

CENTER OF INNOVATIVE & APPLIED BIOPROCESSING (CIAB)

(Autonomous institute of the Department of Biotechnology, Govt. of India)

Knowledge City, Sector-81, Mohali

CIAB/7(13)/2014- Works



REQUEST FOR QUOTATION, CIAB

Name of Work: Energy Audit and Validation Work of CIAB Main Campus at Knowledge City, Sector-81, Mohali-Punjab, India

Completion Period: The time allowed for carrying out the work will be **06 weeks** from the date of start or from the first date of handing over of the site, whichever is later, in accordance with the phasing or deemed essential by GRIHA Authority, if any.

Estimated Cost: Rs. 1, 35,000/- (exclusive of all applicable taxes etc.)

Earnest Money: Rs. 2700/- in favour of Center of Innovative & Applied Bioprocessing payable at Mohali

Last Date of submission of Quotation : 18/01/2019 up to 3.00 pm

Date of Opening of Quotation : 18/01/2019 at 3:30 pm

In the office of CIAB

CENTER OF INNOVATIVE & APPLIED BIOPROCESSING (CIAB)

NOTICE INVITING QUOTATION

1. Item rate sealed quotations are invited on behalf of the Chief Executive Officer; CIAB from agencies/vendors for the work of **Energy Audit and Validation Work of CIAB Main Campus at Knowledge City, Sector-81, Mohali-Punjab, India**

The work is estimated to cost Rs. 1, 35,000/- (exclusive of all applicable taxes etc.).

2. The time allowed for carrying out the work will be **06 weeks** from the date of start or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any.

3. The RFQ document consisting of specifications, the schedule of quantities of the work to be done and the set of terms and conditions of contract to be complied with by the firm can be downloaded from the CIAB's website: - www.CIAB.res.in or central public procurement portal -eprocure.gov.in

4. Quotations, which should always be placed in sealed single packet envelope along with specified EMD, with the name of work and due date written on the envelope, will be received by the CIAB up to **18/01/2019** at 3.00 pm and will be opened by authorized representatives on the same day at 3:30 pm.

The bidder should submit **EMD of Rs. 2700/-** in favour of Center of Innovative & Applied Bioprocessing payable at Mohali.

5. Technical Eligibility Criteria for Bidders-

5.1 The firm should be empanelled as Energy Service Company (ESCO) with Bureau of Energy Efficiency (BEE), Govt. of India.

5.2 The firm shall have accredited Energy Auditors approved by the Bureau of Energy Efficiency (BEE), Govt. of India who will be authorized by the firm to carry out this work.

5.3 Experience of having successfully completed works during last 07 years ending last day of the month previous to the one in which applications are invited.

The firm shall have completed at least one similar work for the minimum connected load of 700 kW with some Central Govt. department/State Govt. Department/Central Autonomous body/State Autonomous Body/Central PSU/State PSU/City Development Authority/Municipal Corporation of City/Private Companies & Organizations.

Similar work means the work of Energy Audit, Water and Waste Audit in Institutional campus/Hospitals/Multistory Office buildings/ Commercial complexes/Power Plants/Refineries/Manufacturing Plants & Industries/Research Centers and Laboratories

5.4 The Agency/firm must have valid Service Tax No. The certificate for the same shall be enclosed with the bid.

Note- The bidder shall produce definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified above. Completion Certificates/proofs need to be enclosed. Also the Accreditation/empanelment certificates issued by BEE shall be enclosed with bid.

6. Agreement shall be drawn with the successful bidder on prescribed format by the Competent Authority. Bidder shall quote his rates as per various terms and conditions laid down in the NIQ document.

7. The Energy Audit and Validation work would be done after 01year of the 70% occupancy of the newly built CIAB Main campus. The Campus is already occupied since August 2017.

8. **Submission of Bid-** The bid should be submitted in the single sealed envelope as detailed below:

- a) Bid shall contain the price for the execution of the works specified as per schedule-C.
- b) Envelope containing EMD of Rs.2700/- in the prescribed format (i.e., DD/cash receipt, as the case may be)
- c) Documents related to Technical eligibility criteria 1.2 i.e., Completion certificates/proofs of the similar works completed, Empanelment/Accreditation certificates from BEE and all other required documents as mentioned in the Technical Eligibility criteria.

Name of work, Date of opening of tender etc. shall be written on the cover which will be received by the Institute by 3:00 PM on 18-01-19 and will be opened on the same day at 3:30 PM.

9. The description is as follows:-

Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their quotations as to the nature of the ground and sub soil (so far as is practicable) the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their quotation. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The bidder shall be responsible for arranging and maintaining at his own costs all materials, tools and plants, water, electricity access, facilities for workers and all other

services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of quotation by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant etc. will be issued to him by the Institute and any other local conditions and other factors having a bearing on the execution of the work.

10. Chief Executive Officer, CIAB does not bind him to accept the lowest or any other quotation and reserves to him the authority to reject any or all of the quotations received without the assignment of a reason. All quotations, in which any of the prescribed conditions are not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected.

11. Canvassing whether directly or indirectly, in connection with quotations is strictly prohibited and the quotations submitted by the contractors who resort to canvassing will be liable to rejection.

12. Chief Executive Officer, CIAB reserves to himself the right of accepting the whole or any part of the quotation and the bidder shall be bound to perform the same at the rate quoted.

13. The contractor shall not be permitted to quotation for works in the Institute if his near relative is an officer in any capacity (responsible for award and execution of contracts). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relative to any Group A & B officer in the Institute. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Institute / debarring for further participation in the Institute for at least 5 years.

14. The quotation for the works shall remain open for acceptance for a period of **30 days** from the date of opening of quotations.

15. No price preference to any corporate society/Registered society, Govt. Public Sector undertakings / bodies shall be given and quotations shall be exclusively dealt with on merit.

16. The contractor shall comply with the provisions of the Apprentices Act 1961, minimum wages Act 1948, Workmen's compensation Act 1923, Contract Labour (Regulation and Abolition Act 1970),

Payment of Wages Act 1938, Employer's Liability Act 1938, Maternity Benefits Act 1961 and the Industrial Disputes Act 1947 as applicable and the rules and regulations issued there under and by the local Administration / Authorities from time to time as well all provisions of law applicable to workmen. Failure to do so shall amount to breach of the contract and Competent Authority may at his discretion terminate the work. The Contractor/Firm shall also be liable for any pecuniary liability arising on account of violation by him of any of the said Acts and shall, indemnify the Institute on that account. Institute will not be liable for any act or omission on the part of the contractor in so far as any violation of any of the aforementioned acts.

17. Each bidder shall submit only one quotation; either by him or as partners in a joint venture. A bidder who submits or participates in more than one quotation will be disqualified.

18. The contractor/Firm shall be bound to complete the whole work as described in the schedule of items of works and including additional items, if any, as per schedule A. The issuance of certificate of completion as issued by Assistant Engineer (Electrical) shall be conclusive proof of completion of work.

19. Interpretations, corrections and changes to the Quotations Documents shall be made by Addendum, if required.

20. Each Bidder shall ascertain prior to submitting his Quotation that he has received all Addenda Issued and he shall so acknowledge their receipt in his Quotation.

21. All pages of the quotation should be numbered.

22. It is the responsibility of bidder to go through the NIQ document to ensure furnishing all required documents in addition to above, if any.

23. The authorized signatory of the bidder must sign the quotation duly stamped at appropriate places and initial all the remaining pages of the quotation document.

24. A quotation, which does not fulfill any of the above requirements and/or gives evasive information/reply against any such requirement, shall be liable to be ignored and rejected.

25. The Provisions in the Quotation documents shall govern over the contents of the above paragraphs if in contradiction or variation.
26. The safety of workers deputed at site will be the sole responsibility of the contractor.
27. The work shall be completed as per Manufacturer/Industry/CPWD specifications.
28. The payment for the work done by the contractor shall be made within 01 months after the satisfactory completion of allotted work or after submission of First and Final bill/Invoice for the same to the Engineer-In charge, whichever is later.
29. Statutory deductions, if any as per rules of Govt. shall be made as applicable.
30. The Audit reports as per formats attached shall be comprehensive and as deemed essential by GRIHA Authority pertaining to criteria no.32. The validity of the reports be as per standard period for the needful submission to M/s HCPDPM, Ahmedabad (the project architect and nodal agency responsible for GRIHA certification of the CIAB campus project). The suggestive measures, requirements and executions by the successful bidders be proposed to CIAB in case of any variation of requirements of GRIHA authority in context of Criteria no. 32.
31. **Compensation @ 0.5 percent (0.5 %) per week of delay** for delay of work to be computed on per day basis provided always that the total amount of compensation for delay to be paid under this Condition shall not exceed 5% of the bid Value of work.
32. Quotations sent by fax/telex/electronically shall not be considered.

Assistant Engineer (Electrical)
CIAB, Mohali
(On behalf of Chief Executive officer, CIAB)

Schedule-A

SCHEDULE/SCOPE OF WORK

ABOUT THE WORK/PROJECT:

Center of Innovative and Applied Bioprocessing (CIAB) is a Central Autonomous Institute under Department of Biotechnology, Ministry of Science and Technology, Govt. of India. The Institute has developed its new campus in 15 acres in Knowledge City, sec-81, Mohali. This Project is registered for GRIHA Rating/ certification (i.e. Green rating for Integrated Habitat Management) with ADaRSH (Association for Development and Research of Sustainable Habitats). To comply for GRIHA criteria No.32, the Energy Audit and Validation of the Project need to be done as per the GRIHA requirements. The details of the different buildings constructed at CIAB campus with their built up areas are given as below:

S. No	Name of Building	Built up Area (sq.ft)
1.	CIAB Laboratory	75000.00
2.	Utility-1 /substation/plant room	17534.41
3.	Main Entrance Gate	139.93
	TOTAL	92674.34 say 92674 sq.fts

Also the contract demand/Electrical load applied to the Electricity Department i.e., PSPCL for CIAB is 666 kW.

Standard Scope of Work:

The firm will be required to validate the performance of the energy and environmental systems in the project as predicted during the design and development stages of the project. The firm will also be required to carry out Energy audit of the project as per the requirements of GRIHA Criterion 32: Energy Audit & Validation. The energy audit & validation would be done after occupying the building(s) in the project. The building(s) must be occupied for minimum 70% area, for a minimum duration of 01 year and maximum duration of 02 years. After occupancy, the firm will be required to carry out following audits:

1. Energy Audit
 - i Energy consumption
 - ii Thermal comfort
 - iii Visual comfort
2. Water and Waste Audit
 - i Water quality
 - ii Solid waste generation
 - iii Solid waste disposal process

3. Sound Audit

Conduct sound level audit as specified in Criterion 29 of GRIHA Version 3, to measure the following:

- i Indoor noise levels
- ii Outdoor noise

These audits should be conducted for typical representative days. The firm will be required to submit audit reports in the specified format (as below) for validation of the information provided at the time of award of provisional rating. The energy audit report shall include audit data of 01 year as per the specified format. The sound audit report in the format specified below shall contain measured average ambient noise level at site and indoor noise levels at different locations inside the building.

Formats for Energy Audit Report:

- 1) For Energy Audit- Annexure 1
- 2) For Water and Waste Audit- Annexure 2
- 3) For Sound Audit- Annexure 3

Apart from above, the following documents shall be submitted by the firm:

- 1) Completed and Signed Audit Forms demonstrating that all Energy and Environment systems of the building/Project are performing as predicted and match the information provided at the time of award of provisional GRIHA rating.
- 2) Certificate stating that the Energy Audit has been conducted by an Energy Auditor approved/accredited by the Bureau of Energy Efficiency (BEE), Govt. of India.
- 3) The firm shall also require to coordinate with the existing architect of the CIAB Project i.e. M/S HCPDPM Pvt. Ltd., Ahmedabad to submit the Audit data/reports as per the GRIHA requirements.

Anything or any item/documentation not specifically mentioned in this tender but if required for the compliance of GRIHA criteria no.32 shall be considered part of the scope of work and nothing shall be paid extra on account of that.

ANNEXURE -1

Table 32.1 Energy audit format			
A. Energy consumption			
No.	Item		Value
1	Name of the building		
2	Type of building (office, institution, hotel, hospital, and so on)		
3	Working hours (day working/24 hour working)		
4	Working days/week (5/6/7 days per week)		
5	Area of the building (exclude parking, lawn, roads, and so on)	1. Built Up Area (m ²)(Excluding Basement Area)	
		2. Conditioned Area(in m ²)	
		3. Conditioned Area(as % of built up area)	
6	Connected Load (kW) or Contract Demand (kVA)		
7	Installed capacity of DG/ GG Sets (kVA or kW)	No.	
		Capacity	
8	Installed capacity of transformers (kVA)	No.	
		Capacity	
9	Installed capacity of air conditioning system (TR)		
10	Installed lighting load (kW)		
11	a. Annual electricity consumption, purchased from utilities (kWh)		
	b. Annual electricity consumption, through diesel generating (DG)/ gas generating (GG) set(s) (kWh) (Data collected from metre installed on DG/GG sets)		
	c. Total annual electricity consumption, utilities + DG/GG sets (kWh)		
12	a) Energy consumption for lighting (kWh) (Data collected from indoor lighting sub metre)		
	b) Energy consumption for HVAC (kWh)	<ul style="list-style-type: none"> • HVAC plant (Data collected from HVAC plant sub meter) • AHU fans (Data collected from AHU fans sub meter) 	
13	a) Annual cost of electricity, purchased from utilities (Rs) (Provide monthly electricity bills)		
	b) Annual cost of electricity generated through DG/GG Sets (Rs)		
	c) Total annual electricity cost, utilities + DG/GG Sets (Rs)		
14	HSD (or any other fuel oil used, specify)/gas consumption in DG/GG sets (litres/cu metres) in the year		
15	Fuel (FO, LDO, LPG, NG) used for generating steam/water heating in the year (in appropriate units)		
16	EPI (Energy Performance Index) in kWh/ m ² /year Energy includes electricity purchased and generated (excluding electricity generated from on-site renewable resources)		
B. Thermal comfort data			
1	Provide hourly temperature and relative humidity profile of the building areas for at least one day. Readings should be taken for at least 20% of all representative spaces of the building.		

C. Visual comfort audit		
Average illumination level in all building areas measured at horizontal work plane		
No.	Area (For example: Office area-enclosed, Office area-open plan, Corridor, Restroom, and so on.)	Average lighting level (lux)
I hereby declare that the building is fully occupied since..... and all the above furnished information is true in all respect		
Signature of the building owner		or authorized representative

ANNEXURE-2

Table 32.2 Water and waste audit format

A. Water audit			
1	What are the different sources of water supply to the building? Tick on the applicable options <input type="checkbox"/> Municipal supply <input type="checkbox"/> Ground water <input type="checkbox"/> Tanker		
2	Is there a raw water treatment plant on site?	Yes ()	No ()
3	Is there a wastewater treatment plant on site?	Yes ()	No ()
4	Provide water quality test reports for potable and treated water specifying the following parameters		
	Parameter	Drinking water	Treated/ recycled water
	Total hardness (as CaCO ₃) (mg/litre)		
	Total dissolved solids (mg/litre)		
	Chlorides as chlorine (mg/litre)		
	Colour (hazen)		
	Turbidity (NTU)		
	Alkalinity (mg/l)		
	Calcium (as Ca), mg/litre		
	Boron (mg/litre)		
	Sulphates (as SO ₄)(mg/litre)		
	Nitrates (as NO ₃) (mg/litre)		
	Conductivity at 25 °C (us/cm)		
	pH		
	Anionic detergents as MBAS (mg/litre)		
	Arsenic (mg/litre)		
	Iron (mg/litre)		
	Fluorides (mg/litre)		
	Lead (mg/litre)		
	Copper (mg/litre)		
	Zinc (mg/litre)		
	Phenolic compounds (as C ₆ H ₅ OH) (mg/litre)		
	Cyanide (mg/litre)		
	Chromium (mg/litre)		
(In case regular water quality test have been conducted for the building, these test reports can be submitted. However, it should be ensured that all the parameters specified above have been included in these test reports.)			

B. Solid waste audit				
1	Total quantity of waste generated (kg/day)			
2	Are multi-coloured bins provided for waste segregation at source?	Yes ()	No ()	
3	Is there a provision of space for hygienic storage of segregated waste?	Yes ()	No ()	
4	If answered 'yes' for '3', please provide details for the storage space for the following type of waste:			Area/volume (sq. m. / litres)
	1. Biodegradable			
	2. Recyclable			
	3. Inert and miscellaneous			
	4. Hazardous			
5	Quantity of waste generated (Kg) <i>This data should be collected for at least 2 representative days in a week.</i>			
	Day	Type of waste (Kg)		
	1	Biodegradable	Recyclable	Inert and miscellaneous
	2			
	3			
5	Is there a treatment plant for biodegradable waste?		Yes ()	No ()
6	If answered 'yes' for '5' then provide the following details			
	1. Type of plant			
	2. Capacity			
9	Provide a narrative (maximum 250 words) on how each type of waste generated by the building is being weighed and disposed. Also specify procedure adopted for e-waste disposal.			
I hereby declare that the building is fully occupied for the last one year and all the above furnished information is true in all respect				
Signature of the building owner			or authorized representative	

ANNEXURE-3

Table 29.3: Sound audit format			
Outdoor noise levels			
Façade	Measured sound level dB (A)	Recommended sound level as set in CPCB-Environmental Standards- Noise (ambient standards) dB (A)	
Note: Sound level should be measured outside each façade of the building.			
Indoor noise levels			
Room	Location	Measured sound level dB (A)	Recommended sound level as set in CPCB-Environmental Standards- Noise (ambient standards) dB (A)
Note: In case of more than one building on site conduct outdoor and indoor sound level audit for all buildings separately.			

SCHEDULE-B

Reference to Conditions of Contract:

Name of Work: Energy Audit and Validation work of NABI Main campus at Knowledge city, sector-81, Mohali-Punjab, India

Estimated cost of work : Rs.1,35,000/- (exclusive of applicable taxes)

(i) Earnest Money : Rs.2700/-

SCHEDULE- C

FINANCIAL/PRICE BID

We hereby quote the following price for taking up the tendered work:

S.No	Item description	Amount (in Rs.)(in figures)	Amount (in Words)
1	Fees for conducting Energy Audit, Water and Waste Audit, Sound Level Audit and Validation of CIAB Main campus as per the GRIHA criterias and SCHEDULE A of this tender document		

NOTE:

- 1) *The rates shall be quoted by the contractor in the above format.*
- 2) *The rates quoted shall be inclusive of all taxes and duties etc. as applicable to this contract.*

(Signature and Stamp of bidder)