**REPORT FORMAT:** CL-1 | Version: 1.0\_2018

# FILE No.: VIS (2024-25)-PL607-545-777 Date: 19-12-2024

* ***REPORT* NAME:** *Cost Verification Report of 10 TPD CBG Plant*
* ***PREPARED FOR ORGANIZATION:*** *State Bank of India, SME, Rudrapur*
* ***BORROWER COMPANY’S NAME:*** *M/s. Carbon Circle Pvt. Ltd.*
* ***ASSET TYPE****: 10 TPD CBG Plant*
* ***CURRENT LOCATION OF THE PLANT****: Village Shahpur Dandi, Tehshil: Baheri, District: Bareilly.*

**TO WHOM IT MAY CONCERN**

|  |  |  |
| --- | --- | --- |
| **S. NO.** | **PARTICULARS** | **DESCRIPTION** |
| 1. | Date of Survey | 13-12-2024 |
| 2. | Date of Report | 19-12-2024 |
| 3. | Documents provided for perusal | * Detailed Project Report. * Project Cost Budget |
| 4. | Current Location of the Plant | Village Shahpur Dandi, Tehshil: Baheri, District: Bareilly.. |
| 5. | Borrowing Company | M/s. Carbon Circle Pvt. Ltd. |
| 6. | Type of Plant & Capacity | 10 TPD CBG Pant |
| 7. | Type of Assessment | Cost Vetting |
| 8. | Scope of Assessment | Cost Vetting of the 10 TPD CBG Plant |
| 9. | Year of Establishment | 2024 - phase-I (5 TPD) has been established and operational, another phase-II (5 TPD) is under process of establishment. |
| 10. | Total Project Cost | **Rs. 84.77 Crore** (*Total project cost includes the total expenditure to be incurred in establishing the plant.* |
| 11. | Current Estimated Market Value | 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.  As per information available from online references, we are of the view that rate range for establishing the similar kind of CBG plant around **Rs.5.5 to Rs.6.5 Crore per TPD** |
| 12. | Condition of the plant | The plant has been designed to be established in two phases (Phase-I & II) of capacity 5 TPD each out of which phase-I (5 TPD) has achieved commercial operation on 1st August and phase-II plant work is under progress. |

**OBSERVATIONS:**

1. We have been provided with the details of project cost budgeted by the borrower company.
2. As per the site survey this plant is being established at Village Shahpur Dandi, Tehshil: Baheri, District: Bareilly.
3. We have contacted several suppliers for similar items and also did research on the public domain. Accordingly, we have got the quotation from the suppliers and found that the price given in the list of quotations provided to us is well within the price range of similar items available in the market and seems to be reasonable.
4. 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.
5. Also, the installation cost of any equipment like labour cost varies according to the scope of work and it is not possible to calculate exact amount for any fabrication work. So, we have considered the same as mentioned in the quotations provided by the company.
6. Based on the information provided by the company (M/s. Carbon Circle Pvt. Ltd.) and references found on the public domain for similar capacity of CBG plant, it is certified that the total market cost for establishing the similar capacity of plant type should be around **Rs.5.5 to Rs.6.5 crore per TPD.** (as per the quotations provided to us by the company) appears to be on higher side.

***Disclaimer:***

* 1. *This cost vetting is done only on the basis of project cost provided to us by the company and we don’t recommend any sort of recommendation in our Report.*
  2. *The estimated cost verification of item to item can’t exactly match as per our vetting due to several market consideration. In some of the items it is lower while in some of the item’s price comes to be higher but on an average the price as per list provided to us falls in the range as confirmed by us.*
  3. *There can be variation in the estimated price if the specification & make of any items procured is different from the list provided to us during assessment.*
  4. *The estimated cost verification is made based on the third-party information which has been replied upon in good faith.*
  5. *The estimated price may vary at the time of actual procurement because of change in prices in the market 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.*
  6. *This report doesn’t include any work related to drawing, design, sketch plan, procurement of the machines.*
  7. *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.*
  8. *This report is made at the request of the Bank.*

**For R.K Associates Valuers** **& Techno** **FOR INTERNAL USE Engineering Consultants (P) Ltd. *TYPED BY: Deepak Kumar Singh*** ***REVIEWED BY: SR. VP Projects***

# ANNEXURE: - I (COMPARISON LIST)

|  |  |  |  |
| --- | --- | --- | --- |
| **Reference for Bio Gas Plant** | | | |
| **S. No.** | **Name of the Party** | **Contact details** | **Remarks** |
|  | M/s Jog Waste to Energy Pvt Ltd | [info@jogwte.com](mailto:info@jogwte.com)  +91 9723269295  [www.jogwte.com](http://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. |
|  | The Global Green Growth Institute, GGGI India | [nishant.bhardwaj@gggi.org](mailto:nishant.bhardwaj@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 pre-operative expenses and excluding all other costs such as engineering, consultancy, installation costs etc. i.e. EPC Costs) |
|  | 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. |
|  | 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. |

# ANNEXURE:- II (QUOTATIONS/ REFERENCES FROM MARKET)

# ANNEXURE: - III (PROJECT COST BUDGETED PROVIDED BY CLIENT)

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| --- | --- | --- | --- |
| **Particulars** | **For 10 TPD Capacity** | **Phase-1** | **Phase-II** |
| Land | 1.9 | 1.15 | 0.75 |
| Building & Other Civil Works | 11 | 8.74 | 2.26 |
| Plant & Machinery\* | 63.4 | 26.16 | 37.24 |
| Pre-operative Expenses | 5.31 | 1.75 | 3.56 |
| Interest on Term Loan during Construction | 2.6 | 2.4 | 0.2 |
| Margin for Working Capital | 0.56 | 0.21 | 0.35 |
| **Total Cost of The Project** | **84.77** | **40.41** | **44.36** |