaking/department, never been blacklisted or our companies' contract been terminated due to poor performance.
11. Mandatory grounds of exclusion – i.e., the bidder and/or its management has been involved in and convicted of an offence under:
 - a. the Indian Penal Code, 1860;
 - b. the Prevention of Corruption Act, 1988;
 - c. the Prevention of Money Laundering Act, 2002;
 - d. the Unlawful Activities (Prevention) Act, 1967;
 - e. the Immoral Traffic (Prevention) Act, 1956; or

- f. any other applicable legislation in this regard.

In addition, the bidder is also debarred from the procurement process, if the bidder has committed any fiscal offence including but not limited to the following legislations, which offence/contravention has been established by judicial or administrative decision having final and binding effect:

- a. default in payment of tax under the Income Tax Act, 1961;
- b. default in payment of goods and service tax in compliance with the GST laws;
- c. default in payment of any tax in compliance with the applicable national, state or local legislation;
- d. default in payment of employee benefits under the labour and employee legislations such as provident fund, professional tax, labour welfare cess etc.; or
- e. default in compliance with the Foreign Contribution (Regulation) Act, 2010.”

Sub-point (a) and (b) above (concerning the Indian Penal Code, 1860 and the Prevention of Corruption Act, 1988) have been prescribed as grounds for debarment of a bidder, under rule 151(1) of the General Financial Rules, 2017 as well.

(Signature and stamp of Bidder)

Name:

Seal/Stamp:

Date:

5. Annexure C: Technical Criteria

S No	Description	Critical Points / Criteria to follow	Response
A		Supply, Installation and Commissioning of 5-TPD biogas plant with operation and maintenance for 6 months shall be in accordance with the technical specifications given in the section “Technical Specifications”. *Including sourcing of the various components of the unit.	Refer to Pg No. 13 to 25

Signature of the bidder

Name:

Seal / Stamp

6. Annexure D: Price bid submission

Separate excel sheet enclosed with the tender document.

7. Annexure E: Delivery Schedule

Overview

Project Completion Timeline:

The “Waste Solutions for a Circular Economy in India” project is scheduled to conclude by December 2026. Therefore, the construction, commissioning, and initial 6-months operation of the biogas plant must be completed before December 2026, to ensure timely closure and support under the project scope.

Sl. No	Description	Expected Plan (GIZ)	Plan Proposed by the bidder
1.	Date of Purchase Order / Award of Contract	D0 (Day 0)	

2.	Complete Delivery of equipment and associated training at project site	D0 + 210 days	
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Detailed Schedule

Sl. No	Tentative Delivery Schedule	Expected Plan (GIZ)	Plan Proposed by the bidder
1.	Detail Engineering-Plant Layout Details (Full detailed layout of the plant, machineries, pathways)	D0 - 15 days	
2.	Apply for Government Approvals (PCB clearance, PESO approval, power and water)	D0 - 45 days	
3.	Civil Works- Bio methanation plant (Construction of sheds, civil foundations for machineries, pathways, etc)	D30 - 150 days	
4.	Bio-methanation Plant Erection (Ordering of equipment, Secondary Waste collection points, installation of plant machinery and equipment)	D0 - 150 days	
5.	Biogas Plant Commissioning (Inoculation of the digesters, dry run of machineries, starting of trails of the waste collection)	D130 - 150 days	
6.	Wet Waste Intake (Initial wet waste intake at 1tonne per day with increment of double the capacity per week)	D150 - 1800 days	
7.	Operation of the plant Sustainable plant operation ensuring cost recovery through sale of CBG, compost/digestate, and other by-products. Operation must optimize gas yield, maintain BIS 16087:2016 quality standards, and ensure environmental compliance.	D180- 210 days	

Name of the Supplier:

Signature & Stamp

Date

- **Annexure F: Soil Testing and Geo-technical Report**
- **Annexure G: Layout and Architectural Drawing for the plant**
- **Annexure H : GSOP**
- **General Terms & Conditions**
- **Legal Inferences**
- **Self-declaration to determine the origin or source of the goods offered**