

# **Punjab Genco Ltd.**

**Invites**

**E-Tenders**

**For**

**Supply, Installation, Testing and Commissioning of Bio- Gas Flow Meter, On Line Bio – Gas Purity Monitoring System at 1.0 MW capacity High Rate Bio-Methanation Power Plant at Haibowal (Ludhiana) on turnkey basis.**

\*\*\*\*\*

**Director  
Punjab Genco Limited,  
Solar Passive Complex  
Plot No. 1 & 2, Sector 33-D, Chandigarh  
Tel - Fax no. (0172) – 2646384**

E-Tender no: PGL/2016-17/27

E-Tender for supply, installation, testing and commissioning of Bio-Gas Flow Meter, On line Bio-Gas Purity Monitoring System at 1.0MW Capacity High Rate Bio-Methanation Power Plant at Haibowal (Ludhiana) on turnkey basis.

**TENDER SUMMARY**

E-Tender No.	EMD (Rs.) by on-line payment only	Tender form fee (Rs.) by on-line payment only	Tender Processing fee by on line payment only	Date & Time			
				Bid Document Sale	Clarifications / site visit	Last Date & Time for Submission of E-bid	Date & Time of Opening of Technical E-Bids
<b>PGL/16-17/27</b>	Rs. 20,000/- (Rs. Twenty Thousand Only)	Rs 500/- <b>(Rs Five Hundred Only)</b>	Rs 2300/- (Rs. Twenty three Hundred only)	14/02/2017	Between Bid Document sale period only	06/03/2017 till 5.00 PM.	07/03/2017 at 10.30 AM.

**Note-** email-id for technical clarifications

kulbirsingh@peda.gov.in

**TABLE OF CONTENTS**

<b>SECTION</b>	<b>SUBJECT</b>	<b>PAGES</b>
<b>I.</b>	<b>Invitation for E-tender</b>	<b>4</b>
<b>II.</b>	<b>Instructions and Guidelines to Bidders for using E-Procurement System For Bid Submission</b>	<b>5-6</b>
<b>III.</b>	<b>Terms &amp; Conditions of the Bid</b>	<b>7-13</b>
<b>IV.</b>	<b>Introduction</b>	<b>14</b>
<b>V.</b>	<b>Bid Proposal (Performa-I)</b>	<b>15-16</b>
	<b>Technical deviations (Performa-II)</b>	<b>17</b>
	<b>Certificate of Genuine Parts (Performa-III)</b>	<b>18</b>
	<b>Detailed Scope of Work (Technical Specifications)</b>	<b>19</b>
	<b>Financial Bid (Performa-IV)</b> <b>(will be visible after purchase of Bid Document)</b>	<b>25</b>
	<b>Bid Proposal Form (Performa-V)</b> <b>(will be visible after purchase of Bid Document)</b>	<b>26</b>

## SECTION - I INVITATION FOR E-TENDER

Director PGL (Punjab Genco Ltd.), Chandigarh invites e-tenders from eligible firms for carrying out work of Supply, Installation, Testing and Commissioning of Bio- Gas Flow Meter, On Line Bio – Gas Purity Monitoring System at 1.0 MW capacity High Rate Bio-Methanation Power Plant at Haibowal (Ludhiana) on turnkey basis.

The other technical specifications are detailed in Section-IV - Technical specifications

### **BID CONDITIONS**

1. Bidders are advised to study the Bid Document carefully. Submission of Bids shall be deemed to have been done after careful study and examination of the Bid Document with full understanding of its implications.
2. Online offers prepared in accordance with the procedures enumerated in Section II should be submitted on line not later than the date and time laid down in this document. .
3. The PGL reserves the right to reject any bid or all the bids or withdraw Notice Inviting Tender without assigning any reasons and revising quantity, fine-tuning specifications as per requirement/result of clarifications / site visit in between the period of sale of this document before opening the technical bids.
4. Bidders/ Supplier are to submit online tenders by accessing tender documents on the website fill it and submit the completed tender document into Electronic Tender form on the website itself. Bidders / Contractors shall attach scanned copies of all the papers, i.e. Earnest Money, Tender Form Cost & the certificates as required in Eligibility criteria.
5. Corrigendum / Addendum / Corrections, if any will be published on the website.
6. The Particulars of Bidder (Performa-II) & Price Schedule Performa (Performa-IV) will be visible after purchase of Bid Document.
7. If the date of opening of tenders happens to be a holiday then tenders will be opened on the next working day.
8. The Tenders shall be valid for 90 days from date of opening of Tenders.
9. Addressee and Address at which Bids are to be submitted:  
**[www.etender.punjabgovt.gov.in](http://www.etender.punjabgovt.gov.in)**

E-Tender no: PGL/2016-17/27

E-Tender for supply, installation, testing and commissioning of Bio-Gas Flow Meter, On line Bio-Gas Purity Monitoring System at 1.0MW Capacity High Rate Bio-Methanation Power Plant at Haibowal (Ludhiana) on turnkey basis.

For  
Director  
Punjab Genco Limited,  
Solar Passive Complex  
Plot No. 1 & 2, Sector 33-D, Chandigarh  
Tel- Fax no. (0172) – 2646384

10. **Technical Bids** will be opened on the prescribed date and time
11. **Financial Bids** of only those Bidders will be opened who qualify technically. The information regarding date of financial bid opening shall be made available on the web site.
12. **Please note that financial aspects (prices, cost etc.) should not be indicated in the Technical Bid and should be quoted only in the Financial Bid.**
13. **The other terms and conditions of the BID are elaborated in Section-III**

**SECTION- II**  
**INSTRUCTIONS AND GUIDELINES TO BIDDERS FOR USING**  
**E-PROCUREMENT SYSTEM FOR BID SUBMISSION**

**1. REGISTRATION OF BIDDERS ON E-PROCUREMENT SYSTEM:**

For participating in the e-tendering process, the Suppliers shall have to get themselves registered with [etender.punjabgovt.gov.in](http://etender.punjabgovt.gov.in) and get user ID, Password. Class-3 Digital Signature is mandatory to participate in the e-tendering process.

**2. DIGITAL CERTIFICATES:**

The Bids submitted online should be signed electronically with a Class III Digital Certificate to establish the identity of the Bidder submitting the Bid online. The Bidders are required to obtain Class III Digital Certificates issued by ITI/Punjab Infotech Ltd. A Class III Digital Certificate is issued upon receipt of mandatory identity proofs along with an Application Form. Only upon the receipt of the required documents, a Digital Certificate can be issued.

**Note: It may take up to 2-3 working days for issuance of Class III Digital Certificate after completion of required documentation, hence the bidders are advised to obtain them at the earliest.**

**For any clarification/difficulty regarding e-tendering process flow, please contact on 9257209340/8054628821 / 01723934667 or Contact PGL Tel- Fax no. (0172) – 2646384.**

**4. PUBLISHING OF N.I.T.:**

For the Tenders processed using the e-Procurement System, only a brief Advertisement related to the Tender shall be published in the newspapers and the Detailed Notice shall be published only on the e-Procurement System. The contractors can view the Detailed Notice and the time schedule for all the Tenders processed using the e-Procurement System on the website <http://etender.punjabgovt.gov.in>.

**5. KEY DATES:**

The Bidders are strictly advised to follow the time schedule (Key Dates) of the Tender given in the Tender Summary in this document for their side of tasks and responsibilities to participate in the Tender as all the stages of each Tender are locked before the start time and date and after the end time and date for the relevant stage of the Tender as set by Punjab Genco Limited.

**6. PURCHASE OF TENDER DOCUMENTS:**

The Tender documents can be purchased ONLY online from 14/02/2017, 10.00 Hrs. to 06/03/2017 17:00 Hrs. & can be down loaded in between this period from the web site <https://etender.punjabgovt.gov.in>. Arrangements have been made for the Bidders to make payments online via IPG (Internet Payment Gateway) / Internet Banking/NEFT/RTGS. As this is online tendering, the application form for the purchase of tender documents shall not be required.

The Bidders are to purchase the tender documents online by making online payment of tender document fees using the service of the secure electronic payments gateway via one of the

payments modes as mentioned above, and should print out the system generated receipt for their reference which can be produced whenever required.

## 7. SUBMISSION OF EMD:

The Bidders are to deposit the Earnest Money of Rs. 20,000/- (Rs. twenty Thousands only) online by making online payment using the service of the secure electronic payments gateway via one of the payment modes as mentioned in clause 6 above, and should print out the system generated receipt for their reference which can be produced whenever required. EMD in the shape of Bank Guarantee (BG) will not be accepted. The last date for submission of e-bids 06/03/2017 upto 17:00 Hrs.





## 8. PRE-BID CLARIFICATIONS:

For any Pre-bid queries, the bidders are advised to follow instructions/procedure as given below:

Pre bid query option is available for bidders to initiate a conversation with the Buyer in form of messages to clarify the doubts regarding the tender on the website [etender.punjabgovt.gov.in](http://etender.punjabgovt.gov.in)

Query posted by a bidder in the form of message in the pre bid query option of e- tender is viewable only to the department once they click on the pre-bid query button. Bidders who have posted the query have to check the pre bid query area regularly for the reply given by the department. For any communication, gap bidder will be solely responsible.

The queries shall be entertained only on Technical matters and must be submitted upto 5 days prior to the submission of bid. After this period, all the queries posted by the bidders and replies given by the department will be uploaded on the above website for the information of all the bidders.

Department > Tender Number(by Line) > In Progress		Tender Number Search				Punjab Rural Water Supply and Sa			
Actions	Tender Number	Line#	Quantity	Estimated Cost	EMD	Form Fee	Authorized Date	Tender Document Request To Date Da	
    <a href="#">Click Here</a>	001/test	01	. NA	Rs.1.00	Rs.1.00	Rs.1.00	04-09-2012 16:30	04-09-2012 17:30	

Test Tender

## 9. AMENDMENT OF BID DOCUMENT:

At any time up to the last date for receipt of bids, the PGL, may, for any reason, whether at his own initiative or in response to a clarification requested by prospective Bidders, modify the Bid Document by an amendment:

- The amendment will be notified on the website and will be binding on the prospective bidders.
- In order to afford prospective Bidders reasonable time or otherwise for any other reason, in which to take the amendment into account in preparing their bids, PGL may, at his discretion, extend the last date for the receipt of Bids.

## 10. OPENING OF TENDERS:

The concerned Officials of the department will open the Technical Bid online on the date and time stipulated in the NIT. In case the tender could not be opened on due date and time, the same will be opened in the subsequent working day/days at the same time. Date & time of the financial bid opening will be uploaded on the web site. Financial Bids of only technical qualified bidders will be opened on that date and time.

Financial Bid of only Technical Qualified Bidders will be opened on that date & time. Date & time of Financial Bid opening will be uploaded on the website.

For any clarification/difficulty regarding e-tendering process flow, please contact on 9257209340/8054628821 / 01723934667 or Contact PGL -Tel- Fax no. (0172) – 2646384.

### SECTION - III

#### TERMS AND CONDITIONS OF THE BID

##### 1. LANGUAGE OF BID :

The Bids prepared by the Bidder and all correspondence and documents related to the bids exchanged by the Bidder and PGL, shall be written in the English language, provided that any printed literature furnished by the Bidder may be written in another language so long as accompanied by an English translation in which case, for purposes of interpretation of the bid, the English translation shall govern.

##### 2. TECHNICAL QUALIFICATION CRITERION :

###### Technically qualified bidders are –

- Bidder should be Proprietorship/partnership firms/company incorporated under Indian Companies Act 1956/2013.
- Bidder should be manufacturer of On line Bio Gas Flow Meter and Online continuous biogas purity monitoring system needs to be installed in the plant or their authorised supplier.
- Bidder must have executed successfully at least one installation/commissioning of these instruments at Bio Gas Plant or process industries.
- The bidder will provide the copies of completion certificates of such works and their satisfactory performance from their clients
- The offered instrument must be certified from the appropriate accredited laboratory for its accuracy.
- The Bidder must possess Professional Competence and experience of the personnel to be associated with this project. Scanned copies of work experience of such key personnel to be attached in Technical Bid.
- The Bidder should not be under a declaration of ineligibility for corrupt and fraudulent practices or any other reason, whatsoever, or have not been blacklisted by the Government of India or any of its agencies, including public enterprises and/or by any State Government or any of its agencies.
- The Bidder must have valid PAN issued by Income Tax Authorities, India.
- The Bidder shall give a certificate regarding the use of quality components for works as indicated in Performa-III

##### 3. TECHNICAL BID WILL CONSIST THE FOLLOWING:

- (a) Bid Proposal Sheet as per Performa-I of Section-V.
- (b) Particulars of Bidder as per Performa-V of Section-V (will be visible after purchase of Bid Document).
- (c) Certificate of genuine parts as per Performa-III of Section-V.



- (d) Scanned copies of all the documents mentioned in the check list.
- (e) All the Technical Drawings of the modifications required in the work along with offered system in details.
- (f) Technical Deviations, if any, from the terms and conditions and specifications (Performa-II). Failing which, it would be assumed that there are no technical deviations and the full responsibility lies on the Bidder.

**4. FINANCIAL BID WILL CONSIST THE FOLLOWING:**

- (a) Bid prices duly filled, signed and complete as per the Price Schedule on the prescribed Performa (Performa-IV) (will be visible after purchase of Bid Document).
- (b) The prices will be fixed and valid for a period of six months from the date of signing the contract.
- (c) Financial Deviations not allowed.

**5. INSPECTION OF EXISTING BIO – GAS FILTERATION AND BOTTLING SYSTEM OF HAIBOWAL POWER PLANT:**

Tenderer if desires, may inspect High Rate Bio-Methanation Power Plant at Haibowal (Ludhiana) and examine and obtain all information required and satisfy him regarding objectives, supplies and technical works involved and all local matters and things before submission of their tender. They should also satisfy themselves regarding the type and number of equipment and facilities required and constraints for the satisfactory completion of work. The quantities of various sections of the work, the availability of local labour, availability and rates of materials, local working conditions, extreme weather conditions, uncertainties of weather, obstructions and hindrance that may arise etc. all which may affect the work and cost thereof.

**6. STANDARDS:**

The Goods supplied under this contract shall conform to the standard mentioned in the Technical Specifications, and when no applicable standards are mentioned, it should conform to the authoritative standards. Such Standard shall be the latest issued by the concerned institution governing that standard.

**7. COMPLETION PERIOD :**

- a. The completion period will be within **30 Days** from the date of issue of work order for the entire project.
- b. Planned shutdown of the power plants will be provided for carrying out the installation and commissioning works within the above-mentioned period. The shutdown period will be provided after completion of supplies or any other period considered appropriate by PGL.
- c. In the event of delay in the supply and /or installation & commissioning, specified above, the bidder shall be liable to pay a penalty @ 2% value for every week of delay subject to a maximum of 10% value, after which PGL,

shall be at liberty to cancel the contract. For the purpose of this clause, part of a week shall be considered to be a full week.

- d. Relaxation in completion period for the purpose of penalty shall be allowed if it is felt that the delay is beyond the control of contractor or due to non-availability of planned plant shutdowns or due to force majeure conditions. The decision in this regard shall be given by Director, PGL

#### **8. SUBMISSION OF PERFORMANCE GUARANTEE:**

- a. The Bidder whose tender will be accepted will be notified through letter of intent.
- b. The bidder then shall submit a performance Bank Guarantee of 10% of the quoted price in the prescribed Performa within 7 days from the date of issue of work order and would be valid for warranty period. The Bank Guarantee will be released after completion of warranty obligation period. Further the EMD amount of will be released on submission of Bank Guarantee.
- c. An unexcused delay by the Bidder in the performance of its supply and installation obligations shall render him liable to penalties as mentioned in clause 7 above and in addition to that Performance Security will be forfeited in case the maximum value of penalty is reached.
- d. Hiding of facts, misrepresentation, corrupt practices by the Bidder if revealed at any stage, withdrawing the bid after opening of financial bid, non-signing of contract within stipulated period would amount to forfeiture of EMD and subsequently the firm may also be blacklisted.

#### **9. STANDARD OF PERFORMANCE:**

The firm shall carry out the supply order and carry out its obligations under the contract with due diligence, efficiency and economy in accordance with generally accepted norms techniques and practices used in the industry through qualified/licensed manpower. The Bidder shall also adhere to professional implementation and support services during the execution of the project. The PGL may carry out benchmarking of sample equipment to be provided by the short listed Firm before and / or immediately after the delivery of equipment.

It shall employ appropriate advanced technology and safe and effective equipment, machinery, material and methods. Bidder shall always act in respect of any matter relating to this contract, as faithful advisors to the PGL and shall, at all times, support and safeguard the PGLs legitimate interests in any dealings with the third party.

#### **10. USE OF CONTRACT DOCUMENTS AND INFORMATION:**

- a. Bidder shall not, without the PGL's prior written consent, disclose the contract or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of PGL in connection therewith to any person other than a person employed by Bidder in the performance of the contract. Disclosure to any such employed person shall be made in confidence

and shall extend only as far as may be necessary for purposes of such performance.

- b. Bidder shall not without the purchaser's prior written consent, make use of any document or information.
- c. Any document other than the contract itself shall remain the property of the PGL and shall be returned (in all copies) to PGL on completion of the service provider's performance under the contract if so required by the PGL.

#### **11. SCHEDULE OF PAYMENT:**

- a) 10% of the contract value shall be released as mobilization advance against submission of Bank Guarantee of 110% of the advance amount.
- b) 70% of the contract price will be released after delivery of complete material/equipment at site after adjusting the 10% advance.
- c) 10% of the contract price will be released after successful installation and completion of all modification works, protection testing and commissioning.
- d) Balance 20% of the contract value will be released after performance run of three months from date of commissioning of complete system.

#### **12. INSPECTION AND TEST:**

The PGL at its discretion shall inspect, examine and test the technical supplies through its officers and/or through an outside agency nominated by PGL at the manufacturer's /supplier's works or at site where the contractor have installed the instruments prior to dispatch on receipt of a clear notice of minimum 3 days in advance to be reckoned from the date of receipt by purchaser. Alternately the company may ask for the test certificate for the tests carried out by the manufacturer in line with the requirement of ISI. The cost of inspection including boarding, lodging, travelling etc. of PGL inspecting officer will have to be borne by the supplier.

#### **13. WARRANTY PERIOD:**

- a. The firm will be responsible for a comprehensive warranty of **one year** from the date of completion of works.
- b. The firm will not remove any equipment without the written permission of the PGL to be repaired/replaced under warranty obligations.
- c. The firm will rectify the faults as soon as possible appropriately within 12 clock hours. Such services shall be provided on all days.

- d. The firm will provide preventive performance check once in three months and if felt necessary will provide the preventive maintenance thereof.
- e. In case of default, the PGL will have the right to arrange maintenance at the risk and cost of the firm from any other source and shall adjust the charges from the Performance Bank Guarantee. PGL decision shall be final in this regard and will be binding on the firm.

**14. TAXES AND DUTIES:**

- a. The bidder shall be entirely responsible for all taxes, levies, cess, Octroi, duties, license fees, etc. incurred until completion of warranty obligations. PGL will issue C form as required.

**15. SUSPENSION:**

- a. PGL may by a written notice of suspension to the Firm, suspend all payments to the Firm under the contract, if the Firm fails to perform any of its obligations under this contract provided that such notice of suspension:
  - i. Shall specify the nature of the failure.
  - ii. Shall request the bidder to remedy such failure within a specified period from the date of receipt of such notice of suspension by the bidder.

**16. TERMINATION FOR DEFAULT:**

- a. The PGL may, without prejudice, to any other remedy for breach of contract, by written notice of default sent to the bidder, terminate the contract in whole or in part if:
  - i. The bidder fails to deliver any or all of the obligations within the time period(s) specified in the contract, or any extension thereof granted by the PGL.
  - ii. The bidder fails to perform any other obligation(s) under the contract.
  - iii. The Firm shall be given maximum of two opportunities of 10 days each to improve his service level and meet the obligations as per the contract.

**17. TERMINATION FOR INSOLVENCY:**

The PGL may at any time terminate the contract by giving written notice to the bidder without compensation to the bidder, if the bidder becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or effect any right of action or remedy which has accrued thereafter to the PGL.

**18. NO CLAIM CERTIFICATE:**

The bidder shall not be entitled to make any claim, whatsoever, against the PGL under or by virtue of or arising out of this contract nor shall the PGL entertain or consider any

such claim, if made by the bidder after he shall have signed a “no claim” certificate in favour of the PGL in such forms as shall be required by the PGL after the works are finally accepted.

#### **19. DOCUMENTATION BY BIDDER IS PGL PROPERTY:**

All plans, drawings, specifications, designs and other documents prepared by the bidder in the execution of the contract will be got approved from PGL and then shall become and remain the property of the PGL, and before termination or expiration of this contract, the bidder shall deliver all such documents to the PGL under the contract along with the detailed inventory thereof.

#### **20. CONFIDENTIALITY:**

The bidder and their personnel shall not, either during the term or after expiration of this contract, disclose any proprietary or confidential information relating to the services, contract or the PGL's business or operations without the prior written consent of the PGL.

#### **21. FOCE MAJEURE:**

- a. Notwithstanding the provisions of the bid, the bidder shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure.
- b. For purposes of this Clause, “Force Majeure” means an event beyond the control of the bidder and not involving the bidder and not involving the bidder's fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- c. If a Force Majeure situation arises, the bidder shall promptly notify the PGL in writing of such conditions and the cause thereof. Unless otherwise directed by the PGL in writing, the bidder shall continue to perform its obligations under the contract as far as reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event. The PGL may terminate this contract, by giving a written notice of minimum 30 days to the bidder, if as a result of Force Majeure, the bidder being unable to perform a material portion of the services for a period of more than 60 days.

#### **22. COST OF BID PREPARATION :**

The Bidder shall bear all costs associated with the preparation and submission of its Bid, including cost of presentation for the purposes of clarification of the bid, if so desired by PGL and PGL will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Bidding process. The Bidder is expected to carefully examine all instructions, forms, terms and specifications in the Bid Document.

Failure to furnish all information required in the Bid Document or submission of a bid not substantially responsive to the Bid Document in every respect will be at the Bidder's risk and may result in the rejection of the bid.

**23. SUPPLY OF T&P, SAFETY EQUIPMENTS AND CONSUMABLES:**

Except where otherwise specified the contractor shall at his own expenses supply and provide all the T&P, temporary works, material for installation, safety equipment's, testing equipment's etc. for both for temporary and for permanent works. This will also include supervision and labour including their transport to or from the site and their staying arrangements and any other and everything required for executing the entire works.

**24. NIGHT WORK AND SAFETY PRECAUTIONS:**

Night work shall not be allowed. The contractor is responsible to safeguard the workmen and the public and suitable precautions shall be taken to prevent accidents and accidental falls.

**25. SUB CONTRACT**

The contractor shall not subcontract any portion of the contract without the prior written approval of Director, PGL.

**26. Compliance to Regulations and Bye Laws:**

The contractor shall conform to the provisions of any statute relating to his workers and the work and regulations and bye-laws of any local authority and or any Central/State Department or undertaking in whose jurisdiction the work connected.

**27. COMPENSATION UNDER WORKMEN'S COMPENSATION ACT:**

The contractor shall be responsible for and shall pay any compensation to his workmen payable under the Workmen's Compensation Act, 1923 (VIII of 1923) or any other act applicable hereinafter called the said Act for injuries caused to the workmen. The contractor will take a policy with an Insurance Company to cover all his workers against injuries fatal/non-fatal during course of duty against Workmen's Compensation Act. The contractor shall submit a copy of the same before start of the work so that PGL is kept free from any liability.

**28. OTHER CONDITIONS:**

- a. Risk purchase at the cost of bidder will be made on the failure of the bidder to make supply as per Terms and Conditions. The difference of excess in cost thus incurred will be received from the bidder in a suitable manner and even from his pending bills, earnest money or security whichever is available.
- b. If the contractor or his work people, or servants shall break, deface, injure or destroy any part of a building or existing equipment, the contractor shall make the same good at his own expense.
- c. All disputes, differences, claims and demands arising under or pursuant to or touching the contract shall be referred to the arbitrator(s) as per the provisions of the arbitration Act. Such arbitration shall be held at Chandigarh.

- d. In all matters and disputes arising there under, the appropriate Courts at Chandigarh alone shall have jurisdiction to entertain and try them.
- e. Quote should be F.O.R destination.

## INTRODUCTION

Punjab Genco Ltd., (wholly owned company of Punjab Energy Development Agency - PEDDA, a State nodal agency for promotion and development of Non-Conventional and Renewable Energy Sources) has set up High Rate Bio-Methanation Power Plant of 1 MW capacity at Haibowal, Ludhiana, Punjab. The plant is in operation since 2004

### Outdoor Switch Gears

The plant has 11 KV System for evacuation of power generated from its 1 MW Gas Engine.

The outdoor switchyard comprises of:

- Power Transformer, 1600 KVA/1875 KVA, 415V/11 KV, outdoor type, natural cooled (ONAN).
- Protection & metering CTs & PTs.
- Outdoor type Vacuum Circuit Breaker, 11 KV, 800A, 50 Hz, Motor charged, rated Short Circuit Current Capacity 25 KA & Lightning Withstand Voltages 75KV. Make ABB Model 2003.
- Main Isolators & Auxiliary Transformer Isolators.

### Transmission Line & HT indoor Switch Gear at PSEB Grid

Transmission Lines are erected from plant outdoor switchyard to nearest PSPCL grid for injection of power to PSPCL Grids. In the control room of PSPCL Grid, the following equipment is installed.

- 11KV HT Control Panel provisioned with VCB 630 A, 12 KV, 50 Hz Motorized Spring Charging, Making capacity 62.5 KA (Peak) with Overcurrent & Restricted Earth Fault protections & Metering instruments connected with Main 11KV transformer of the Grid Sub Station.

**SECTION-V**

**BID PROPOSAL PROFORMA's**

***Performa -I***

**BID PROPOSAL SHEET**

Bidder's Proposal Reference No. & Date :  
Bidder's Name & Address :  
Person to be contacted :  
Designation :  
Telephone No. Fax No:

**To:**

**Director  
Punjab Genco Limited,  
Solar Passive Complex  
Plot No. 1 & 2, Sector 33-D, Chandigarh**

**Subject: Tender for Supply, Installation, Testing and Commissioning of Dew Point Meter, Bio- Gas Flow Meter, On Line Bio – Gas Purity Monitoring System at 1.0 MW capacity High Rate Bio-Methanation Power Plant at Haibowal (Ludhiana) on turnkey basis.**

Dear Sir,

**1.0** We, the undersigned Bidders, having read and examined in detail the specifications and all bidding documents in respect of Supply, Installation, Testing and Commissioning of Dew Point Meter, Bio- Gas Flow Meter, On Line Bio – Gas Purity Monitoring System at 1.0 MW capacity High Rate Bio-Methanation Power Plant at Haibowal (Ludhiana) on turnkey basis. do hereby propose to provide equipment as specified in the bidding document.

**2.0 PRICE AND VALIDITY**

2.1 All the prices mentioned in our proposal are in accordance with the terms as specified in bidding documents. All the prices and other terms and conditions of this proposal are valid for a period of 120 days from the last date of submission of bids.

2.2 We do hereby confirm that our bid prices include all taxes and cess including Income Tax.



2.3 We have studied the Clauses relating to valid Indian Income Tax and hereby declare that if any Income Tax, Surcharge on Income Tax and any other Corporate Tax is altered under the law, we shall pay the same.

### 3.0 EARNEST MONEY

We have enclosed the required earnest money Online in the Pre-Qualification bid envelope. It is liable to be forfeited in accordance with the provisions of bid document.

### 4.0 DEVIATIONS

We declare that all the services shall be performed strictly in accordance with the fine-tuned Technical specifications and other bid document except the deviations as mentioned in the Technical deviation Performa (Performa-II) Further we agree that additional conditions, if any, found in the proposal documents, other than those stated in deviations Performa, shall not be given effect to.

### 5.0 BID PRICING

We further declare that the prices stated in our proposal are in accordance with your terms & conditions in the bidding document.

### 6.0 QUALIFYING DATA

We confirm having submitted in qualifying data as required by you in your bid document. In case you require any further information/documentary proof in this regard during evaluation of our bid, we agree to furnish the same in time to your satisfaction.

### 7.0 CONTRACT PERFORMANCE SECURITY

We hereby declare that in case the contract is awarded to us, we shall submit the performance Guarantee Bond in the form of Bank Guarantee as per terms of bid document.

7.1 We hereby declare that our proposal is made in good faith, without collusion or fraud and the information contained in the proposal is true and correct to the best of our knowledge & belief.

7.2 Bid submitted by us is properly prepared so as to prevent any subsequent alteration and replacement.

7.3 We understand that you are not bound to accept the lowest or any bid you may receive.

Thanking you,

**Date**

**Signature**

**Name**

**Place**

**Seal**

Performa-II

**TECHNICAL DEVIATIONS**

**Subject: Supply, Installation, Testing and Commissioning of Bio- Gas Flow Meter, On Line Bio – Gas Purity Monitoring System at 1.0 MW capacity High Rate Bio-Methanation Power Plant at Haibowal (Ludhiana) on turnkey basis.**

Dear Sir,

Following are the Technical deviations & variations from the exceptions to the specifications of commissioning the **Supply, Installation, Testing and Commissioning of Bio- Gas Flow Meter, On Line Bio – Gas Purity Monitoring System at 1.0 MW capacity High Rate Bio-Methanation Power Plant at Haibowal (Ludhiana) on turnkey basis.** These deviations and variations are exhaustive. Except these deviations and variations, the entire work shall be provided as per your specifications and documents.

Sr. No.	Clause No.	Page No.	Statement of deviations and variations
---------	------------	----------	--

Date

Signature

Name

Place

Seal

E-Tender no: PGL/2016-17/27

E-Tender for supply, installation, testing and commissioning of Bio-Gas Flow Meter, On line Bio-Gas Purity Monitoring System at 1.0MW Capacity High Rate Bio-Methanation Power Plant at Haibowal (Ludhiana) on turnkey basis.

**Performa-III**

**CERTIFICATE**

**Use of new, genuine and quality components for High Voltage Section**

This has reference to the quoted / to be supplied by your company against the tender no. **PGL/2016 - 17/27** dated \_\_\_\_\_.

We hereby undertake that all the components / parts/ assembly/ equipment's, etc. to be used in **Supply, Installation, Testing and Commissioning of Bio- Gas Flow Meter, On Line Bio – Gas Purity Monitoring System at 1.0 MW capacity High Rate Bio-Methanation Power Plant at Haibowal (Ludhiana)** shall be original, new, genuine and as per the said technical specifications from respective OEM(s) of the quoted products and will be as per applicable Indian/International Standards as applicable. It is also certified that no refurbished/ duplicate/ second-hand components/ parts/assembly are being used or shall be used.

In case we are found not complying with above indicated undertaking at the time of delivery or during installation, we allow the **Punjab Genco Limited** to take appropriate action (e.g. Forfeiture of Bank Guarantee/ EMD, etc.).

**Authorized signatory**

## SECTION-IV

### Detailed Scope of Work

#### OBJECTIVE OF ADDITION IN CAPITAL EQUIPMENT

For online flow measurement and monitoring of Bio – Gas being supplied to Bottling Plant from Bio - Gas holder.

#### SCOPE OF WORKS:

1. Complete Supply, Installation, Testing and Commissioning of Bio- Gas Flow Meter, On Line Bio – Gas Purity Monitoring System at 1.0 MW capacity High Rate Bio-Methanation Power Plant, Haibowal (Ludhiana) on turnkey basis. Including unloading, shifting & erection comprising of all civil, electrical & mechanical work.
2. The available space to be used for installation of new system. The civil work of grouting, anchoring & fastening will also be in vendor's scope.
3. The new system is to be connected with existing system within the available space & in a systematic & aesthetic manner for the ease of operation & maintenance.
4. The new electrical connections needs to be done with standard cables to the nearby Panels with all adequate controls like switch gear, contactors, fuses & MCBs of ISI & reputed make.
5. PGL strongly recommends visiting site before bidding for actual Bill of materials & installation process.
6. The work will be on turnkey basis.

#### SCOPE OF SUPPLY

1. Online continuous biogas flow meter for biogas flow rate of 500m<sup>3</sup>/hour – 1 no. and Online continuous biogas purity monitoring system for biogas flow rate of 500m<sup>3</sup>/hour – 3 no. - With specifications as per Annexure - I.
2. All the modifications and additions in mechanical works like piping, flanges, bases, valves and Electrical system like laying of new wiring, switchgear etc. including Industrial grade PCs as required with latest specifications with all required licensed software like windows, MS Office or any other required for online monitoring and consumable items during erection are in vendor's scope.
3. The scope also includes data logging system.

The detailed engineering drawings like GA & P&ID will be approved by PGL.

**Annexure- I****1. Online Continuous Biogas Flow meter for flow rate of 500m<sup>3</sup>/hour****Specifications:**

- Mounting - Integral/ Remote
- MOC - Mild or Carbon steel/ 55316/ SS304.
- Power Supply - 85V to 265V AC, 50Hz, Single Phase (Universal).
- Operating Temperature - 0-70°C
- Cable Glands for computing unit

**Input / Output Specifications:**

- Input A - Gas flow
- Input B - Gas temperature
- Input C - Gas Pressure
- Output - 4 - 20 mA dc in max. 600 Ohm load isolated. Proportional to Flow Rate.

**Online Density compensation:**

- Online density compensation possible because of the online pressure and temperature measurement.
- Accuracy - 2.5 % of actual reading.
- Typical Turn down 10:3 standard or 10:1 extended

**Display**

- Display For Total flow- 6 Digit, 0.5", 7-Segment LED, with programmable decimal point position and count-rate (8 Digit Totalizer with the uppermost 2 significant digits can be viewed on pressing Enter Key in Run Mode.)
- Display for Flow Rate - 4 Digit, 0.5", 7-Segment LED.
- Flow Transmitter type – DPT
- D.P. Transmitter Type - Linear / Sq-root, Programmable.
- Zero Cut-Off - 1%, 2%, 5%, 10%, Programmable.
- Keyboard - Four Numbers of Keys for Parameter Programming.
- NOTE: accessible on opening cover of transmitter box.
- Four magnetically operated keys for parameter programming.
- NOTE: accessible without opening cover of transmitter box.
- Pressure Unit - Kg/cm<sup>2</sup> (g) or Bar (g), Programmable.
- Gas Pressure - 0 to 50 Kg/cm<sup>2</sup> (g) maximum.
- Temperature - 0°C to 70°C
- Input C range - 0°C to 70°C
- Alarm Setting - Two numbers on instantaneous flow rate
- Alarm Configuration - HH / HL/ HN / LL/ LN / NN - programmable.
- Alarm output: 2 numbers of Potential Free C/O relay contact rated for 230V AC / 5 Amp.
- One Relay for alarm setting and one Relay for alarm2 setting with hysteresis of 0.5 %.
- Blinking Flow rate - If Flow rate exceeds the set reference flow the lower 4 digit display for Flow rate blinks.
- Password protection - Provided for all modes except Display Mode.

- PC Communication: Protocol - MODBUS /RTU
- Comport - RS232 or RS485.
- Baud-rate - 19.2K I 9600 / 4800 / 2400, Programmable.
- Baud-rate - 19.2K I 9600 / 4800 / 2400, Programmable. - Parity - Even / None, Programmable.
- Tag Number - 1 to 99 Programmable.
- Data Logging: Every Hour
- No of logs: 3750 logs
- Backup for Total: Provided. (Totalized value stored on Power OFF)
- ( 8 digit Totalizer with the most significant 2 digits available on Pressing Enter key in RUN Mode)
- Ingress protection - IP65 equivalent.

#### **Compulsory Features:**

- The meter should not have any moving part or even vibrating diaphragms.
- It should work on very low fluid velocities and low flowing pressures, as low as 150 mmwc.
- It must be have a well-defined standard from BS or ISO etc.
- It should have digital display for reading the instantaneous flow rate on 4 digits and total or cumulative flow on 8 digits.
- It should have facility to read flowing pressure and temperature.
- It must have compensation for variable flowing pressure and temperature.
- It should have an output of 4-20 mA proportional to current flow rate.
- It should have communication port to communicate with computer.

#### **Installation:**

Measurement of flow at one points: - Raw Bio Gas

## **2. Online continuous biogas purity monitoring system for biogas flow rate of 500m<sup>3</sup>/hour**

1. One biogas analyzer will analyze biogas composition (CH<sub>4</sub>, CO<sub>2</sub>, H<sub>2</sub>S, O<sub>2</sub> & N<sub>2</sub>) at 3 testing points.
2. Raw biogas composition:
  - CH<sub>4</sub>: 55-60%
  - CO<sub>2</sub>: 30-35%
  - H<sub>2</sub>S: 5000 ppm
  - H<sub>2</sub>O: saturated
  - Purified biogas composition:
    - CH<sub>4</sub>: 95-96%
    - CO<sub>2</sub>: <5%
    - H<sub>2</sub>S: <25 ppm
    - H<sub>2</sub>O: - 60<sup>0</sup> C Dew Point
    - Pressure: 0.3-0.4 kg/cm<sup>2</sup>
    - At the vent of VPSA system

- CH<sub>4</sub>: 1-2%
- CO<sub>2</sub>: 96-97%
- H<sub>2</sub>S: <5 ppm
- Pressure: 0.3-0.4 kg/cm<sup>2</sup>

Microprocessor based Continuous Biogas Analyzer shall consist of:

- a) Gas Analyzer
- b) Sampling System

Parameter	Sensor	Range(Nom/Max)	Resolution
CH <sub>4</sub>	TCD/IR	0-100% V/V	0.1 %
CO <sub>2</sub>	TCD/IR	0-50% V/V	0.1 %
H <sub>2</sub> S	EC	0-5000 PPM	1 PPM
O <sub>2</sub>	EC	0- 25% V/V	0.1 %
N <sub>2</sub>	EC	0- 100% V/V	0.1 %

**a) The model with digital display**

- Measuring principle: Infrared absorption (NDIR)
- Accuracy: +/-2% for H<sub>2</sub>S, CH<sub>4</sub>, CO<sub>2</sub>, 0.5% for O<sub>2</sub>, N<sub>2</sub>
- Operating Temperature: 0<sup>o</sup> to 50<sup>o</sup>C
- Display: Alpha-Numeric LCD
- Alarms: 2 level alarms
- Signal response time: T 90 < 2sec (At 1 LPM) 90  
T 90 < 1sec (At 3 LPM) 90
- Warm up time: < 3 min
- Base line noise: +/- 0.5% of the range
- Repeatability: +/-0.5% of the range
- Power Supply: 220V AC, 50 Hz
- Output: 24V DC, 4-20 mA
- Enclosure: Aluminum casing
- Digital interface: RS 485/232
- Protection: IP 65-67
- Data logging system
- Data acquisition software for acquiring data as per CPCB guidelines
- Data to be logged for a month
- RE 485/RS 232 port connectivity for SCADA
- Self-diagnostic check
- Battery backup for RAM
- System retains set mode in case of power failure

**b) Sampling System**

- Housed in a MS Weather proof standalone panel, systems consisting of required filter moisture separator, flow meter, solenoid valve for purging the air
- **Installation and commissioning of the system**
- **Location of installation:**
- At the inlet for raw biogas
- At outlet of VPSA system

- At the vent of VPSA system
- Distance between plant and control room: 30-35 meters

**The quote will include the following:**

- Supply price with freight, duty & taxes
- Commissioning charges will include to and fro charges for the engineer, lodging and boarding, food and local conveyance
- Also required cable needs to be quoted in the offer.

**Performance test:**

- It will be done at the plant. It will be put to test for a period of 24 hours. The data logged will be analyzed.

**Safety alarm:**

- Alarm needs to be generated when H<sub>2</sub>S level increases above 28 ppm and CO<sub>2</sub> increases above 5 ppm

**Technically qualified bidders are –**

- Bidder should be Proprietorship/partnership firms/company incorporated under Indian Companies Act 1956/2013.
- Bidder should be manufacturer of On line Bio Gas Flow Meter and Online continuous biogas purity monitoring system needs to be installed in the plant or their authorised supplier.
- Bidder must have executed successfully at least one installation/ commissioning of these instruments at Bio Gas Plant or process industries.
- The bidder will provide the copies of completion certificates of such works and their satisfactory performance from their clients
- The offered instrument must be certified from the appropriate accredited laboratory for its accuracy.



E-Tender no: PGL/2016-17/27

E-Tender for supply, installation, testing and commissioning of Bio-Gas Flow Meter, On line Bio-Gas Purity Monitoring System at 1.0MW Capacity High Rate Bio-Methanation Power Plant at Haibowal (Ludhiana) on turnkey basis.

## Punjab Genco Ltd.

Price Bid/Financial Bid - (Performa-IV)

Tender No/Line No:		PGL/2016-17/27			
Name of Work		Supply, Installation, Testing & Commissioning of Bio-Gas Flow Meter, On Line Bio-Gas Purity Monitoring System at 1.0 MW capacity High Rate Bio-methanation Power Plant at Haibowal (Ludhiana) on turnkey basis.			
Name of Bidder:					
Address:					
Contact Details:					
Sr.No.	Description	Qty	Rate		Amount
			Rate	Total	In figures
1.	Supply of Online Continuous Biogas Flow meter for flow rate of 500m <sup>3</sup> /hour With technical specification as per Annexure-I	One No.			
2.	Supply of Online continuous biogas purity monitoring system for biogas flow rate of 500m <sup>3</sup> /hour With technical specification as per Annexure-I	Three No.			
3.	Cost of Installation, testing & commissioning of complete works as per scope including modification in existing works including supply of PC.				
			<b>Total</b>		
Note:	Rates to be quoted at 1, 2 & 3 shall be inclusive of all taxes and duties as applicable F. O. R Destination.				
1.	The rates shall be quoted in Indian Currency.				

**Note:**

1. The above Performa is for reference purpose only. EXCEL sheets can be download and uploaded by paying the document and other charges online.
2. This Performa should be part of financial bid only. If this Performa is filled and attached with technical bid, the bid will be rejected.

E-Tender no: PGL/2016-17/27

E-Tender for supply, installation, testing and commissioning of Bio-Gas Flow Meter, On line Bio-Gas Purity Monitoring System at 1.0MW Capacity High Rate Bio-Methanation Power Plant at Haibowal (Ludhiana) on turnkey basis.

## Punjab Genco Ltd.

### Technical Bid Condition (Performa-V)

To qualify for award of the contract, each bidder in its name should have to fulfill following requirements:

Name of work:- Supply, Installation, Testing & Commissioning of Dew Point Meter, Bio-Gas Flow Meter, On Line Bio-Gas Purity Monitoring System at 1.0 MW capacity High Rate Bio-methanation Power Plant at Haibowal (Ludhiana) on turnkey basis.

Tender No:

PGL/2016-17/27

**Name of Bidder/ Bid proposal number & date:**

**Address:**

**Contact Details:**

S.No.	Description	Compliance
1.	Bid proposal sheet duly filled in, signed and complete in all respects. (Performa-1)	
2.	Technical Deviation (Performa II)	
3.	The Bidder must deposit Earnest Money Deposit (EMD) Through online only.	
4.	Bidder must have submitted Tender form fee on line.	
5.	Bidder must have submitted Tender Processing fee on line.	
6.	The Bidder must be Proprietorship/partnership firms/company incorporated under Indian Companies Act 1956/2013.	
7.	The Bidder must be : a) Manufacturer of the equipment; or b) Authorized dealer/representative of the original equipment manufacturer	
8.	Year of Establishment.	
9.	Annual turnover of the firm for the last 2 successive years.	
10.	Name of the Power Plant/Industry where the bidder have executed work of similar nature.	
11.	Details of professional competence & experience of personnel to be associated with this project.	
12.	The Bidder should not be under a declaration of ineligibility for corrupt and fraudulent practices or any other reason, whatsoever or have not been blacklisted by the Government of India or any of its agencies, including public enterprises and/or by any State Government or any of its agencies.	
13.	The Bidder must have PAN issued by Income Tax Authorities	
14.	The Bidder shall give a certificate regarding the use of quality components as per Performa - III.	

#### **Note:**

1. The above Performa is for reference purpose only. EXCEL sheets can be download and uploaded by paying the document and other charges online.