

**Project Name: Construction of CPCB Zonal Office building at Bhopal
incorporating GRIHA Rating – Hiring of energy expert/consultant**

No.:

Dated: 10.01.2011

NOTICE INVITING OFFERS

Sealed offers in two bid system (Technical Bid & Financial Bid) are invited by the Central Zonal Office, CPCB, Bhopal on behalf of Central Pollution Control Board from the reputed and experienced Expert for Energy Efficient Building Design, Analysis & Green Rating up for the work i.e. consultants “Services for Sustainable Design and Green Rating & documentation for the proposed Project: “Construction of G+3 story CPCB Zonal Office building at Bhopal with built-up area of 17,022 Sq.feet”.

The scope of services involves the Facilitation, Design & Specifications Assistance and Computer Based Analysis of the Building and its components and documentation for GRIHA rating while collaborating with the Design team to create the most sustainable design output and the best possible green certification for the project. Consultants are requested to study the architectural drawings and details available in the office of CPCB, Zonal Officer at Bhopal before submitting the offer.

The last date for submitting the offer is **14.02.2011**. The offers shall be opened on **14.02.2011 at 04:00 PM** in the office of Zonal Office, Bhopal in the presence of intending applicants.

The Experts shall quote their total fee as a lump sum figure including taxes if any in the space provided in Annexure III. The total fee should be quoted in figure as well as in words. They shall also mention the breakup of the fee in desired format.

The offer shall be valid for 90 days from date of opening of Financial bid.

**Central Zonal Officer, CPCB
Bhopal**

CPCB, ZO, Bhopal

Sealed offers in two bid system (Technical Bid & Financial Bid) are invited by the Central Zonal Office, CPCB, Bhopal on behalf of Central Pollution Control Board from the reputed and experienced Expert for Energy Efficient Building Design, analysis & Green Rating up to **1:00 PM on 14.02.2011** for the work i.e. "Services for Sustainable Design and Green Rating & documentation for the proposed project: Construction of G+3 story CPCB Zonal Office building at Bhopal with built up area of 17,022 Sq.feet."

SCOPE OF SERVICES:

The scope of services involves the Facilitation, Design & Specifications Assistance and Computer Based Analysis of the Building and its components while collaborating with the Design team to create the most sustainable design output and the at least **four star green certification** for the project which is registered in ADaRSH (Association for Development and Research, Sustainable, Habitat).

The detailed scope of work involves the following:

(A) Whole Building Analysis for Energy Performance, Climatic Comfort & ECBC Compliance

1. Solar Analysis for optimizing orientation, shading, and glazing areas
2. Detailed whole building Thermal/Energy Simulation to achieve thermal comfort indoors through detailed analysis of the following:
 - (a) Envelope (Wall, Windows, Skylights etc)
 - (b) Passive cooling system
 - (c) HVAC systems and components (if required) together with passive cooling strategies
3. Perform the following GRIHA Green Certification related analysis:
 - (a) Analysis for Minimum Energy performance Pre-requisite
 - (b) Analysis for optimizing building design to reduce conventional energy demand
 - (c) Energy Simulation and Analysis for Optimize Energy Performance of building within specified comfort limits
 - (d) Energy Use Calculation for Renewable Energy Credits

(B) Building Analysis for Day lighting and Artificial Lighting

1. Day lighting Simulation for optimizing natural lighting
2. Luminance Analysis
3. Perform the GRIHA Green Certification related analysis for lighting

(C) Site Planning & Water Management

1. Design and recommendation for Erosion control & sedimentation control on site.
2. Assist on Low water usage, Rainwater Harvesting, Wastewater recycling and construction waste usage and other waste management strategies

3. Transportation Management Strategies
4. Perform the GRIHA Green Certification related analysis.

(D) Working with design team to achieve GRIHA rating

1. Overall facilitation to obtain GRIHA rating from TERI under their GRIHA program.
2. Awareness on Green Building concepts and GRIHA rating system for the project team.
3. Facilitate the project design team to select materials/equipment to meet the GRIHA requirement. Support in identifying vendors for the project to meet GRIHA requirement.
4. Vet the tender document to ensure the tender technical specification meets the GRIHA requirement.
5. Create a Construction Documents Review Report.
6. Prepare and provide all necessary templates for the design team, so as to meet GRIHA requirements.
7. Facilitate project team in preparing the documentation as stipulated by GRIHA. Filter, cross validate, verify consistency, add value and consolidate to make the document suitable for submission to TERI. Provide inputs on previous credit interpretation requests.
8. Besides taking up his own documentation, the consultant must also take up all the documentation for all the points as required from the sides of the architect, project managers including taking periodic photographs. Cad drawings & putting together product cut sheets & statements. Only raw material like product brochures for this would be supplied through a designated point person from the department

(E) Measurement and Verification (through a BEE accredited auditor)

1. Prepare a Measurement & Verification Plan based on building systems selected for implementation.
2. Visit Construction site to verify installation and operation of strategies after building occupation. Provide functional testing of operation strategies (day lighting, occupancy control, Indoor Air Quality) with short term monitoring
3. Create Verification Report as per the above
4. Calibrate the computer model the site and building situation as built to create a model of the actual savings.

TERMS OF REFERENCE:

1. Applicants who fulfil the following minimum eligibility criterion shall be eligible to apply:
 - The Applicants should be an Individual or firm or joint venture with maximum two partners. They should have minimum 3 years of experience in his own name on energy efficient building design, analysis & green rating.
 - The Applicants should have rendered and/or in progress at least 3 works of Green Building Consultancy for Government/semi Government/Large Pvt. Sector companies office Building of project cost at least 5 crores in last 5 years.
 - The applicant should be a GRIHA Accredited Evaluator and should include an architect registered with the Council of Architecture for minimum last 10 years.
 - The applicant should be solvent to the extent of 10 Lacs through an authorized certificate from his banker.

Details of “Factors to be Considered” for the “Experience in sustainable design & green building” Parameter

- a. Either walls or roofs having efficient ‘U’ factor as specified in ECBC (Energy Conservation Building Codes)
 - b. Vertical fenestration complying with ECBC requirements as specified in ECBC
 - c. Use of energy simulation program for building design (Provide brief description and simulation results).
 - d. Use of passive and low energy cooling of buildings.
 - e. Integration of on-site renewable electricity generation e.g. solar photovoltaic, biomass gasifier, etc.
 - f. Extensive use of low embodied energy building materials.
 - g. Energy efficient HVAC system as specified in ECBC
 - h. Implementation of building automation system: timer based controls, motion sensors, etc.
 - i. Integration of on-site renewable based thermal energy e.g. solar hot water, etc.
2. Two Bid Offers: The applicants shall submit Technical & Financial bids in two separate envelopes clearly specifying the “Technical Bid” and “Financial Bid” mentioned on top of sealed envelopes. Both the envelopes shall then be placed in single envelope mentioning name of work and agency on top of envelop.
 3. Acceptance Criteria: The offers received on due date & time shall first be evaluated based on technical bids and the financial offer of only those applicants shall be opened, who are found eligible based on technical bids.
 4. Technical bids shall be provided by Applicants as per proformas given in Annexure I and II.
 5. **Evaluation of Technical Bids**
 - 5.1 The applicants fulfilling the requirements as given in para 1 above would be assigned Marks as below.

a.	Experience in services of sustainable design & green building complex as per the detailed criteria (The nine methodologies to be considered are given in Point 1 above - Annexure-II)	Maximum 60 marks (2 marks for each factor with maximum 18 marks for one project)
b.	Organisation and staffing – Annexure-I (Marking to be made as given below)	Maximum 15 marks
c.	Key Personnel proposed to be employed for the said advice (Marking to be made as given below) – Annexure-I	Maximum 25 marks
	Total	Max Marks 100

To pre-qualify, the applicant must secure **at least forty percent marks** in each of the above criteria and **minimum fifty percent** marks in total of the marks obtained in the above stated three criterions.

5.2 Marking Criteria for Organisation and staffing

Sl. No.	Field of Specialization	Minimum Nos. required		Marks		Total Max. Marks
		Experience more than 2 years	Experience 0-2 years	Experience more than 2 years	Experience 0-2 years	
1	Energy Efficient Building/ Sustainable design expert	1	1	7	4	11
2	Energy Analyst	1	-	3	-	3
3	Drafts Man having proficiency in Autocad	1	-	1	-	1
Total						15

5.3 Marking Criteria for Key Personnel proposed to be deployed

Sl. No.	Field of Specialization	Minimum Nos. required		Marks		Total Max. Marks
		Experience more than 2 years	Experience 0-2 years	Experience more than 2 years	Experience 0-2 years	
1	Sustainable design specialist	1	1	15	10	25
Total						25

6. Financial bid shall be provided by applicants as per Annexure-III and the applicants shall quote their rate in figures and words on lump sum basis.
7. The Competent Authority of CPCB, reserve his right to accept or reject the offers based on Technical Bids and financial bids.
8. The rate quoted by applicants shall be all inclusive of all taxes consumables, visiting charges, revision, modifications in design, documentation etc complete as scope of the work. Nothing extra shall be paid on this account. However Service tax shall be reimbursed on actual basis on production of payment vouchers.
9. The recovery of income tax etc. will be made from the bills as per applicable rules.

10. The applicants may inspect the site of proposed construction, if they so desire, before submitting their offers at his own expenses.
11. In case, expert fails to function in specified manner and within the allowed time period, Chairman, CPCB, shall have the authority to terminate the job assignment of the service by giving 15 days notice.
12. The Architectural Drawings of above proposed work are available in the office of ZO Bhopal and CPWD Bhopal office, which can be seen by applicants before quoting their rates, on any working day up to ... PM.
13. The agency (individual) / firm shall start the work immediately after the drawings & details mentioned in this document are given to him. He shall perform the services to the entire satisfaction and in stipulated time. In case it is seen that he is delaying in starting the work or not doing the job satisfactorily or suspends the work or delays the completion of work then the action will be taken as situated under para 11 above.
14. The services shall be rendered as per time schedule of planning, execution of building and various services in such a fashion that at no point of time execution shall hamper in the want of details from energy expert.
15. The total fee payable shall be as quoted in the enclosed Annexure 'III'. The payment will be released on completion of individual components of the work to the satisfaction of ZO CPCB, Bhopal and as per scope of the work. The payment shall be made as per actual services rendered based on the breakup given and accepted as per financial bid.
16. **Terms of Payment**
 - a. On Receiving Preliminary Feasibility Report - 15% of the total amount
 - b. Initial Thermal Analysis & Day Lighting Report - 15% of the total amount
 - c. Documentation & Facilitation (50% of credits) - 15% of the total amount
 - d. Final Thermal, Energy and Lighting Analysis Report - 15% of the total amount
 - e. Building Rating Documentation – 100% Design Documents Submission - 15% of the total amount
 - f. Measurement and Verification through BEE Auditor - 15% of the total amount
 - g. Award of final Certification - 10% of the total amount
17. The Chairman, Central Pollution Control Board reserves the right to cancel any or all the quotations without assigning any reasons thereof.
18. The quotations shall be valid for 03 months from the date of their opening of financial bid.
19. The terms & conditions and taxes etc. should be clearly mentioned in the quotations.
20. The over writing and corrections, if any should be counter signed.
21. In the event of any dispute, the decision of the Chairman, Central Board shall be final and binding on both the parties.
22. Typographical & clerical errors are subject to correction.

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ANNEXURE-II

LIST OF WORKS HANDLED / BEING HANDLED (details to be furnished in the following format)

Appending 1: For each relevant project, fill the table below (replicate as needed; each project information should preferably fit in one page)

Project name, location (climate zone) and brief description of its nature	
Project owner	
Briefly describe the general specification of the finished / proposed building	
List the energy-efficiency technologies / features used/ proposed (as per the nine criteria given in Point 1 of the Terms of Reference)	
Total covered area (in sq m)	
Duration (from getting the appointment to handover or till date)	
References (name and address)	
Copy of letters of successfully completion or work done so far of buildings or Built Photographs or Building Analysis Results.	

FINANCIAL BID

“Services for Sustainable Design and Green Rating for the proposed Project: Construction of CPCB Zonal Office building at Bhopal”

I / we quote my / our rates for the above work as under:

Amount in Rs. * _____ (Amount in words Rupees * _____
_____).

The rates quoted are inclusive of all Taxes, consumables, visiting charges, revision, modifications revision, modifications in design, documentations to be submitted to ADaRSH etc. complete as scope of the work except Service tax. Which shall be reimbursed as per actual payment on production of voucher.

The breakup of the above fee is as given under :

S. No.	Service Details	Total amount (Rs.)
1.	Whole building analysis for energy performance, climate comfort & ECBC compliance.	
2.	Building analysis for day lighting and artificial lighting	
3.	Site planning & water management	
4.	Working with design team to achieve GRIHA rating	
5.	Measurement and verification	

Grand Total

Signature of Applicant with stamp

* to be filled in by the applicant.