

REPORT FORMAT: CL-1 | Version: 1.0_201 89/3, 1st Floor, Subhash Road Dehradun

Uttarakhand (248001)

Phone: +91-7017919244, +91-9958632707

CASE NO.: VIS (2024-25)-PL607-545-777

Dated: 19.12.2024

COST VETTING ASSIGNMENT

OF

NATURE OF ASSETS	CBG PLANT	
CATEGORY OF ASSETS	INDUSTRIAL	
TYPE OF ASSETS	INDUSTRIAL PLANT	

SITUATED AT

AGE SHAHPUR DANDI, TEHSHIL: BAHERI, DISTRICT: BAREILLY

Corporate Valuers

REPORT PREPARED FOR STATE BANK OF INDIA, SME RUDRAPUR

- Business/ Enterprise/ Equity Valuations
 - *Important in case of any query/ issue or escalation you may please contact Incident Manager
- Lender's Independent Engineers (LIF) sociates org. We will appreciate your feedback in order to improve our services.
- Techno Economic Viability Consultants (TEV) lease provide your feedback on the report within 15 days of its submission
- thich report will be considered to be correct. Agency for Specialized Account Monitoring (ASM)
 - Valuation Terms of Services & Valuer's Important Remarks are available at <u>www.rkassociates.org</u> for reference
- Project Techno-Financial Advisors
- Chartered Engineers
- Industry/ Trade Rehabilitation Consultants
- NPA Management

CORPORATE OFFICE:

D-39, 2nd floor, Sector 2, Noida-201301

Ph - +91-0120-4110117, 4324647, +91 - 9958632707





PART A

INTRODUCTION

ABOUT THE PROJECT: M/S. Carbon Circle Private Limited (CCPL) is establishing a
Compressed Biogas (CBG) plant in Baheri Tehsil, Bareilly District, Uttar Pradesh, with an
aggregate capacity of 10 Tons per Day (TPD). The project is implemented in two sequential
phases, Phase-I and Phase-II, each dedicated to setting up a 5 TPD plant.

The phase-1 (5 TPD) plant has achieved commercial operation and the phase-II (5 TPD) plant work is to be started apart from common facilities of Civil work, Plant, machineries & electrical equipment's which has already being established in Phase-I.

2. PROJECT LOCATION:

Details about Location of Unit is as below:

Particulars	Description		
Postal Addre	SS THE REPORT OF THE PROPERTY		
Village- Shah	our Dandi, Tehhshil- Baheri, District-Bareilly, State-Uttar Pradesh, India		
Location			
The location is	s in rural part of village area, nearby lands are mostly agricultural area.		
Google Coor	dinates		
Latitude	28°42'35.9"N		
Longitude	79°29'20.1"E		
Connectivity	Systems		
Road	Baheri is around 45-50 km from Bareilly city through SH 37. The project site is currently accessible via a non-metallic road of ~15-20 feet wide, which runs parallel to the railway track.		
Rail	The Nearest Railway station to the subject locality is Richha Railway Station which is about approximately 0.5 Km from the Subject Project.		
Air	The nearest airport to subject location, i.e, Bareilly Airport, is located approximately 40 kilometres away.		
Geographical Conditions On The Site			
Temperature	The maximum temperature is around 104°F while the minimum is 41°F.		
Rainfall	The average annual rainfall of this area is about 970 mm.		

2 of 19

5





Seismic Zone The above plant site area falls in Seismic Zone III.



Source: Google Map

Figure: Location of CBG Plant

- 3. SCOPE OF THE WORK: Project Cost vetting of 10 TPD Compressed Biogas Plant.
- 4. PURPOSE OF THE REPORT: To provide fair detailed analysis report to the Bank based on the "in-scope point" mentioned above.
- METHODOLOGY ADOPTED: Cost assessment is done based on Industry benchmark cost and not on item wise.







PART B

PROJECT COST AND EXPENDITURE

 TOTAL PROJECT COST & STATUS OF EXPERNDITURE: M/s Carbon Circle Private Limited has estimated the total Project Cost amounting to Rs.84.77 Cr. and Rs.62.77 Cr. has been spent till 16th August 2024 as per CA Certificate dated 19th August 2024 with UDIN No. 24519826BKARXI5653.

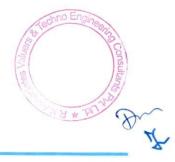
Particulars	Project Cost as Budgeted	Phase-1 (5 TPD)	Phase-II (5 TPD)	Expenditure Incurred Till 16 th August 2024 (As per CA Certificate)
Land including land developments	1.9	1.15	0.75	1.90
Building & Civil works	11	8.74	2.26	9.73
Plant Machinery	63.4	26.16	37.24	42.67
Preoperative Expenses	5.31	1.75	3.56	5.31
Interest During Construction	2.6	2.4	0.2	2.60
Margin Money for Working Capital	0.56	0.21	0.35	0.56
Total	84.77	40.41	44.36	62.77

(Rs in Cr)

For the balance work company has estimated amount Rs.22.23 crore company has planned to spent it in the expansion of Phase-II plant (5TPD), details are as follows: -

Particulars	Balance to Spent
Land including land developments	0.00
Building & Civil works	1.56
Plant Machinery	20.32
Preoperative Expenses	0.00
Interest During Construction	0.00
Margin Money for Working Capital	0.35
Total	22.23

(Rs in Cr)







The break-up of plant & machineries expenditure to be incurred in phase-II plant (5 TPD) is as follows: -

Particulars Particulars	Amount
Anaerobic Digester (AD) Package (Vendor : PlanET Global Biogas GmbH)	15.54
Digester Civil Works	2.4
Insulation, cladding and walkway around the Digester	0.5
Erection & Commissioning cost related to AD	0.5
Cabling - electrical	0.5
Engineering & designing	0.3
Consultants Fee (Safety, PESO, PCB,etc.)	0.3
SCADA (Automation)	0.3
TOTAL	20.34

(Rs in Cr)

Note:

- In present 5 TPD Plant, expenses incurred for Anaerobic Digester (AD) Package (Vendor: PlanET Global Biogas GmbH) is approximately Rs.14.49 Crores including custom duty of Rs.2 crores.
- 2. Digester civil cost during 5 TPD Plant implementation has come pur approximately Rs.1.7 crores as per our assessment.
- Accordingly, the above estimated cost is taken on a higher side to adjust any contingency. As per company there is scope of achieving price reduction at the time of final negotiation.
- a) BUILDING & CIVIL WORKS: For setting up the plant / development of below listed sections and other civil works are being constructed: -

S. No.	Description	
1.	Bagging Unit	
2.	Sun Drying Area	
3.	Biogas Up gradation Plant	
4.	Master control room and Office room	
5.	Raw water Storage	
6.	Hot Water Generator	
7.	Mixer	
8.	Anaerobic Digesters	



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9. Liquid Digest lagoon	
10.	Guard Room & Meter Room
11. Internal Road & Drainage	
12.	Pump House

b) PLANTS/ MACHINERIES & OTHER EQUIPMENTS AND UTILITIES: - The following sections are being establishing in plant as follows:

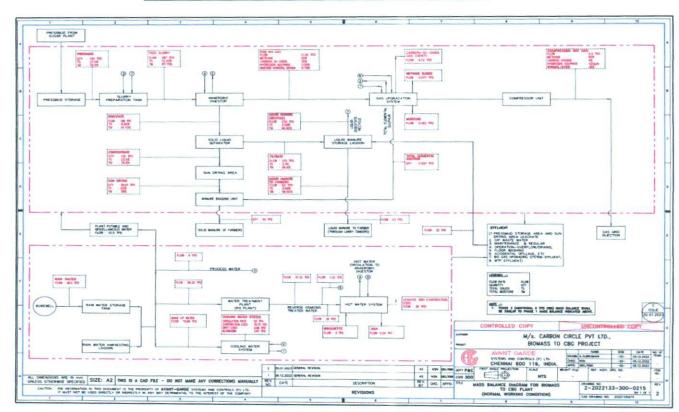
S. No	Particulars	Supplier/Vendor
1.	Digester	Planet Biogas Global Gmbh
2.	Biogas Up gradation Plant	Biogas Engineering India Private Limited
3.	Mixer	Planet Biogas Global Gmbh
4.	Compressor	Kirloskar Pneumatic Comp.
5.	Hot Water Generator	HME Boilers Pvt Ltd.
6.	Water Treatment Plant	
7.	Transformer	Voltamp Transformers Ltd.
8.	HT/LT Panels	Electro Control Systems
9.	Bagging Unit	
10.	Weigh bridge	Eagle Scale Manufacturing Works
11.	DG Set	Sterling Generators Pvt. Ltd







Mass Balance Diagram for Biomass to CBG Plant



Source: As per DPR







PART C

COST VETTING

S. NO.	PARTICULARS	DESCRIPTION
1.	Report Type	Cost Verification Report of 10 TPD CBG Plant
2.	Type of Assessment	Cost Vetting
3.	Work Order Number	Via Email Dated – 09/12/2024
4.	Customer Name	M/s. Carbon Circle Pvt. Ltd.
5.	Coordinating Person Name and Number	Mr. Rahul Madaan & +91-8130206655
6.	Scope of Work	Cost Vetting of the 10 TPD CBG Plant
7.	Purpose of the Assessment	Cost Vetting of the 10 TPD CBG Plant
8.	Date of Survey	13-12-2024
9.	Date of Report	19-12-2024
10.	Documents provided for perusal	 Detailed Project Report. Project Cost Budget CA Certificate
11.	Current Location of the Plant	Village Shahpur Dandi, Tehshil: Baheri, District: Bareilly.
12.	Borrowing Company	M/s. Carbon Circle Pvt. Ltd.
13.	Type of Plant	Anaerobic Digestion using PSA (Pressurised Swing Adsorption) using 2 stage membrane technology.
14.	Plant Capacity	10 TPD CBG Plant
15.	Year of Establishment	Phase-I (5 TPD) has achieved COD in 2024. Phase-II (5 TPD) is under process of establishment.
16.	Total Project Cost	Rs. 84.77 Crore (Rs.8.47 Crore per TPD) (Total project cost includes the total expenditure to be incurred in establishing the plant.)
17.	Our opinion	Cost at Rs.8.47 Crore per TPD is within the established plant references but on the higher side of the upper range of the market references. As per the sector consultant and implementing agencies the capital cost for setting up 5 to 10 TPD plant comes

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around Rs.5.5 to Rs.6.5 Crore per TPD, details of which is annexed in Annexure-I.

As per MNRE the cost Is Rs.4 to 5 crore per TPD.

As per various Plant references the cost is ranging from Rs.6.5 crores to Rs.9.5 crores excluding one exceptional case at Garhmukteshwar which is Rs.3.25 per TPD, list of which is annexed in **Annexure-II.**

Plant capex depends on various factors such as scale of the Plant and technology used.

Company has already implemented 5 TPD Plant for which COD has already been achieved. The cost details of it is already shared above. 5 TPD will be extended from 5 TPD to 10 TPD now in which major expense is of Digester machines and its civil works as shown in Part-B of the report. Both these costs for the extension are estimated on little higher side for estimation purpose considering any eventuality of contingency.

There is a scope of achieving better cost efficiency at the time of finalization of orders.

The range of current market rates of similar capacity & type of plant is verified from various existing biogas plants and also from the public domain for the establishment of new CBG plants.

NOTES:

- 1. The cost assessment is done based on Project cost rather than machine wise cost.
- We have been provided with the details of project cost budgeted by the borrower company.
- 3. As per the site survey this plant is being established at Village Shahpur Dandi, Tehshil: Baheri, District: Bareilly.

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In this report, there can be some difference in the cost of establishing the plant on the basis of technology and feeding to obtain CBG.

Disclaimer:

- This cost vetting is done only on the basis of project cost provided to us by the company and we do not pass any other recommendation in respect to the Project.
- 2. The estimated cost verification is made based on the third-party information which has been replied upon in good faith.
- We have only suggested the estimated cost range of such kind of Projects as per market information. This can't be construed as the actual cost.
- 4. The estimated price may vary at the time of actual procurement because of change in prices in the market, negotiations with the supplier, currency fluctuation, other market factors for such kind of machinery/items for which we will not have any control. The cost vetting is only limited to the date of Report issued. We do not assume any responsibility in change of prices of the said machinery/items after this date.
- 5. This report doesn't include any work related to drawing, design, sketch plan, procurement of the machines.
- Ownership and other legal point of view in respect of the asset is not considered in this report as same is out of scope of this report.
- 7. This report is made at the request of the Bank.

OR R.K ASSOCIATES VALUERS & TECHNO ENGINEERING CONSULTANTS (P) LTD.		
VALUATION ENGINEER	L1/ L2 REVIEWER	
Er. Deepak Kumar Singh	Sr. V.P. Projects	
Dm	N Q and Engin	
	Seemila Seemila A	





ANNEXURE: - I (COMPARISON LIST)

	Reference for Bio Gas Plant			
S. No.	Name of the Party	Contact details	Remarks	
1.	M/s Jog Waste to Energy Pvt Ltd	info@jogwte.com +91 9723269295 www.jogwte.com	As per JOGWTE, the average installation cost as per EPC basis from scratch to successful trial run would be ranging INR 5.5-6.5 Crore per ton including preliminary and pre-operative expenses and other contingent costs.	
2.	The Global Green Growth Institute, GGGI India	nishant.bhardw aj@gggi.org	 As per information provided by GGGI, The capital expenditure (CAPEX) for a typical 8-10 TPD Bio-CNG plant varies from INR 32-50 Crore which varies based on the type of biomass feedstock and technology deployed. It has been estimated that the plant and machinery costs contributes ~76% of CAPEX. (Excluding preliminary and preoperative expenses and excluding all other costs such as engineering, consultancy, installation costs etc. i.e. EPC Costs) 	
3.	Ministry of New & Renewable energy	MNRE	 The economics of a CBG plant can vary depending on various factors such as the scale of the plant, technology used, feedstock cost, government incentives and market demand for CBG. ~INR 20-25 crore is the cost of installing a 5 TPD capacity CBG plant, while ~75-80% of the CAPEX cost is for purchasing plant machinery. 	
4.	Others vendors	On the public domain	CSTR technology which is flexible for all types of organic wastes including mixed wastes. Capital cost for this technology is approximately INR 4-6 Crore per ton including all the costs from scratch to Successful trial run.	

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ANNEXURE: - II (PLANT COMPARISON LIST)

Reference OF Bio Gas Plant			
S. No.	Name of the Company	Plant Location	Remarks
1.	Verbio AG	Lehragaga, Sangrur, Punjab	 Production capacity – 33 TPD Biogas purification method – Amines (Chemical Based) Cost Rs. 230 Crore (Rs. 6.96 Crore per TPD)
2.	EverEnviro	Indore, Madhya Pradesh	 Production capacity – 17 - 18 TPD Biogas purification method – PSA Cost Rs. 150 Crore (Rs. 8.82 – 8.33 Crore per TPD)
3.	Mittal Enterprises	Garhmukhteshwar, Uttar Pradesh	 Production capacity – 8 TPD Biogas purification method – Water Scrubbing Technology Cost Rs. 26 Crore (Rs. 3.25 Crore per TPD)
4.	Badaun CBG Plant	Badaun, Uttar Pradesh	 Production capacity – 14 TPD Biogas purification method – NA Cost Rs. 133 Crore (Rs. 9.5 Crore per TPD)
5.	Gobardhan Bio CNG Plant	Madhya Pradesh	 Production capacity – 15 - 20 TPD Biogas purification method – NA Cost Rs. 6.5 to 9 Crore per TPD







ANNEXURE: - III SOME OF THE INVOICES



Carbon Circle Pvt. Ltd. Level-5, The Circle, HUDA City Centre, Gurugram Haryana-Gurugram, 110034 India

PlanET Biogas Global GmbH

Schildarpstr 75 48712 Gescher

Phone: +49(0)2542 86956-0

Final invoice SAINP-019-10208

Page 1

Document Date:

16.04.24

Person in Charge: Bassam El Fhayly

Customer-No.: Order confirmation:

019-10026 SAO-019-10047

Your Reference:

VAU-36441

Pos.	No.	Description	Delivery date	Quantity	Unit	Unit Price	Amount
1		installation package	16.04.24	1.00	Pauschal	196.766,00	196.766,00
				Total EUI	R Excl. VA	T	196.766,00

Received Advance Payment	Date	VAT Base	VAT Amount	VAT %	Amount
	13.04.23	29.514,90	0.00	0 %	29.514,90
	06.05.24	98.383,00	0,00	0 %	98.383,00
Payment of balance		68.868,10	0.00		68.868,10

break down of payment of balance:

59.029,80 EUR to SAARP-019-10105 - 30% at the end of the installation work 9.838,30 EUR to SAINP-019-10208 - 5% on commissioning

within 7 days net due

The sales tax for that sales tax benefit owe the benefit recepient after §13b UStG.

Dept -ing (FH) J. Meyer zu Strohe Ambiguriant Covalist MRB 14860 St.-Nr. 301/5637/1560

Deutsche Bank AG BLZ 400 700 80 Kto -Nr. 037777000

Ust-late: DE293747280 IBAN DE23 4007 0080 0037 7770 00

BIC DEUTDE YEARD

Es gatten unservi Allgemenen Geschäftsbedingungen. Diese finden Sie auf unserer Internetsiebe unter wew planet-bi-opas comlago.

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Tax Invoice



04a85ae42d6e46cf5ed3778c161f720033c9208c52322-41d2f721a02a0f3ae9f

Ack No.

142414216870349

1-Feb-24 Ack Date





Biogas Engineering India Pvt Ltd

V-1207, Amrapali Silicon City, Sec 76, Noida GSTIN/UIN: 09AAICB6667P1ZR State Name: Uttar Pradesh, Code: 09 CIN: U40300DL2019FTC355563

E-Mail: infoindia@biogaseng.com

www.biogaseng.com

Buyer (Bill to)

State Name

Carbon Circle Pvt Ltd

GATA No. 391, Vill. Shahapur Dandi, Pargana Richha

Baheri, Bareilly, Uttar Pradesh, 243201 : 09AAJCC8804E1ZL GSTIN/UIN

: Uttar Pradesh, Code: 09 Place of Supply : Uttar Pradesh

Invoice No. BGI/FY23-24/044	Dated 1-Feb-24
Delivery Note	Mode/Terms of Payment 100% Against Tax Invoice
Reference No. & Date.	Other References
Buyer's Order No.	Dated
Dispatch Doc No.	Delivery Note Date
Dispatched through	Destination Bareilly
Terms of Delivery	

Si lo	Description of Services	HSN/SAC	GST Rate	Quantity	Rate	per	Amount
	Reimbursement of Transport charges From Chandrapura Haliol Gujarer to Barelly UP Agt 8SA Logistics Bit No 2023-24/1107-105000 Agt 8SA Logistics Bit No 2023-24/1108-105000 For FRP H2S Removal Vessel	996799	18 %	2 Nos	1,05,000.00	Nos	2,10,000.00
-	Reimbursement of Transport charges From Andheri Mumbai to Bareilly UP For PLC Cum VFD Panel	996799	18 %	1 Nos	45,000.00	Nos	45,000.00 2,55,000.00
	OUTPUT SGST 9% OUTPUT CGST 9%					% %	22,950.00 22,950.00
	Total			3 Nos			₹ 3,00,900.00

Amount Chargeable (in words)

INR Three Lakh Nine Hundred Only

HSN/SAC	Taxable	ÇGST		SGSTATGST		Total	
	Value	Rate	Amount	Rate	Amount	Tax Amount	
996799	2.55,000.00	9%	22 950 00	9%	22 950 00	45,900,00	
Total	2,55,000.00		22,950.00		22,950.00	45,900.00	

Tax Amount (in words) INR Forty Five Thousand Nine Hundred Only

Company's Bank Details

A/C Holder's Name Blogas Engineering India Private Limited Bank Name Hdfc Bank Bank Name

50200045586435 A/c No

Branch & IFS Code KG MARG & HDFC0000003

SWIFT Code **HDFCINBB**

Company's PAN Declaration

AAICB6667P

for Biogas Engineering India Pvt Ltd

We declare that this invoice shows the actual price of the goods and services described and that all particulars are true

Authorised Signatory

This is a Computer Generated Invoice



ESOE





Tax Invoice

(ORIGINAL FOR RECIPIENT)

e-Invoice

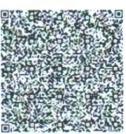
IRN

6869735b7d4d2b140ca023e779705864dd662273c07-

9cef8911b72f1fe1882ac

Ack No. 142414134070690

Ack Date : 17-Jan-24



Electro Cont			Invoice No.	e-Way Bi				
B-82 Sector-5	Noida-20	1301	T/23-24/21		17-Jan-24			
Distt.Gautam Budh Nagar(U.P.) GSTIN/UIN: 09AAAFE1168R1Z0 State Name: Uttar Pradesh, Code: 09 E-Mail: info@electrocontrol.co.in		Delivery Not	Model	Mode/Terms of Payment Other References				
		Reference N	Other					
Consignee (Sh	ip to)		Buyer's Ord	Dated	Dated			
Carbon Circl	e Private I	imited	CCPI /BAL	HERVECS	11 4-411	4-Aug-23		
GATA No. 391, Vill. Shahapur Dandi Pargana Richha, Baheri, Bareilly, Uttar Pradesh 243201		Dispatch Doc No.			Delivery Note Date			
GSTIN/UIN State Name		JCC8804E1ZL Pradesh, Code : 09	Dispatched	through	Destin	Destination		
Buyer (Bill to)	. Ottar	Pradesti, Code : 09	BY ROAD		BARE	BARFILLY		
GSTIN/UIN State Name	: 09AA	Bareilly, Uttar Pradesh 243201 JCC8804E1ZL Pradesh, Code : 09	2)					
SI Marks & Nos./ No. Container No.		Description of Goods	HSN/SAC	Quantity	Rate	per	Amount	
1		Distribution Transformer 2.5MVA with Accessories	85042200	1.000 nos	47,58,000.00	nos	47,58,000.00	
		CGST@6% UP STATE SALE SGST@6% UP STATE SALE				%	2,85,480.00 2,85,480.00	
					i i			

Amount Chargeable (in words)

Company's PAN

E. & O.E

₹ 53,28,960.00

for Electro Control Systems

Authorised Signatory

INR Fifty Three Lakh Twenty Eight Thousand Nine Hundred Sixty Only

HSN/SAC	Taxable	CGST		SGST/UTGST		Total	
	Value	Rate	Amount	Rate	Amount	Tax Amount	
85042200	47,58,000.00	6%	2,85,480.00	6%	2,85,480.00	5,70,960.00	
Tot	al 47.58.000.00		2.85.480.00		2.85.480.00	5.70 960 00	

Total

Tax Amount (in words) : INR Five Lakh Seventy Thousand Nine Hundred Sixty Only

Company's Bank Details

Bank Name ICICI BANK LTD

1.000 nos

A/c No. 739051000005 Branch & IFS Code Sector 16 Noida & ICIC0007390

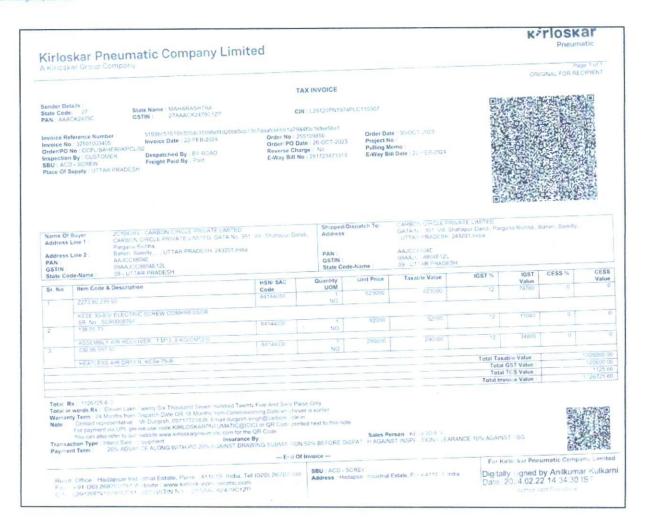
AAAFE1168R Declaration

We declare that this invoice shows the actual price of the goods described and that all particulars are true and

This is a Computer Generated Invoice













ANNEXURE: - IV SITE PHOTOGRAPHS





