Hiring of an Agency for Energy Mapping of identified 38 Thermal Power Plants

Request for Proposal

Last Date of Submission: 28/12/2021

Bureau of Energy Efficiency

Ministry of Power, Government of India,
4th Floor Sewa Bhawan, R. K. Puram,
Sector – 1, New Delhi – 110066.

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Critical Information

1	Availability of Request for Proposal Document	25.11.2021
2	Pre-bid Meeting	10.12.2021 at 12:00 hours Virtual pre bid meeting (through VC on Microsoft Team)
3	Last date of receipt of queries for prebid	06.12.2021
4	E-mail address for queries	1. kumara@beeindia.gov.in 2. ravinder.yadav@beeindia.gov.in
5	Issuance of revised RFP Documents, if required	17.12.2021
6	Last date for submission of bids	28.12.2021 by 5 PM
7	Date of Opening of Financial Proposal for qualified Bidders	Will be informed by e-mail at least 5 days prior to the date of opening of financial bid
8	Place for Submission of Proposal/Bid	The Secretary, Bureau of Energy Efficiency, 4th floor, Sewa Bhawan, R K Puram New Delhi – 110066 Tel No.: -91-11-26179699,700
9	Contact Person for Clarification	1. Dr. Ashok Kumar, Deputy Director General (DDG) Bureau of Energy Efficiency, 4th floor, Sewa Bhawan, R K Puram New Delhi – 110066 Email: kumara@beeindia.gov.in 2. Mr. Ravinder Yadav, Project Engineer, Bureau of Energy Efficiency, 4th floor, Sewa Bhawan, R K Puram New Delhi – 110066 Email: ravinder.yadav@beeindia.gov.in

Note: Please send attendee's details such as Name, Company name, Aadhar no., Email, Contact no for attending all meeting against this RfP to ravinder.yadav@beenet.in in advance.

1. Bureau of Energy Efficiency (BEE)

1.1. About BEE

The mission of Bureau of Energy Efficiency (BEE) is to develop policy and strategies with a thrust on self-regulation and market principles, within the overall framework of the Energy Conservation Act (EC Act), 2001 with the primary objective of reducing energy intensity of the Indian economy. This will be achieved with active participation of all stakeholders, resulting in accelerated and sustained adoption of energy efficiency in all sectors.

The setting up of Bureau of Energy Efficiency (BEE) provides a legal framework for energy efficiency initiatives in the country. The Act empowers the Central Government and in some instances the State Governments to:

- Notify energy intensive industries, other establishments, and commercial buildings as designated consumers.
- Establish and prescribe energy consumption norms and standards for designated consumers.
- Direct designated consumers to designate or appoint certified energy manager in charge of activities for efficient use of energy and its conservation.
- Get an energy audit conducted by an accredited energy auditor in the specified manner and intervals of time.
- Furnish information with regard to energy consumed and action taken on the recommendation of the accredited energy auditor to the designated agency.
- Comply with energy consumption norms and standards, and if not so, to prepare and implement schemes for efficient use of energy and its conservation.
- Prescribe energy conservation building codes for efficient use of energy and its conservation in commercial buildings State Governments to amend the energy conservation building codes to suit regional and local climatic conditions.

- Direct owners or occupiers of commercial buildings to comply with the provisions of energy conservation building codes.
- Direct mandatory display of label on notified equipment and appliances.
- Specify energy consumption standards for notified equipment and appliance.
- Prohibit manufacture, sale, purchase and import of notified equipment and appliances not conforming to standards.

The Energy Conservation Act, 2001 defines the powers of the State Government to facilitate and enforce efficient use of energy and its conservation. The State Governments have to designate State Designated Agencies in consultation with the Bureau of Energy Efficiency to coordinate, regulate and enforce the provisions of the Act in the State. Thus, the State Designated Agencies are the strategic partners for promotion of energy efficiency and its conservation in the country.

1.2. Organization

Under the provisions of the Energy Conservation Act, 2001, Bureau of Energy Efficiency has been established with effect from 1st March, 2002 by merging into it, the erstwhile Energy Management Centre, being a society registered under the Societies Registration Act, 1860, under the Ministry of Power.

1.3. Functions of BEE

BEE co-ordinates with designated consumers, designated agencies and other organization; recognizes, identifies and utilizes the existing resources and infrastructure, in performing the functions assigned to it under the E.C Act, 2001. The Act provides for regulatory and promotional functions:

The major functions of BEE include:

- Develop and recommend to the Central Government the norms for processes and energy consumption standards.
- Develop and recommend to the Central Government minimum energy consumption standards and labeling design for equipment and appliances.
- Develop and recommend to the Central Government specific energy conservation building codes.
- Recommend the Central Government for notifying any user or class of users of energy as a designated consumer.
- Take necessary measures to create awareness and disseminate information for efficient use of energy and its conservation.

2. Objective of Study

2.1 To identify the energy gaps and diagnosis the deficiencies in heat rate cycle of thermal power plant through thermodynamic modeling, In July, 2019, BEE has initiated energy mapping exercise of some of the identified State and Central thermal power plants. Based on the criteria of age (>25 years) and gross heat rate deviation (>10%), BEE has identified 10 TPPs for energy mapping exercise.

2.2 During energy mapping of 10 TPPs, energy reduction potential of about 0.335 million toe which is equivalent to CO_2 emission reduction of about 0.844 million tonnes and coal saving in the tunes of about 0.957 million tonnes/year was identified. Energy mapping reports submitted by agencies has broadly identified areas required for improving energy efficiency. The mapping report has also provided an indication about the necessity and urgency of taking up residual life assessment and conditional assessment studies and R&M measures in plants. The study has also indicated measures that could be taken up immediately with comparatively small expenditure to improve plant performance before going in for regular R&M measure.

2.3 As PAT cycle II assessment is over and on the basis of PAT II data, BEE has identified 38 TPPs (30 Sate/Central and 8 Private) having heat rate deviation greater than 10%.

2.4 Continuing the objective of mapping exercise i.e., to get potential improvement in heat rate for selected TPPs within 5% of Design Heat rate value and on the achievements of Energy mapping exercise of 10 TPPs in PHASE-1, BEE would like to further escalate this energy mapping exercise on a broader level for proposed 38 TPPs (List of 38 TPPs is at Annexure 1).

3. Scope of Work

- The number and details of thermal power plants identified for mapping study is at **(Annexure-1).**
- The mapping studies must be carried out scientifically using a diagnostic tool or through instruments to assess the total energy saving potential of the plant including auxiliaries and balance of plant (BOP).
- Mapping should be done at different load (100%, 80% and 60%). If plant doesn't agree to run on different load due to scheduling or another reasons, data can be taken from records / DCS from last 6 months operation summary. If plant doesn't agree to run on different load due to scheduling or another reasons, data can be taken from records / DCS from last 6 months operation summary.
- The Mapping studies shall conduct the performance evaluation of process, sub-process, equipment etc.
- The mapping study must calculate the heat rate and equipment efficiency and also identify the gaps in operating parameter as compared to design for each equipment.
- The thermodynamic model must clean the input DCS data for bad / missing values.
- For all the Actual operating parameters, its corresponding Expected values must be calculated. Expected values, derived from the thermodynamic model, is the value under current operating condition if the plant was new and clean. Expected values and Operating values of the parameters must be compared, from which the degradation must be derived.
- Quantify the current degradation at each equipment which will help the plant to prioritize steps to mitigate them.
- The model must be developed for 3 scenario-

    1. Design values
    2. Expected values considering current scenario
    3. Operating value

- Below table will summarizes the performance & gap analysis expected out of the mapping studies.

Boiler	Boiler efficiency and its heat losses with intermediate calculation
Turbine	Turbine efficiency, Heat rate and its intermediate calculations
Condenser	Condenser cleanliness factor and its intermediate calculations
Condensate, Feed Water Heater	Terminal temperature difference, Drain cooler approach, Extraction flows and its intermediate calculations, Effectiveness & heat load etc
Deaerator	Heat duty and its intermediate calculations
Economizer	Economizer effectiveness and its intermediate calculations
Air Heater	Air side leakage, gas side leakage, pressure drop, corrected gas temperature, air side effectiveness, gas side effectiveness and its intermediate calculations
Generator	MW, MVA and MVAR and excitation system
Pumps	Major Pump efficiency and its intermediate calculations
Fans	Major Fan efficiency and its intermediate calculations
Heat Exchanger	Heat transfer coefficient for all Heat exchangers.
ESP	Performance of ESP

- The model must use the existing measured data from the station DCS. No modification to existing instrumentation is envisaged for this mapping studies.
- Mapping studies must cover the process, sub-process, for eg-
    a. All Turbine (HPT, IPT and LPT) performance evaluation considering efficiency, enthalpies, steam flow and gland leakage flowestimation.
    b. Boiler performance evaluation considering efficiency, excess air and cleanliness factor of super heater, evaporator, re-heater and economizer.
    c. Mill system performance evaluation.
    d. Air pre-heater performance involving efficiency and pressure loss
    e. Condenser performance
    f. Deaerator performance
    g. LP and HP heater performance

- All the above calculations must be based on relevant ASME PTC Standards
- Agency have to recommend measures for gaps identified during study.
- Agency will provide the technical support in capacity building or training program, organized by BEE to demonstrate the outcome from this mapping activity.

4.0 Deliverables

(a) The agency will deliver a gap analysis and recommendation report to the DC and BEE. The reports will be a performance evaluation of heat rate, plant and equipment efficiency and the report should have acceptance of the DC.

(b) The agency can use their standard report and graphs template to cover all performance parameters shown in above table, however the report format must be approved from BEE.

(c) The Mapping report must compare the Actual Operating values with Expected value. However, the vendors are free and encouraged to use any of their methodology to highlight equipment degradation and the concept of deviation from the Design value.

(d) The reports must be delivered in an editable format MS Word/Excel and in pdf. Supply and License of the software / thermodynamic model is not in the scope of this project.

(e) The Gap analysis shall imply a detailed description with identification of areas of improvement as a result of mapping study. The chapter of final report shall contain the following items:

- Introduction
- General overview of plant and plant details
- Main parameters of unit
- Methodology
- Operating parameter at the commencement
- Major observation on process, sub process mentioned in table.

(f) Based on gap analysis adequate saving measure shall be developed, considering technical and operational issue. The sequence of recommended measures shall be according to priority in consideration of economic parameter. Each position shall be described within the final report as follow:

- Description of each measure
- Description of steps for its implementation
- Expected reduction of heat rates (Kcal/kWh) and improvement of efficiency (%).
- Reduction of oil/coal consumption (tonnes/year)
- Reduction of Co2 (tonnes/year)
- Estimation of investment (INR)
- Reduction of costs for fuel and operation / maintenance (INR/year)
- Payback period (years)

5. Timeline

S. No	Activity	Timeline	Submissions
1	Inception Phase	2 weeks from the issuance of work order	Inception Report*
2	Draft Final Phase	5 months from the issuance of work order	Draft Report**
3	Final Phase	6 months from the issuance of work order	Final report along with other relevant documents.

*Submission of report template/format, methodology, visit schedule etc.

**Submission of draft report to BEE and DC with a timeframe of 15 days for comments/input. If the DC doesn't respond within 15 days, an intimation must be sent to BEE.

6. Selection Process

6.1. Pre-Qualification Criteria

The agencies interested in being considered for this task preferably shall fulfill the following criteria:

1. Should be a firm/company registered/incorporated in India with atleast 4 offices in India.
2. Should have the work experience of at least 10 years in either O&M of coal based Thermal Power Plants or diagnosis energy efficiency or energy auditing in coal based Thermal Power Plants.
3. Technical team leader should have experience of minimum 15 years in relevant field.
4. Team members should have experience of minimum 5 years in relevant field.
5. Should have a minimum annual turnover of INR 05.00 Crores in the last three (3) years i.e. FY 2018-19, 2019-20, 2020-21.
6. Should have been profitable for at least two (2) of the last three (3) years.
7. As the mapping study must be carried out scientifically using a diagnostic tool, Agency have to submit proof of possession of such diagnostic tool.

6.2. Preliminary Scrutiny

Preliminary scrutiny of the proposal will be made to determine whether they are complete, whether required process fee has been furnished, whether the documents have been properly signed, and whether the bids are in order, and whether the bidder meets all the pre-qualification criteria.

Proposals not conforming to these requirements will be rejected.

Outsourcing and Consortium of work related to this assignment is not permitted.

6.3. Evaluation of Proposals

BEE will evaluate proposals and will give marks to all the successful bidders from preliminary scrutiny on the following basis:

S. No.	Category	Max. Marks	Criteria
1	Turnover	05	Turnover between 05-10 crore = 3 marks Turnover > Rs 10 crore = 5 marks
2	**Team**		
	Team Leader (Years of experience in relevant area)	05	Years of Experience between 15-20 years: 2 Marks Years of Experience between 20-30 years: 4 Marks Years of Experience more than 30 years: 5 Marks
	Team Strength (with relevant experience)	05	Team between 10-15: 2 Marks Team between 15-25: 4 Marks Team more than 25: 5 Marks
3.	**Approach**		
	Approach and detailed work methodology as per scope of work	40	Qualitative and quantitative basic
4.	**Experience**		
	Energy Mapping through Diagnostic tools or PADO service to plants	20	Each Project will have 02 marks subject to maximum of 20 marks
	Thermal power generation, O&M, Erection, Transmission and Distribution	15	Each Project will have 01 marks subject to maximum of 15 marks
	Energy Audit (baseline, M&V etc), PG test	10	Each Project will have 02 marks subject to maximum of 20 marks
	TOTAL TECHNICAL SCORE		

Note: Only agencies with minimum of 80 marks will be qualified for the financial bid opening.

6.4. Selection of Bidder

S.No.	Groups	Number of TPP	Name of States	Name of TPP	No. of Plants
1	Group A	15	Andhra Pradesh	Vijayawada TPS	1
			Tamil Nadu	Tuticorin TPS	5
				NLC TPS-I	
				NLC TPS-II	
				TAQA Neyveli	
				TCP Ltd	
			Telangana	Kothagudem TPS	2
				Ramagundam TPS	
			Puducherry	Puducherry Gas PP	1
			Maharashtra	Bhusawal TPS	6
				Nasik TPS	
				New Parli TPS	
				Paras TPS	
				Uran Gas Power Station	
				Trombay TPS	
2	Group B	12	Chhattisgarh	Dr Shyamaprasad Mukharjee TPS	4
				Hasdeo TPS (Korba West)	
				Lanco Amarkantak	
				ACB India Ltd	
			Jharkhand	Chandarpura TPS	3
				Jojobera Power Plant	
				Maithon Right Bank Power Ltd	
			West Bengal	Bakreswar TPS	5
				Kolaghat TPS	
				Sagardighi TPS	
				Durgapur TPS	
				Durgapur Steel TPS	
3	Group C	11	Rajasthan	Kota Super TPS	1
			Punjab	Guru Gobing Singh TPS	1
			Haryana	Deen Bandu TPS (DCRTPP)	2
				Rajiv Gandhi TPS	
			Uttar Pradesh	Parichha TPS	3
				NTPC Dadri	
				NTPC Singrauli	
			Gujrat	Kutch Lignite TPS	4
				Surat Lignite TPS	
				Ukai TPS	
				Coastal Gujrat Power Ltd c/o Tata	

1. The bidder with lowest commercial bid against the group shall be declared as the successful bidder for that particular group and will be called as L1 bidder. BEE reserves the right to place the order with the L2 bidder, in case the L1 bidder refuses to accept the order or otherwise gets disqualified as per the terms of the RFP, provided the L2 bidder matches the price quoted by the L1 bidder. In case the 2nd lowest bidder is unable to match the L1 price, BEE reserves the right to place order with the shortlisted L3 bidder and so on.

2. Bidders can apply in any/all of the group. Bids will be opened in sequence number (first for group A and then Group B and then Group C).

3. Any bidder who is successful in One group will not be considered for the rest of the groups. Evaluation will be based on the total lump sum cost quoted by the bidder.

4. In case more than one bidder quotes the same value, then the bidder having maximum technical evaluation marks will be reckoned as L1. A list of L1, L2, L3 … and so on will be prepared.

5. In case of selected L1 bidder refuses to work within the time frame given by BEE, the offer would be treated as withdrawn and the bidder's EMD will be forfeited and L2 bidder shall be reckoned as L1 for further process. If other bidders refuse to work, their EMD will be forfeited and offer will be extended to another qualified bidder. The defaulted bidder may also be debarred from participating in BEE tenders for a period of 3 years.

6. If there is discrepancy between words and figures, the amount in words will prevail. The decision of BEE arrived at above will be final and no representation of any kind shall be entertained.

7. **If the bidder is applying for a particular group, then bidder has to quote for the total number of industries in the group as per table. Partial quote in any group is not allowed and shall be considered as non-responsive.**

8. **List of industries with detailed address are attached at Annex-I.**

7. Other Conditions

7.1. Procedure for Submission of Proposal

The Agency should submit following document with Cover Letter in two separate envelopes marked as ENVELOPE-A and ENVELOPE-B.

a) **COVER LETTER: -** The cover letter must clearly mention the name, address, telephone and fax no., and email id of the authorized person who will serve as the primary point of contact for all communication. The person who is signing the cover letter and the proposal should have authorization.

b) **ENVELOPE- A: -** One Hard Copy of Technical Proposal, in original with signature of authorized personnel and stamp/seal of the organization. The sealed envelope should be super scribed with the wordings "Technical Proposal for Hiring of Agency for Energy Mapping of Thermal Power Plants".

c) **ENVELOPE- B: -** One Hard Copy of Financial Proposal, in original with signature of authorized personnel and stamp/seal of the organization. The sealed envelope should be super scribed with the wordings "Financial Proposal for Hiring of Agency for Energy Mapping of Thermal Power Plants".

Along with 1 set of hard copy of technical proposal, the soft copy of the Technical Proposal should be submitted, in the form of a Pen Drive and placed in appropriate envelope. The Pen drive must be duly signed by the Firm/Agency using a "Permanent Pen/Marker" and should bear the name of the Agency.

7.2. Cost of RfP

The Agency shall bear all costs associated with the preparation and submission of its RfP, including cost of presentation for the purposes of clarification of the bid, if so desired by the purchaser. BEE will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.

7.3. Earnest Money Deposit

As per MoF/DoE O.M.No.F.9/4/2020-ppd dated 12th November, 2020, "Micro and Small Enterprises (MSEs) and the firms registered with concerned Ministries/ Departments are exempted from submission of EMD (Bid security). Further, in lieu of Bid Security, Ministries/ Departments may ask bidders to sign 'Bid Security Declaration' accepting that if they withdraw or modify their bids during period of validity etc., they will be suspended for the time specified in the tender documents.

7.4. Performance Security

The successful bidder would be required to deposit an amount equivalent to 03% of the value of the contract (as per Ministry of Finance OM No. F.9/4/2020-PPD, dated 12.11.2020). This should be furnished through the Demand Draft in favour of "Bureau of Energy Efficiency", payable at Delhi. The Performance Security amount furnished by Demand Draft will be returned without interest within 60 days of completion of all obligations under the contract. The Performance Security will be returned after adjusting for penalties on account of deficiencies, if any, in the performance of the contract.

7.5. Liquidated Damages

Liquidated damages would be imposed @0.5% per week or part there off or the delay in delivery (refer section 5 for Timeline) as may be attributed to the successful bidder for each payment milestone as defined in the contract, subject to a maximum of 10% of the contract value. Recoveries through such Liquidated Damages are to

be without any prejudice to the other remedies as available to BEE under the terms of the contract.

7.6. Contents of the RfP

The Agency is expected to examine all instructions, forms, terms & conditions and Statement of Work in the RfP documents. Failure to furnish all information required or submission of an RfP Document not substantially responsive to the RfP in every respect will be at the Agency's risk and may result in the rejection of the RfP.

7.7. Conflict of Interest

The Agency who is selected for the work will have to maintain the confidentiality of the information compiled. In no case the Agency would be allowed to use the data or share the information with anyone else, except for the BEE.

BEE shall hold the copyrights over any of the data collected or compiled during the course of the awards.

7.8. Language of Bids

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

7.9. Confidentiality

BEE require that recipients of this document to maintain its contents in the same confidence as their own confidential information and refrain from any public disclosure whatsoever.

7.10. Disclaimer

BEE and/or its officers, employees disclaim all liability from any loss or damage, whether foreseeable or not, suffered by any person acting on or refraining from acting because of any information including statements, information, forecasts, estimates or projections contained in this document or conduct ancillary to it whether or not the loss or damage arises in connection with any omission, negligence, default, lack of care or misrepresentation on the part of BEE and/or any of its officers, employees.

7.11. Authorized Signatory (Consultant)

The "Consultant" as used in the RfP shall mean the one who has signed the RfP document forms.

The Consultant should be the duly Authorized Representative of the Agency, for which a certificate of authority will be submitted. All certificates and documents (including any clarifications sought and any subsequent correspondences) received hereby, shall, as far as possible, be furnished and signed by the Authorized Representative. The power or authorization, or any other document consisting of adequate proof of the ability of the signatory to bind the Consultant shall be annexed to the bid. BEE may reject outright any proposal not supported by adequate proof of the signatory's authority.

7.12. Contact details of the Consultant

Consultant who wants to receive BEE's response to queries should give their contact details to BEE. The Consultant should send their contact details in writing at the BEE's contact address.

7.13. Amendment of RfP

At any time prior to the last date for receipt of bids, BEE, may, for any reason, whether at its own initiative or in response to a clarification requested by a

prospective Agency, modify the RfP Document by an amendment. In order to provide prospective Agencies reasonable time in which to take the amendment into account in preparing their bids, BEE may, at their discretion, extend the last date for the receipt of Bids and/or make other changes in the requirements set out in the Invitation for RfP.

7.14. Bid Processing Fee

All bids must be accompanied by a bid processing fee of INR 5,000 (INR Five Thousand only) in the form of a crossed demand draft drawn on any nationalized/ scheduled bank payable at par in New Delhi, in favour of "Bureau of Energy Efficiency, New Delhi" for applying for the task.

As per MSME policy circular dt 23rd March 2012, MSEs registered under UAM scheme will be provided tender cost free of cost. Bidders are required to submit valid UAM certificate and their claim for free tender cost will be considered for the service/category for which they are registered as per UAM certificate.

7.15. Documents Comprising the RfP

The proposal prepared by the Consultant shall comprise the following components:

- Form 1: Letter Pro-forma
- Form 2: Minimum Eligibility
- Form 3: Team Composition
- Form 4: CV of team leader
- Form 5: List of Projects implemented by the bidder organization
- Form 6: Prior Experience
- Form 7: Comments and Suggestions
- Form 8: Approach and Methodology
- Form 9: Declaration Letter
- Form 10: EMD declaration form
- Bid processing fee of INR 5,000 (INR Five Thousand only)
- Pendrive comprises soft copies of technical bid

Envelope - A

- Financial Proposal

Envelope - B

7.16. Power of Attorney

Registered Power of Attorney executed by the Consultant in favour of the Principal Officer or the duly Authorized Representative, certifying him/her as an authorized signatory for the purpose of this RfP. BEE shall not be responsible for non-receipt / non-delivery of the RfP due to any reason whatsoever.

Agencies are advised to study the RfP document carefully. Submission of RfP shall be deemed to have been done after careful study and examination of the RfP document with full understanding of its implications.

7.17. BEE has all the rights to change/rescind/cancel the tender at any stage before award of the contract to any bidder without any explanation.

8. Terms of Payment

1. Payment authority will be Bureau of Energy Efficiency.
2. The successful bidder shall raise the invoice in favour of "The Secretary, Bureau of Energy Efficiency, 4th Floor, Sewa Bhawan, Sector– 1, R.K. Puram, New Delhi".
3. Payment will be made as per the timeline mentioned below:

Phase	Payment Terms	Payment Percentage
1	After submission of inception report	30%
2	After submission of final report	50%
3	Final payment after 6 months of submission of final report	20 %

***Note**: BEE shall process the payment after the receipt of the invoice at the end of each phase. However, the work schedule shall be adhered and shall not be affected due to payment related process.

4. Quoted prices shall be inclusive of duties, taxes etc. except GST. GST as applicable shall be payable extra.
5. Travelling, boarding and lodging expenses will be supposed to include in price quoted.
6. No extra amount shall be paid on any ground whatsoever.

9. Pre-Bid meeting

1. Pre bid meeting will be convened virtually on MS Team.
2. During the course of pre bid conference, the bidders may seek clarifications and make suggestions for consideration of the BEE.
3. The BEE shall endeavor to provide clarifications and such further information as it may, in its sole discretion, consider appropriate for facilitating a fair, transparent and competitive bidding process.

4. All enquiries from the bidders relating to this RfP notice document must be submitted to BEE before the deadline mentioned in this document.
5. These queries should be emailed at kumara@beeindia.gov.in and ravinder.yadav@beeindia.gov.in

10. Forms to be submitted

RfP is to be submitted in the following format along with the necessary documents as listed. The RfP shall be liable for rejection in the absence of requisite supporting documents. RfP should provide information against each of the applicable requirements. In absence of the same, the RfP shall be liable for rejection.

10.1. Form 1: Letter Pro-forma

To

The Secretary

Bureau of Energy Efficiency
4th Floor, Sewa Bhawan,
R.K. Puram,
New Delhi -110066 India.

Sub: Hiring of an Agency for Energy Mapping of Thermal power Plants.

Sir/ Madam,

The undersigned agency, having read and examined in detail all the RfP documents in respect of appointment of an agency for BEE do hereby express their interest to provide Consultancy Services as specified in the scope of work.

Our correspondence details are:

1	Name of the Consulting Firm	
2	Address of the Consulting Firm	
3	Name of the contact person to whom all references shall be made regarding this RfP	
4	Designation of the person to whom all references shall be made regarding this RfP	
5	Address of the person to whom all references shall be made regarding this tender	
6	Telephone (with STD code)	
7	E-Mail of the contact person	
8	Fax No. (with STD code)	

We have enclosed the following:

- Form 1: Letter Pro-forma
- Form 2: Minimum Eligibility
- Form 3: Team Composition
- Form 4: CV of team members
- Form 5: List of Projects implemented by the bidder organization
- Form 6: Prior Experience
- Form 7: Comments and Suggestions
- Form 8: Approach and Methodology
- Form 9: Declaration Letter
- Form 10: EMD declaration form
- Bid processing fee of INR 5,000 (INR Five Thousand only)
- Pen drive containing soft copies of technical bid
- Form 11: Financial Proposal
- Registered Power of Attorney executed by the agency in favor of the Principal Officer or the duly Authorized Representative, certifying him/her as an authorized signatory for the purpose of this RfP.

We hereby declare that our RfP is made in good faith and the information contained is true and correct to the best of our knowledge and belief.

Thanking You

Yours faithfully,

Name:

Designation:

Date:

Place:

Address:

10.2. Form 2: Minimum Eligibility

1	Name of Firm/Company			
2	Year of Registration/Incorporation			
3	Year of Registration/Incorporation in India*			
4	Details of the registered offices in India			
5	Experience in years in the field of TPP (O&M, energy mapping, energy audit etc)			
4	Number of Employees in India as on March 31, 2020			
		FY 2018-19	FY 2019 - 20	FY 2020-21
5	Annual Turnover from Consultancy Services**			
6	Annual Profits **			

* Enclose a copy of Registration document

**Enclose a copy of Audited Financial Statement

Witness:		Consultant:	
Signature	_____	Signature	_____
Name	_____	Name	_____
Address	_____	Designation	_____
	_____	Company	_____
Date	_____	Date	_____

10.3. Form 3: Team Composition

S. No	Name and contact detail of Person	Role (Team Leader/ Team Member/ Other)[1]	Year of relevant experience[2]	Working in bidder organization since	Signature of the person[3]

[1] Role of the person in this project

[2] Year of relevant experience and same should also be depicted in the attached resume of the person.

[3] Signature should be original and signed in ink by all team members and also attach self- attested copy of PAN card/Passport etc. for verification of signature. Bid will be rejected, if signatures are not valid/not signed in original.

10.4. Form 4: CV of Team Members

Provide CVs of the proposed team for undertaking the current assignment. The CVs to be included in the following format:

FORMAT

1. Name:
2. Position:
3. Name of Firm:
4. Date of Birth:
5. Nationality:
6. Education (In Reverse Chronology):

Name of Degree	Year	Name of Institution

7. Membership of Professional Associations:
8. Other Training:
9. Countries of Work Experience:
10. Employment Record:

Firm/Organization	From – To	Designation/Role

11. Projects undertaken

Name of Project	Role in the project	Duration (From – To)	Organization Name	Details of the Assignment

12. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes me, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Date:

Sign of staff member or authorized representative:

10.5. Form 5: List of EnMS Projects implemented by the bidder Organization

Type of Projects	List of Projects/Name of industry
Energy Mapping through Diagnostic tool or PADO services to TPPs	1.
TPPs O&M, generation, Erection, T&D etc	1.
Energy Audit, PG test etc	1.
Any Other relevant Project	1. 2. 3.

Agency has to submit proof for undertaken and completion of project enlisted above (such as work order/completion certificate for these projects).

BEE has complete right to ask for other relevant documents. Non availability of such document may lead to rejection of bid/contract at any stage of the project.

10.6. Form 6: Prior Experience

Please indicate at least minimum requirement of assignment directly related to the experience as specified in this document.

Name of Consulting Firm:	
Assignment/job name:	
Nature of Assignment:	
Description of Project	
Approx. value of the contract (in Rupees):	
Country:	
Location within country:	
Duration of Assignment/job (months) :	
Name of Employer:	
Address and contact details:	
Total No of staff-months of the Assignment/job:	
Approx. value of the Assignment/job provided by your firm under the contract (in Rupees):	
Start date (month/year):	
Completion date (month/year):	
Name of associated Consultants, if any:	

No of professional staff-months provided by associated Consultants:	
Name of senior professional staff of your firm involved and functions performed.	
Description of actual Assignment/job provided by your staff within the Assignment/job:	

Witness:		Consultant:	
Signature	_____	Signature	_____
Name	_____	Name	_____
Address	_____	Designation	_____
	_____	Company	_____
Date	_____	Date	_____

10.7. Form 7: Comments and Suggestions

[Suggest and justify here any modifications or improvement to the scope of work, tasks to be performed, timeline, deliverables, payment terms etc. to improve performance in carrying out the Assignment. The Agency can suggest deleting some activity or adding another, or proposing a different phasing of the activities. Such suggestions should be concise and to the point.]

(Maximum 2 Pages)

Witness:		Consultant:	
Signature	_____	Signature	_____
Name	_____	Name	_____
Address	_____	Designation	_____
	_____	Company	_____
Date	_____	Date	_____

10.8. Form 8: Approach and Methodology

[Explain your understanding of the objectives of the Assignment/job, approach to the Assignment/job, methodology for carrying out the activities and obtaining the expected output, and the degree of detail of such output. You should highlight the problems being addressed and their importance, and explain the technical approach you would adopt to address them. You should also explain the methodologies you propose to adopt and highlight the compatibility of those methodologies with the proposed approach]

Witness:		Consultant:	
Signature	_____	Signature	_____
Name	_____	Name	_____
Address	_____	Designation	_____
	_____	Company	_____
Date	_____	Date	_____

10.9. Form 9: Declaration Form

Declaration Letter on official letter head stating the following:

We are not involved in any major litigation that may have an impact of affecting or compromising the delivery of services as required under this contract.

We are not black-listed by any Central / State Government / Public Sector Undertaking in India

Witness:		Consultant:	
Signature		Signature	
Name		Name	
Address		Designation	
		Company	
Date		Date	

10.10. EMD Declaration Form

To,

Secretary,
Bureau of Energy Efficiency
4th Floor, Sewa Bhawan,
R.K. Puram Sector-I, New Delhi -110066

Sub: Hiring of agency for energy mapping in 38 identified TPPs

The undersigned agency declares that if we withdraw or modify the Bids during the period of validity, or if we are awarded the contract and we fail to sign the contract, or to submit a performance security before the deadline defined in the request for bids document, we will be suspended for the period of time specified in the request for bids document from being eligible to submit Bids for contracts with the entity that invited the Bids.

Thanking you,

Yours faithfully

(Signature of the Officer)

Name :

Designation :

Seal :

Date :

Place :

Business Address:

10.11. Form 11: Format for Financial Proposal

Should be sealed separately from technical proposal and super scribed

Financial Proposal for "Hiring of Agency for Energy Mapping of Thermal Power Plants"

[Location, Date]

FROM: (Name of Firm)

TO

Secretary
Bureau of Energy Efficiency,
4th Floor, Sewa Bhawan,
R.K. Puram,
New Delhi -110066 India.

Sir/ Madam,

Sub: Hiring of Agency for Energy Mapping of Thermal Power Plants.

I / We, the undersigned, offer to provide the consulting services for the above in accordance with your Request for Proposal dated [Date], with our Technical and Financial Proposals.

Our attached Financial Proposal is for Hiring of Agency for Energy Mapping Exercise of Thermal Power Plants is as per financial bid template and is exclusive of the GST.

* Each Stage of payment will be released on submission of the deliverables as mentioned in clause 4 & 8.

*Note: GST will be paid extra as per the rules of Government of India.

Our financial proposal shall be binding upon us subject to the modifications resulting from contract negotiations, and are valid upto 1 year from the date of opening of financial bids.

We confirm that, contract may be cancelled at any stage by Bureau of Energy Efficiency without giving any reason and will be completely binding on us. We confirm that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

We understand you are not bound to accept any Proposal you receive.

Yours sincerely,

Authorized Signature
Name and Title of Signatory:

Name of the Firm:
Seal:

Financial Bid Template

Date XX/XX/2021 Financial Bid No. <<*if any*>>

Client: Bureau of Energy Efficiency, New Delhi – 110066

Validity of the proposal – <<*1 year from the date of bid submission*>>

Summary of Costs

Price Bid Name of Project: Request of proposal for Energy Mapping of 38 TPPs (as per Annex-I).					
S.No.	Name of Group	Number of Plants	Per plant rate excluding GST as per scope of work (in Rs.)	Total cost excluding of GST as per scope of work (in Rs.)	Total cost excluding of GST as per scope of work (in words)
1	A	15			
2	B	12			
3	C	11			

There is no other additional cost thereon.

Yours sincerely,

(Authorized Signatory)

Name of Firm

Annexure-1 (List of TPPs)

Group - A

S. No.	DC No.	TPP Name and address	State	Ownership	Capacity
1	TPP0004TS	KOTHAGUDEM THERMAL POWER STATION (KTPS) V STAGE, O/o.THE CHIEF ENGINEER, KTPS V & VI STAGES, PALONCHA, BHADRADRI KOTHAGUDEM DIST., TELANGANA-507115	Telangana	S	500 (2*250)
2	TPP0008TS	Ramagundam Thermal Power Station- TPS-B (Telangana Power Generation Corporation Limited), (62.5 MW)	Telangana	S	62.5
3	TPP0115TN	Tuticorin TPS, Harbour Estate, Tuticorin, Tamilnadu	Tamilnadu	S	1050 (5*210)
4	TPP0112TN	TAQA Neyveli Power Company Pvt Ltd 250MW LFPP, Uthangal, Vridhachalam Taluk, Cuddalore District Tamil Nadu, India 607804	Tamil Nadu	P	250
5	TPP0113TN	TCP LTD, Thandalacherry Road, New Gummidipoondi, Tiruvallur District, Tamil Nadu - 601201	Tamil Nadu	P	63.75
6	TPP0105TN	TPS-I Expension, NLC India Limited, Neyveli, Dist - Cuddalore, 607807, TN	Tamil Nadu	C	420 (2*210)
7	TPP0107TN	TPS-II, NLC India Limited, Dist - Cuddalore, 607807, TN	Tamil Nadu	C	1470 (7*210)
8	TPP0012AP	Vijayawada (Dr.Narla Tata Rao) Thermal Power Station, Ibrahimpatnam, Krishna (Dist), 521456, Andhrapradesh.	Andhra Pradesh	S	1760 (6*210+1*500)
9	TPP0086PY	Puducherry Gas Power Plant (Puducherry Power Corporation Ltd.), Puducherry	Pondicherry	S	32.5
10	TPP0071MH	Bhusawal Thermal Power Station, MAHAGENCO, Deep Nagar, Tah. Bhusawal, Jalgaon, Maharashtra 425307	Maharashtra	S	1210 (210+500+500)
11	TPP0076MH	Nasik Thermal Power Station, MAHAGENCO Eklahare, Nasik, Maharashtra 422105	Maharashtra	S	630 (3*210)
12	TPP0077MH	New Parli Thermal Power Station (3*250), MAHAGENCO Parli Vaijnath, Beed, Maharashtra - 431520	Maharashtra	S	750 (3*250)
13	TPP0078MH	Paras TPS, Paras, Taluka-Balapur, Dist-Akola, Maharsatra - 444109	Maharashtra	S	500 (2*250)
14	TPP0082MH	Uran Gas Power Station, MAHAGENCO, Bokadvira, Uran, Dist Raigad, Maharastra, 400702	Maharashtra	S	672 (4*108+2*120)
15	TPP0081MH	The Tata Power Company Limited, Trombay Thermal Power Station, Mahul Road, Chembur, Mumbai 400074	Maharashtra	P	750 (1*500+1*250)

Group - B

S. No.	DC No.	TPP Name and address	State	Ownership	Capacity
1	TPP0019CG	Dr. Shyamaprasad Mukharjee Thermal Power Station Korba CSPGCL, Korba, Chhattisgarh	Chhattisgarh	S	500 (2*250)
2	TPP0020CG	Hasdeo Thermal Power Station Korba (West), CSPGCL, Korba West, Darri, Korba, Chhattisgarh 495450	Chhattisgarh	S	840 (4*210)
3	TPP0166CG	Lanco Amarkantak Power Limited, Patadhi, Korba, Chhattisgarh-495674	Chhattisgarh	P	600 (2*300)
4	TPP0018CG	ACB (INDIA) Ltd., 30 MW, Vill-Chakabura, PO- Jawali, Tehsil-Katghora, Dist- Korba, CG	Chhattisgarh	P	30
5	TPP0053JH	Chandrapura Thermal Power Station, Damodar Valley Corporation Bokaro Dist., Jharkhand 828403	Jharkhand	C	500 (2*250)
6	TPP0054JH	Jojobera Power Plant,Jamshedpur, The Tata Power Company Limited, Rahargora, East Singhbhum, Jharkhand-831016	Jharkhand	P	427.5 (1*67.5+3*120)
7	TPP0151JH	Maithon Right Bank Thermal Power Plant, Nirsa, Dhanbad, Jharkhand-828305	Jharkhand	P	1050 (2*525)
8	TPP0136WB	Durgapur Thermal Power Station,DVC, Durgapur-713207 Dist: Paschim Burdwan,State: West Bengal	West Bengal	C	210
9	TPP0148WB	Durgapur Steel Thermal Power Station, Damodar Valley Corporation,DSTPS-DVC Sarani, Andal,Burdwan,West Bengal-713321	West Bengal	C	1000 (2*500)
10	TPP0132WB	Bakreswar TPS, Dist-Birbhum, 731104	West Bengal	S	1050 (5*210)
11	TPP0137WB	Kolaghat Thermal Power Station, WBPDCL Salt Lake City, Kolkata, West Bengal PIN-721137	West Bengal	S	1260 (6*210)
12	TPP0141WB	Sagardighi Thermal Power Project, Manigram, Murshidabad, WestBengal, Pin-742237	West Bengal	S	600 (2*300+2*500)

Group - C

S. No.	DC No.	TPP Name and address	State	Ownership	Capacity
1	TPP0051HR	DEEN BANDHU CHOTU RAM THERMAL POWER PLANT (DCRTPP), HPGCL (Haryana Power Generation Co. Ltd.), Yamunanagar	Haryana	S	600 (2*300)
2	TPP0153HR	Rajiv Gandhi Thermal Power Plant, Khedar, Hisar,Khedar, Barwala Tehsil,Hisar,Haryana-125121	Haryana	S	1200 (2*600)
3	TPP0087PB	Guru Gobind Singh Super Thermal Power Station, Ropar, Roop Nagar, Punjab	Punjab	S	840 (4*210)
4	TPP0092RJ	KOTA SUPER THERMAL POWER STATION,SAKATPURA, KOTA (RAJ.)324001	Rajasthan	S	1240 (2*110+3*210+2*195)
5	TPP0124UP	NTPC DADRI (COAL) , VIDYUTNAGAR , GAUTAM BUDH NAGAR UP - 201008	Uttar Pradesh	C	1820 (4*210+2*490)
6	TPP0126UP	NTPC Ltd- Singrauli, Shakti Nagar, Sonebhadra, Uttar Pradesh	Uttar Pradesh	C	2000 (5*200+2*500)
7	TPP0131UP	Parichha Thermal Power Station Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited, Jhanshi, UP 284305	Uttar Pradesh	S	1140 (2*110+2*210+2*250)
8	TPP0037GJ	Kutch (Lignite) Thermal Power Station, Gujarat State Electricity Corp. Ltd., Lakhpat, Kutch, Gujarat 370601.	Gujarat	S	150 (2*75)
9	TPP0043GJ	Surat Lignite Power Plant (Gujarat Industries Power Company Ltd.), Nani Naroli, Mangrol, Surat, Gujarat-394112	Gujarat	S	500 (4*125)
10	TPP0044GJ	UKAI Thermal Power Station GSECL, Vidyut Bhawan, Vadodara, DIST TAPI, UKAI DAM-394680, Gujarat	Gujarat	S	1110 (2*200+1*210+1*500)
11	TPP0147GJ	Coastal Gujarat Power Limited C/o The Tata Power Company Limited, Tunda, Kutch, Gujarat-370 435	Gujarat	P	4150 (5*830)