

NTPC LTD
CenPEEP, EOC Annexe, NOIDA
VENDOR ENLISTMENT FOR HIRING OF A CONSULTANT /
INSTITUTIONS
FOR INTERNATIONAL PARAMETRIC BENCHMARKING STUDY OF
OPERATION & MAINTENACE (O&M) PARAMETERS OF NTPC THERMAL
POWER PLANTS

1	CEG No.	CPG-01
2	Brief description of CEG	International parametric benchmarking study of operation & maintenance (O&M) parameters of NTPC thermal power plants
3	Responsibility Centre	COS - CenPEEP
4	Brief scope of work	<p>The engagement with NTPC will be in the following steps:</p> <ol style="list-style-type: none"> 1. Initial Meeting with Plant teams at NTPC, Noida Office for detailed explanation of methodology, discussions regarding questionnaire and procedure for data sharing. 2. Sharing a questionnaire seeking data on Performance parameters. Major parameters are as following; <ol style="list-style-type: none"> (a) Unit Heat Rate (b) Boiler Efficiency (c) Turbine Cycle Heat Rate (d) Auxiliary Power Consumption (e) Plant load factor (f) Plant Availability factor (g) Outages – Forced , Planned (h) Specific Water Consumption (i) Specific Chemical consumption for water treatment. (j) Cooling tower performance (k) Condenser performance (l) Startups and shutdowns – time taken for cold start up, hot startup and warm start up, oil consumption for each startup. Shutdowns (m) Specific Oil consumption (n) Emission parameters 3. Based on the filled in data, analysis to be carried out to identify specific areas of focus. 4. Visit to select plants (depending on fleet wise capacity ranges like 200 MW, 500 MW, 660 MW & 800 MW) for further and deeper analysis of parameters and energy consumption.

		<ol style="list-style-type: none"> 5. Further analysis of data collected from questionnaires and plant visits, with respect to International Benchmark values of best Power utilities. Fleet wise analysis with respect to international benchmark values is desired. In case international benchmark value is not available for lower capacity fleet (200 MW) reference international benchmark value of 500 MW can be taken. 6. Meeting at NTPC Noida for discussing initial findings from the data collection and plant visits. 7. Establishing of Performance norms for NTPC plants based on the data collected and plant visits. 8. Identifying major gaps and further fleet wise suggestions to achieve the best parameters. 9. Documentation of best benchmark parameters vis-à-vis NTPC units' parameters as well as NTPC practices and technologies vis-à-vis International practices and technologies and suggestions to mitigate the gaps. 10. Final debriefing / Presentation at NTPC Noida, presenting the major findings from the Benchmarking study 11. The findings / assessment shall be shared initially in the Draft Report for NTPC comments. 12. Final report will be submitted after considering the NTPC comments on draft report.
5	Technical Qualifying requirements	<ol style="list-style-type: none"> 1. The applicant should be an Partnership Firm / Company / Consortium / R&D Institutions/Consultancy Firm, who has undertaken International parametric benchmarking study of operation & maintenance (O&M) parameters in at least two power plants (larger than or equivalent to 200MW capacity) during preceding 10 years from the date of publication of EOI. <p>OR</p> <p>The applicant should have undertaken</p>

		<p>International parametric benchmarking study of operation & maintenance (O&M) parameters in manufacturing industries like steel & cement during preceding 10 years from the date of publication of EOI.</p> <ol style="list-style-type: none"> 2. The key person(s) of the consulting firm should have working experience/familiar with ASME PTC codes. 3. Foreign consultants, Indian consulting group having international experience, Indian companies with tie-up with foreign consultants are only eligible.
	<p>Document to be submitted by Applicant in support of meeting QR</p>	<ol style="list-style-type: none"> 1. Relevant PO copy and Client's Completion Certificate/RA bill/Final Deviation Statement. 2. Qualifications & Relevant experience of Key person(s) of the consulting firm on self-certification basis.

NTPC LTD CenPEEP, EOC Annexe, NOIDA VENDOR ENLISTMENT FOR HIRING OF A CONSULTANT / INSTITUTIONS FOR INTERNATIONAL PARAMETRIC BENCHMARKING STUDY OF OPERATION & MAINTENACE (O&M) PARAMETERS OF NTPC THERMAL POWER PLANTS		
CEG No.	CPG-01	
6	Additional documents to be submitted	<p>In addition to the documents required in support of meeting technical requirements as stated above, following documents are required to be submitted by the Applicants applying for enlistment:-</p> <ol style="list-style-type: none"> 1. Three POs with BOQ of highest executed value for SIMILAR WORK during previous ten years from the date of application and Copy of Completion Certificate /RA Bill/ final deviation statement from the concerned client in support of execution of job against each of the POs to be submitted. 2. Audited balance sheet including Profit & Loss statement for the previous three completed financial years reckoned from the date of application. In case the Consultant / Consulting Firm or Agency is not able to furnish its audited financial statements on standalone entity basis, the unaudited unconsolidated financial statements of the Consultant / Consulting Firm or Agency can be considered acceptable, if they provide following documents in substantiation of their qualification. <ol style="list-style-type: none"> (i) The unaudited unconsolidated financial statements of the Consultant / Consulting Firm or Agency along with copies of the audited consolidated financial statements of the holding company (ii) A Certificate from the CEO / CFO of the Holding Company, stating that the unaudited unconsolidated financial statements form part of the consolidated financial statements of the Holding Company. <p>Any other documents in addition to the above which the applicant wants to submit.</p>

Detailed Invitation for Expression of Interest

DETAILED INVITATION FOR EXPRESSION OF INTEREST (EOI) FOR HIRING OF A CONSULTANT / INSTITUTIONS FOR INTERNATIONAL PARAMETRIC BENCHMARKING STUDY OF OPERATION & MAINTENANCE (O&M) PARAMETERS OF NTPC THERMAL POWER PLANTS

EOI NO. : NTPC/CenPEEP / 2017/ 01

DATE: 08.08.2017

1.0 INTRODUCTION

NTPC Limited, a Maharatna Company, is India's largest power producer with an installed capacity of more than 51 GW. NTPC generates power from Coal, Gas, Solar, wind & Hydro. It has also diversified into coal mining, power equipment manufacturing, oil & gas exploration, power trading & distribution. With an increasing presence in the power value chain, NTPC is well on its way to becoming an Integrated Power Major. The total installed capacity of the company is 51,635 MW (including JVs) with 20 coal based, 7 gas based stations, 1 Hydro based station and 1 Wind based station. 9 Joint Venture stations are coal based and 11 Solar PV projects. NTPC has an ambitious plan to be a 130 GW company by 2032 with diversified fuel mix and a 600 BU company in terms of generation. Most of the generation of NTPC is from coal and coal would continue as predominant fuel with 65% share of coal based capacity in the portfolio. It has fleet of thermal units having various capacities comprising of 200 MW, 500 MW, 660 MW and 800 MW.

2.0 PURPOSE OF THE EXPRESSION OF INTEREST (EOI)

- 2.1 NTPC Limited desires to hire a consultant / Institutions for International parametric Benchmarking Study of Operation & Maintenance (O&M) parameters of NTPC thermal power plants. The main objective of the study is to benchmark the technical performance of NTPC units with that of world class benchmark values of International power utilities and formulating strategies to bridge the gap in the performance.
- 2.2 NTPC Limited invites EXPRESSION OF INTEREST (EOI) from reputed Consultants / Institutions (referred to as Consultants, who have experience of undertaking consultancy works of similar nature as per scope of work mentioned at **4.0 below** through our enlistment website www.vendor.ntpc.co.in .

3.0 SCOPE OF WORK

The engagement with NTPC will be in the following steps:

13. Initial Meeting with Plant teams at NTPC, Noida Office for detailed explanation of methodology, discussions regarding questionnaire and procedure for data sharing.
14. Sharing a questionnaire seeking data on Performance parameters. Major parameters are as following;
 - (o) Unit Heat Rate
 - (p) Boiler Efficiency
 - (q) Turbine Cycle Heat Rate
 - (r) Auxiliary Power Consumption
 - (s) Plant load factor
 - (t) Plant Availability factor
 - (u) Outages – Forced , Planned
 - (v) Specific Water Consumption
 - (w) Specific Chemical consumption for water treatment.
 - (x) Cooling tower performance
 - (y) Condenser performance
 - (z) Startups and shutdowns – time taken for cold start up, hot startup and warm start up, oil consumption for each startup. Shutdowns
 - (aa) Specific Oil consumption
 - (bb) Emission parameters
15. Based on the filled in data, analysis to be carried out to identify specific areas of focus.
16. Visit to select plants (depending on fleet wise capacity ranges like 200 MW, 500 MW, 660 MW & 800 MW) for further and deeper analysis of parameters and energy consumption.
17. Further analysis of data collected from questionnaires and plant visits, with respect to International Benchmark values of best Power utilities. Fleet wise analysis with respect to international benchmark values is desired. In case international benchmark value is not available for lower capacity fleet (200 MW) reference international benchmark value of 500 MW can be taken.
18. Meeting at NTPC Noida for discussing initial findings from the data collection and plant visits.
19. Establishing of Performance norms for NTPC plants based on the data collected and plant visits.

20. Identifying major gaps and further fleet wise suggestions to achieve the best parameters.
21. Documentation of best benchmark parameters vis-à-vis NTPC units' parameters as well as NTPC practices and technologies vis-à-vis International practices and technologies and suggestions to mitigate the gaps.
22. Final debriefing / Presentation at NTPC Noida, presenting the major findings from the Benchmarking study
23. The findings / assessment shall be shared initially in the Draft Report for NTPC comments.
24. Final report will be submitted after considering the NTPC comments on draft report.

4.0 ELIGIBILITY

4.1 Eligibility of participating Consultants/Institutions

4. The applicant should be an Partnership Firm / Company / Consortium / R&D Institutions/Consultancy Firm, who has undertaken International parametric benchmarking study of operation & maintenance (O&M) parameters in at least two power plants (larger than or equivalent to 200MW capacity) during preceding 10 years from the date of publication of EOI.

OR

The applicant should have undertaken International parametric benchmarking study of operation & maintenance (O&M) parameters in manufacturing industries like steel & cement during preceding 10 years from the date of publication of EOI.

5. The key person(s) of the consulting firm should have working experience/familiar with ASME PTC codes.
6. Foreign consultants, Indian consulting group having international experience, Indian companies with tie-up with foreign consultants are only eligible.

In addition to the documents required in support of meeting technical requirements as stated above, following documents are required to be submitted by the Applicants applying for enlistment:-

3. Three POs with BOQ of highest executed value for SIMILAR WORK during previous ten years from the date of application and Copy of Completion Certificate /RA Bill/ final deviation statement from the concerned client in support of execution of job against each of the POs to be submitted.
4. Audited balance sheet including Profit & Loss statement for the previous three completed financial years reckoned from the date of application. In case the

Consultant / Consulting Firm or Agency is not able to furnish its audited financial statements on standalone entity basis, the unaudited unconsolidated financial statements of the Consultant / Consulting Firm or Agency can be considered acceptable, if they provide following documents in substantiation of their qualification.

- (i) The unaudited unconsolidated financial statements of the Consultant / Consulting Firm or Agency along with copies of the audited consolidated financial statements of the holding company
- (ii) A Certificate from the CEO / CFO of the Holding Company, stating that the unaudited unconsolidated financial statements form part of the consolidated financial statements of the Holding Company.

Any other documents in addition to the above which the applicant wants to submit.

5.0 DOCUMENTS OF EOI

The EOI documents shall comprise of the following documents:

- i. Invitation for Expression of Interest
- ii. Instructions to Applicants
- iii. Form of covering letter & Schedules

6.0 DOCUMENTS COMPRISING THE APPLICATION

Applicants are required to submit the information about their company profile, their technical capabilities, manpower strength & financial status in the format as mentioned in Schedules. Interested Applicants are required to attach copy of work order / Letter of Award and completion Certificate in support of the experience for same / similar work assignment in any industry. Additional Information relevant to the work / assignment can be submitted by the applicant.

The application of EOI shall comprise of the following:

- A. **Form of covering letter:** The form of covering letter shall indicate willingness of consultants/consulting firms or agencies to participate in the RFP, as and when NTPC invites proposal for same.
- B. **Schedules:**
 - a. **Schedule -1:** Company Profile and organization structure
 - b. **Schedule - 2:** Turnover and Profit/Loss of the consultant / consulting agency in preceding four financial years and net worth of the Company.
 - c. **Schedule - 3:** List of experts & Specialists and their experiences & qualification
 - d. **Schedule - 4:** Acceptance of Fraud Prevention Policy of NTPC
 - e. **Schedule - 5:** Any other information

7.0 PROCEDURE OF OBTAINING EOI DOCUMENTS

For submission of Expression of Interest, interested parties may obtain the complete set of EOI documents along with forms free of cost on www.vendor.ntpc.co.in .

8.0 TIME SCHEDULE

PARTICULARS	DATE
START DATE FOR ISSUING EOI DOCUMENT	14.08.2017
LAST DATE FOR QUERIES / CLARIFICATIONS	29.09.2017
LAST DATE FOR SUBMISSION OF FILLED _IN EOI FORMS	30.09.2017

9.0 DISCUSSION WITH BIDDERSX

Discussion shall be held with eligible bidders at NTPC CC-EOC NOIDA. Agencies shall participate at their own cost.

10.0 SIGNATURE & SUBMISSION

- 10.1 All the applicant shall submit/upload duly signed and stamped filled –in form in the format as per Annexure-I provided along with this document. The signed proposal along with the documentary evidences shall be uploaded at www.vendor.ntpc.co.in .

Address for Communication

Additional General Manager (CenPEEP)
NTPC Limited

Engineering Office Complex Annexe,

A-8A, Sector – 24, NOIDA

Distt. – GautamBudh Nagar

PIN – 201 301 (U.P.) INDIA

Tel No. : +91 – 0120 – 2410588 / 2410258

Fax No.: +91 – 120 - 2410322

Mobile : +91 – 9650998035 / 9650991169

Email: ashokksingh@ntpc.co.in; spkarna@ntpc.co.in

- 10.2 NTPC may seek additional information from interested applicants who respond to the EOI. However, NTPC reserves the right to modify the process or to not act upon the EOI or to ask for fresh EOI at a later date, without assigning any reason whatsoever.

11.0 RIGHT TO ACCEPT OR REJECT APPLICATION

- 11.1 Applicants may note that mere submission of EOI and / or submission of additional information do not automatically entitle them to any claim.

11.2 Notwithstanding anything contained in this EOI, NTPC reserves the right to accept or reject any application and annul the process and reject all applications at any time without any liability or any obligation for such acceptance, rejection or annulment without assigning any reason.

12.0 DISCLAIMER

12.1 NTPC reserves the right not to proceed further, to change the process or procedure to be applied. It also reserves the right to decline to discuss further with any party expressing interest.

12.2 No reimbursement of cost of any type shall be paid to persons, entities or consortiums expressing interest.

Note:

1. All applications must upload all the documents related to EOI on the website itself.
2. NTPC reserves the right to accept, reject any or all the applications without assigning any reasons and to seek extra information, if required.

Note – EOI document can either be downloaded from the website <http://www.ntpctender.com> or www.vendor.ntpc.co.in can be obtained from the office of the AGM (CenPEEP) CC-EOC NOIDA **during office hours (9: 00 hrs to 17: 00 hrs) up to 15.09.2017** by submitting an application for the same.

FORMAT OF COVERING LETTER

(to be submitted by the party on the company's Letter Head)

Additional General Manager (CenPEEP)

**NTPC Limited, Engineering Office Complex Annexe, A-8A, Sector- 24, NOIDA, Distt.
Gautam Budh Nagar (U.P.) India, Pin – 201301**

(Agency to provide Date and Reference)

Dear Sir,

Sub: EXPRESSION OF INTEREST (EOI) FOT INTERNATIONAL PARAMETRIC BENCHMARKING STUDY OF OPERATION & MAINTENANCE (O&M) PARAMETERS OF NTPC THERMAL PLANTS

We, the undersigned, express our interest for the subject EOI and declare the following;

- (a) We are duly authorized to represent and act on behalf of _____ (name of the agency).
- (b) We have examined and have no reservations to the EOI document including Amendment Nos. & Clarification Nos. _____ (if any).
- (c) With reference to your invitations for EOI dated _____, we are furnishing herewith all the required details as per the prescribed formats.
- (d) NTPC and / or its authorized representatives are hereby authorized to conduct any inquiries or investigations to verify the statements, documents and information submitted in connection with this application, and to seek clarifications from our bankers and clients. This letter of Application will also serve as authorization for any individual or authorized representative of any institution referred to in the supporting information, to provide such information deemed necessary and as requested by NTPC.
- (e) NTPC and / or its authorized representatives may contact the following nodal persons for further information for any aspects of the application:

Contact Person			
Name & Designation	Address for communication	Telephone no.	Email ID

- (f) This application is made in the full understanding that:
 - 1. Through this EOI, NTPC intends to only identify the probable Agencies/Consultants in India or abroad who have experience in executing

the contracts of similar nature and that this invitation for expression of interest is not intended for empanelment or pre qualification of agencies.

2. EOI process will be subject to verification of all information submitted at the discretion of NTPC.
 3. NTPC reserves the right or accept any or all applications, cancel the EOI process without any obligation to inform the agency about the grounds of same.
- (g) We declare that we have read and abide by the provisions of Fraud Prevention Policy and submit the form of Acceptance of Fraud Prevention Policy duly filled in employer's format.
- (h) The undersigned declare that the statements made and the information provided in the duly completed application are complete, true and correct in every detail.

Name:

In the capacity of:

Signed:

Duly authorized to sign the application for and on behalf of :

Date:

**FOR EXPRESSION OF INTEREST (EOI) FOR HIRING OF A CONSULTANT / INSTITUTIONS
FOR INTERNATIONAL PARAMETRIC BENCHMARKING STUDY
OF NTPC THERMAL POWER PLANTS**

CONSULTANT PROFILE

Profile of the Consultant / Consultancy Firm and its activities
Name of the Consultant / Consultancy Firm (with Address and Contact Person details telephone , fax, mobile, email)
Whether – public Ltd. / Pvt. Ltd. / Partnership Firm / Individual (with date of incorporation)
Whether – Registered
Professional affiliations – with Institutions of Engineers, Council of Architecture etc.
Business Profile

Schedule-2

TECHNICAL CAPABILITY & MANPOWER

Details of the manpower i.e. Name, qualifications & experience of persons available for undertaking the assignment				
Name	Professional qualifications	Years with the consultant / Firm	Total experience (in years)	Details of Experience

Note: Interested parties for EOI are required to attach copy of work order / Letter of Award and completion Certificate in support of the experience for same / similar work assignment in any industry.

Schedule-3

FINANCIAL STRENGTH / NETWORTH

Last three years turnover (Copy of Balance sheets or certified copy from registered Chartered Accountant to be attached)	
FY 2013 – 2014	
FY 2014 – 2015	
FY 2015 – 2016	
FY 2016 – 2017	
Net worth as on last day of the preceding financial year	

I / We declare that the information stated here in above is accurate.

Signature (with Designation & Seal) :

Printed Name:

Company Address:

Tel:

Fax:

Email:

Date:

**EXPRESSION OF INTEREST FOT INTERNATIONAL PARAMETRIC BENCHMARKING STUDY
OF OPERATION & MAINTENANCE (O&M) PARAMETERS OF NTPC THERMAL PLANTS**

FORM FOR ACCEPTANCE OF FRAUD PREVENTION POLICY

We have read the contents of Fraud Prevention Policy of NTPC displayed on its tender website <http://www.ntpctender.com> or www.vendor.ntpc.co.in and undertake that we shall strictly abide by the provisions of Fraud Prevention Policy of NTPC.

Date:

Signature:

Place:

Name:

Designation:

Company Seal:

**EXPRESSION OF INTEREST FOT INTERNATIONAL PARAMETRIC BENCHMARKING STUDY
OF OPERATION & MAINTENANCE (O&M) PARAMETERS OF NTPC THERMAL PLANTS**

ANY OTHER INFORMATION

Additional information relevant to the work/assignment is enclosed.

Date:

Signature:

Place:

Name:

Designation:

Company Seal:

Note: Use additional sheets if required.