TENDER NO: PCRA/IND/PT-03/16-17

Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

Petroleum Conservation Research Association
Ministry of Petroleum & Natural Gas,
Government of India
Sanrakshan Bhawan, 10 Bhikaji Cama Place
New Delhi -110006

TENDER NO: PCRA/IND/PT-03/16-17

DUE DATE: 10-11-2016, 14:00 Hours

Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

Issued by:
Additional Director Industries
Petroleum Conservation Research Association
Sanrakshan Bhawan,
10, Bhikaji Cama Place, New Delhi – 110 066
Phone: 011-2619 8856
Email : adind@pcra.org
TENDER NO. PCRA/IND/PT-03/16-17

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Subject: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

Dear Sir / Madam,

Petroleum Conservation Research Association invites eTenders from competent and experienced parties IN TWO BID SYSTEM on lump sum rate basis for conducting Detailed Energy Audit of:

I. Indian Oil Corporation Limited, Haldia Refinery, Haldia, West Bengal
II. Chennai Petroleum Corporation Limited, Chennai, Tamilnadu
III. Indian Oil Corporation Limited, Gujarat Refinery, Vadodra, Gujarat
IV. Indian Oil Corporation Limited, Panipat Refinery, Haryana

These four Tenders are being considered together, because it has been decided to obtain separate Contractors for the four Locations. Bidders can bid with a common EMD for all four tenders however the successful bidder for the first tender will become ineligible for the balance three tenders, the successful bidder for the second tender will become ineligible for the third tender and so on. The sequence of opening the price bids will be as per the chronology Haldia, Chennai, Vadodra and Panipat as above.

Bidder has to upload technical and financial bids for each tender separately as these are separate tenders. However, a common EMD Instrument will be valid for all the bids the bidder makes for the above mentioned four tenders.

The enclosed tender document set shall be submitted online only, duly signed by the registered DSC of the bidder electronically; this is a mandatory condition that the entire tender document is submitted along with the bid as token of acceptance of all tender conditions ie in toto. Physical submission of tenders will not be acceptable.

Only the Earnest Money Deposit (EMD) has to be submitted offline. The instrument for EMD should be put in envelope with the following message super scribed on envelope “DO NOT OPEN, Tender for Energy Audit of Refineries”. The EMD has to reach the following address before closure of bid submission time as contained in the NIT.

Additional Director Industries
Petroleum Conservation Research Association
Sanrakshan Bhawan,
10, Bhikaji Cama Place, New Delhi – 110 066

If EMD is being submitted by hand the same can be dropped in the tender box kept on the third floor of our office building mentioned in the above address.

Thanking you,
For and on behalf of PCRA

(A.V. Joshi)
Additional Director (Industries)

Encl: Tender Document Set
**Name of Work:** Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

**NOTICE INVITING TENDER (NIT) (e-Tender)**

Petroleum Conservation Research Association, New Delhi invites Limited tender through electronic bidding system through Central Public Procurement Portal (e-Procurement) [https://eprocure.gov.in/cppp/](https://eprocure.gov.in/cppp/)

### Details of the Tender:

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<td>TYPE OF TENDER</td>
<td>Public Tender</td>
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<td><strong>4</strong></td>
<td>START DATE FOR DOWNLOADING OF TENDER BY BIDDER</td>
<td>27-10-2016 from 14:00 Hours</td>
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<td><strong>5</strong></td>
<td>SEEK CLARIFICATIONS END DATE</td>
<td>03-11-2016 up to 0900 Hours</td>
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<td><strong>6</strong></td>
<td>PRE BID MEETING</td>
<td>03-11-2016, at 11:00 Hours</td>
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<td><strong>7</strong></td>
<td>BID SUBMISSION START DATE</td>
<td>04-11-2016 from 1100 Hours</td>
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<td><strong>8</strong></td>
<td>TENDER SUBMISSION END DATE</td>
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<td><strong>9</strong></td>
<td>DATE &amp; TIME OF OPENING OF BID</td>
<td>10-11-2016, 14:30 Hours or anytime thereafter.</td>
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<td><strong>10</strong></td>
<td>COST OF TENDER DOCUMENT</td>
<td>NIL, Bidders are required to download the tender documents free of cost from <a href="https://eprocure.gov.in/cppp/">https://eprocure.gov.in/cppp/</a></td>
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<td><strong>11</strong></td>
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<td>Rs. 35,93,750/-</td>
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<td><strong>12</strong></td>
<td>EARNEST MONEY DEPOSIT</td>
<td>Rs. 36,000/- The Demand Draft for EMD should be issued in favour of “Petroleum Conservation Research Association”, Payable at New Delhi Name Additional Director Industries Petroleum Conservation Research Association Sanrakshan Bhawan, 10, Bhikaji Cama Place, New Delhi – 110 066 The EMD should reach Before closure of bid submission time. If being submitted in person it should be dropped in tender box kept on third floor of Sanrakshan Bhawan, PCRA Office Building at Bhikaji Cama New Delhi. Government parties and PSUs are exempted from paying EMD.</td>
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<td><strong>13</strong></td>
<td><strong>VALIDITY OF RATES</strong></td>
<td>120 days after tender opening and up to completion of works upon finalization</td>
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<td>Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery as defined and detailed in the Tender documents</td>
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<td><strong>TIME PERIOD FOR COMPLETION</strong></td>
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<td><strong>METHOD OF SELECTION</strong></td>
<td>Work will be awarded to the L-1 bidder</td>
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<td><strong>PRE –QUALIFICATION CRITERIA</strong></td>
<td>Party should have experience of having completed similar works during last 5 years ending October ’2016 with following criteria:</td>
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<td></td>
<td>i). <strong>One similar completed</strong> work of value not less than Rs.3.5 Lacs</td>
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<td>And</td>
<td></td>
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<td></td>
<td>ii). <strong>Annual financial turnover</strong> during 2015-16 or previous two Financial years should be at least Rs. 22 Lacs</td>
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<td>Definition of similar work: Similar works mean “Experience of having conducted energy audit at Designated Consumers, as per EC Act 2001(DCs)/Petroleum Petrochemical Industries/ Petroleum Refinery/Thermal Power Plants (&gt; 200 MW) of value Rs. 3.5 lacs”</td>
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<td></td>
<td>And</td>
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<td></td>
<td>iii) Shall have as its employee, an Accredited Energy Auditor or Energy Auditor as a team Leader for taking up the Energy Audit. Details regarding the BEE Certification of Accredited Energy Auditor or Energy Auditor ie scanned copy of the certificate should be loaded along with bid documents.</td>
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<td><strong>18</strong></td>
<td><strong>ESSENTIAL DOCUMENTS FOR UPLOADING WITH TECHNO-COMMERICAL BID</strong></td>
<td>1) Certificate of the team leader Accredited Energy Auditor or/Energy Auditor</td>
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<td>2) Audited Balance Sheet for previous 3 years.</td>
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<td>3) Copies of work order</td>
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<td>4) Completion certificate, Final bill payment advice etc. towards proof of completion</td>
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TENDER NO: PCRA/IND/PT-03/16-17

Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

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<td>2) Registration Certificate and Partnership deed in case of Partnership firm</td>
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<td>3) Copy of PAN Card</td>
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<td>4) Service tax registration or proof of application</td>
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<td>5) Registration with PF Commissioner or proof of application</td>
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5) Statement of credentials available on page 12 in the tender documents along with relevant enclosures

IMPORTANT INSTRUCTIONS

1. General

1.1. Bidder to note the followings before bidding:

1.1.1. Offer from following types of bidder will not be accepted

1.1.1.1. Who are in the Holiday / Negative list of PCRA or the MOP&NG.

1.1.1.2. Who are under liquidation, court receivership or similar proceedings.

1.1.1.3. Offer from Joint Bidders / Consortium will not be acceptable.

1.1.1.4. The subject work is indivisible and shall be awarded to single successful bidder unless stated otherwise elsewhere in the tender document, including NIT/LIT.

1.2. PCRA reserves the right to finalise the tender based on credentials uploaded along with Techno-commercial bid without any correspondence with bidders for deficient PQC documents. Bidders are required to go through the Notice Inviting Tenders (NIT/LIT), ITB(Instruction to Bidder) & Tender Documents carefully including GCC and upload all the required documents along with Techno-commercial (Un-Priced) Bid (as a token of acceptance of tender conditions) in order to avoid rejection.

1.3. PCRA reserves the right to reject any or all of the tenders or any parts of the tender so received and may cancel the tender in part or full, extend the due date of Tender submission etc.

1.4. Bidders are to quote their most competitive rates. Negotiations will not be conducted with the bidders as a matter of routine. However, PCRA reserves the right to conduct negotiations.

1.5. EMD: EMD should be submitted offline. EMD only in the form of Demand Draft / Banker’s cheque will be accepted. The Demand Draft for EMD should be issued in favour of “Petroleum Conservation Research Association”, Payable at New Delhi Name of bidder & tender number should be clearly
written on the envelope containing the EMD which should be dropped in tender box kept on third floor of our Office, i.e. Sanrakshan Bhawan, Bhikaji Cama Place, New Delhi before due date & time of bid submission, else offer is liable to be rejected.

1.6. Legal dispute, if any, shall only be within the jurisdiction of Local Court situated at New Delhi.

1.7. Bidder cannot make any claim against PCRA towards its expense incurred in connection with the preparation and delivery of their bids, site visit, participating in the discussion and other expenses incurred during bidding process.

1.8. Bidder should make sure that their priced bid (Part-II/BOQ) contain only price. Bids with any condition directly or implied recorded in Priced Bid (Part-II/BOQ) are liable for rejection.

1.9. Submission of authentic documents is the prime responsibility of the bidder. Wherever PCRA has concern or apprehension regarding the authenticity/correctness of any document, PCRA reserves the right to get the documents verified from issuing authority/any relevant source. If documents (part or full) are found forged such offers will be summarily rejected and EMD will be forfeited and the bidder may be debarred from future tenders.

1.10. Offers not meeting statutory requirement are liable for rejection.

1.11. Bidders are advised to visit Announcement section/ Information for DSC/ Bidders Manual Kit/ FAQ of Central Public Procurement Portal (e-Procurement) https://eprocure.gov.in/cppp/.

1.12. Notwithstanding any other condition/provision in the tender documents, in case of ambiguity or incomplete documents pertaining to pre-qualification criteria (PQC), bidders shall be given only one opportunity with a fixed deadline after bid opening to provide complete & unambiguous documents in support of meeting the pre-qualification criteria (PQC). In case the bidder fails to submit any document or submits incomplete documents within the given time, the bidder’s tender is liable to be rejected.

For and on behalf of PCRA

Additional Director Industries
Petroleum Conservation Research Association
Sanrakshan Bhawan,
10, Bhikaji Cama Place,
New Delhi – 110 066
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

FORM OF TENDER
(To be filled up by the Tenderer)

For Commercial Bid

Serial No.__________________________

From__________________________

To__________________________

Petroleum Conservation Research Association

Name of Work__________________________

Tender No.__________________________

Dear Sirs,

Having examined the Tender Documents consisting of the Tender Notice, General Instructions to Tenderers, General Conditions of Contract, Special Instructions to Tenderers, Special Conditions of Contract, Specifications, Plans, Time Schedule, Form of Contract, Form of Schedule of Rates, and Addendum(a) to the Tender Documents, and having understood the provisions of the said Tender Documents and having thoroughly studied the requirements of PCRA relative to the work tendered for in connection with the ____________________________(Name of the Work) and having conducted a thorough study of the job site(s) involved, the site conditions, the climatic conditions, labour, power, water, material and equipment availability, the transport and communication facilities, the availability and suitability of temporary office accommodation and quarters and all other facilities and things whatsoever necessary for or relative to the formulation of the tender or the performance of work, I/we hereby submit my/our tender offer for the performance of proposed work in accordance with the terms and conditions and within the time mentioned in the Tender Documents.

In consideration of the sum of Rupee 1/- (Rupee one) only paid to me/us by PCRA, by adjustment in the price of Tender Documents, I/We further undertake to keep my/our this tender offer open for a period of not less than 4 (four) months from the scheduled date of opening of Tenders as specified in the General Instructions to Tenderers forming part of the Tender Documents.
I/We hereby further state that I/We/None of us (in the case of partnership firm) and none of our Directors (in the case of a Company) was/were employed as Directors of PCRA, during the period of 2 (two) years immediately preceding the date hereof OR I/We hereby declare that I/Shri _____________________ one of our partners (in the case of partnership firm/Directors in the case of a Company) was employed as a Director in PCRA, during the period of 2 (two) years immediately.

Preceding the date hereof and that I/Shri ______________________ have/has obtained previous permission of PCRA to make this tender.

I/We have annexed to this Bid the following documents:

i) Schedule of Rates in the prescribed form.

ii) Original Power of Attorney or other proof of authority of the person who has signed the Tender OR copy of Power of Attorney attested by a Gazetted Officer or a Notary Public in proof of the authority of the person who has signed the Tender.

iii) Information regarding tenderer in the form annexed to the Form of Tender.

iv) Information regarding experience of the tenderer in the performance of work of a comparable nature in the form annexed to the Form of Tender.

v) Information regarding Organisation and equipment in the form annexed to the Form of Tender.

vi) Set of Tender Documents, as issued duly signed.

vii) Additional Documents as listed below.

I/We hereby undertake that the statements made herein/information giver in the Annexures referred to above are true in all respects and that in the event of any such statement or information being found to be incorrect in any particular, the same may be construed to be a misrepresentation entitling PCRA to avoid any resultant contract.
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

I/We further undertake as and when called upon by PCRA to produce, for its inspection, original(s) of the document(s) of which copies have been annexed hereto.

(Signature(s) of the Tenderer(s))

Name & Designation of authorised person signing the Tender on behalf of the Tenderer(s)

Full Name and address of the Bidder(s)

Witness: 
Signature: 
Name: 
Occupation: 

Name & Designation of authorised person signing the Tender on behalf of the Tenderer(s)

Full Name and address of the Bidder(s)

Witness: 
Signature: 
Name: 
Occupation: 

Witness: 
Signature: 
Name: 
Occupation: 
NOTE:

1. To be filled and signed with stamp by Bidder
2. Incorrect/false declaration will result in disqualification.
3. Necessary supporting documents to be enclosed.
4. PCRA reserves the right to assess the tenderer’s capacity and capability if necessary by visiting/inspecting recently executed/under execution of works

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<td></td>
<td>b) FAX &amp; E-MAIL,</td>
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<td>c) NAME OF CONTACT PERSON:</td>
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<td>2</td>
<td>a) DATE / YEAR OF ESTABLISHMENT</td>
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<td>b) DETAILS OF REGISTRATION WITH COUNCIL OF ARCHITECTURE INCLUDING REGISTRATION NO.</td>
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<td>C.</td>
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<td>5</td>
<td>AUTHORISED SIGNATORY</td>
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<td>PERMANENT ACCOUNT NUMBER(PAN), PLEASE ATTACH COPY OF THE SAME</td>
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**Name of Work:** Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

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<td>SERVICE TAX / SALES TAX REGISTRATION (TIN NO.) (ENCLOSE COPIES OF CERTIFICATES)</td>
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<td>ANNUAL TURNOVER (CURRENT &amp; THREE PREVIOUS YEARS WITH NECESSARY DOCUMENTARY PROOF)</td>
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<td>ANY OTHER INFORMATION DESIRED TO BE FURNISHED BY TENDERER IN LINE WITH THE TENDER INVITED.</td>
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<td><strong>12</strong></td>
<td>CERTIFICATE OF THE TEAM LEADER ACCREDITED ENERGY AUDITOR OR/ENERGY AUDITOR</td>
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<td>CONFIRMATION OF COMPLIANCE TO CONDITIONS AT CLAUSE 16(d) and 16(f) OF SPECIAL TERMS AND CONDITIONS UPON AWARD OF CONTRACT</td>
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(*) – ATTACH DOCUMENTS IN PROOF OF ABOVE DETAILS REQUESTED FOR.
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

CHAPTER-3

INSTRUCTIONS TO BIDDERS(ITB)
TENDER NO: PCRA/IND/PT-03/16-17

Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

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INSTRUCTIONS TO BIDDERS (ITB)

1. INTRODUCTION

PCRA was formed as a registered society under the aegis of Ministry of Petroleum & Natural Gas on 10th August 1978, PCRA has been mandated to promote petroleum conservation with one of the important Objectives of promoting research, development and deployment efforts aimed at petroleum conservation and environment protection, support and facilitate efforts for adoption and dissemination of fuel-efficient technologies and substitution of petroleum products with alternate fuels and renewables.

GENERAL

1.1. The subject tender is an e-tender and available on website https://eprocure.gov.in/cppp/ The bidding documents are and shall remain the exclusive property of PCRA without any right of the Bidder to use them for any purpose except bidding and for use by successful Bidder with reference to the work.

1.2. The bidder shall submit their offer through e-tendering site as mentioned above, following the steps in the e-tendering portal. Physical Bids, Bids sent through Fax / E-mail / Courier / Post will not be acceptable. Bidder(s) are advised to quote strictly as per terms and conditions of the tender documents for e-bidding and not to stipulate any deviations / exceptions. Bidder must ensure that the EMD is deposited before due date & time of bid submission, else offer is liable to be rejected (as indicated in the NIT).

1.3. In order to bid for PCRA e-tenders, all the agencies are required to obtain a legally valid Digital Signature Certificate (DSC) for their user who is authorized to submit bids on-line from the licensed Certifying Authority (CA). For detail requirement bidders are advised to visit our e-tendering web site: Bidders already possessing the digital signature issued from authorized CAs can use the same in this tender. Further, the bidder should ensure that the mobile number & e-mail address given in the Registration Form is valid & active as all the communications will be made through this e-mail.

1.4. On no account will any person to whom bidding documents are furnished, part with possession thereof or copy or disclose the provisions thereof or any of them or disclose or take copies of tracings or of any drawing, plan or route forming part thereof, it
being understood that the information therein is confidential, and that the bidding documents are therefore being furnished only to bidders in strictest confidence.

1.5. The details as called for in the bidding documents shall be filled and completed by the Bidders in all respect and shall be submitted with requisite information and all Annexures.

1.6. If the space in any Performa of bidding document is insufficient, additional pages shall be separately added. These shall be page numbered and shall also carry the bidding document number and shall be signed by the Bidder and entered in the Index for Bid.

1.7. Bidder shall clearly indicate their legal constitution and the person signing the bid shall state his capacity as also the source of his ability to bind the Bidder. The Power of Attorney or Authorization or other document constituting adequate proof of the ability of the signatory to bind the Bidder, shall be annexed to the bid. PCRA may reject outright any bid unsupported by adequate proof of the signatory’s authority.

1.8. Bidders/Agencies shall submit their eligibility and qualification documents, Technical bid, Financial part etc in the standard formats prescribed in the Tender Documents, uploaded in e-procurement website. The bidder shall upload all the scanned copies of all the relevant certificates, documents etc in support of their eligibility criteria/technical bids in the e-procurement website. The bidder shall digitally sign on the statements, documents, certificates uploaded by him, owning responsibility for their correctness/authenticity. PCRA have right to verify the submitted/furnished documents/information. If any of the documents furnished by the bidder is found to be false/ fabricated, the bidder is liable for black listing, forfeiture of EMD & cancellation of work.

1.9. PRE-BID MEETING:

If pre-bid meeting is scheduled as per NIT or as informed, interested bidder may attend the same at their own cost at time & location specified in NIT. It desirable, that queries are posted in advance for timely clarification.

2. BIDDING DOCUMENT:

The bidding document that is downloaded from the website shall be submitted on-line as per the procedure stipulated in the website using digital signature as token of acceptance. The bidding document shall not be transferred to any other agency. The digital signature shall be considered as your confirmation
that you have read and accepted all the conditions laid down in the Tender Documents.

3. **BID VALIDITY:**

As stipulated in GCC, Bid shall remain valid for acceptance for a period of 04 (Four) months from the last date of submission of the bid/revised bid (if any). The bidder shall not be entitled to modify, vary, revoke or cancel his bid during the said period. The validity of the bid shall be extended as and when required for the period as requested by PCRA in writing and agreed by the bidder.

4. **EARNEST MONEY DEPOSIT (EMD)**

   **4.1.** The bid must be accompanied by Earnest Money of amount mentioned in the Notice Inviting Tender. EMD has to be submitted offline only in physical form. No interest shall be payable by PCRA for this Earnest Money Deposit. Bids not accompanied with Earnest Money will not be considered for evaluation.

   **FOR e-Tenders:**

Bidders who are claiming exception from submission of EMD are required to upload legible scanned copy of complete set of requisite certificates. Government parties and PSUs are exempt from payment of EMD.

Bidders must upload legible scanned (100 DPI) copy of the Instrument at the specified space along with their online offer. Bidders are advised to deposit the original Instruments towards EMD in the tender box kept on third floor of the office of tender issuing authority in the sealed envelope "DO NOT OPEN, Tender for Energy Audit of Refineries". The EMD has to reach the following address before closure of bid submission time as contained in the NIT.

   **Additional Director Industries**  
   **Petroleum Conservation Research Association**  
   **Sanrakshan Bhawan,**  
   **10, Bhikaji Cama Place, New Delhi – 110 066**

super scribing name of work, tender reference number, name of Tender issuing Authority, bidder’s name & opening date before due date & time of bid submission, else offer is liable to be rejected.

Bidders are advised to ensure that physical original Instrument must be same as of which scanned copy is uploaded along with offer. In case of mismatch or non-receipt of Instrument before due date & time of bid submission, else offer is liable for rejection.

   **4.2.** If the Bidder, after opening of technical bid, revokes his offer or modifies the items and conditions thereof during the validity of his offer except
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

where PCRA has given opportunity to do so, the Earnest Money shall be liable to be forfeited in addition to rejection of his offer and may be debarred from future tenders.

4.3. Should an “Invitation to Bid” be withdrawn or cancelled by PCRA, which it shall have the right to do so at any time, the Earnest Money paid with the bid will be returned to the Bidder.

4.4. Should the successful Bidder fail or refuse to sign the contract agreement and submit the necessary Security Deposit and other Guarantees as per tender conditions within the stipulated time, the Earnest Money is liable to be forfeited without prejudice to his being liable to any further loss or damage incurred in consequence.

4.5. The Earnest Money of the successful Bidder will be discharged when the Bidder has signed the Contract Agreement and furnished the necessary Security Deposit. Earnest Money of the unsuccessful Bidders shall be returned.

5. **BID SUBMISSION:**

5.1. Only online Bids should be submitted to tender inviting authority by as specified in NIT.

Bidders can submit on line offers after completing the download and must be submitted by the time and date mentioned in the Notice Inviting Tender at the website address stated therein.

5.2. Each e-Tender will provide access to Techno-Commercial as well as Price part of tender. Along with the Commercial part, Bidders can attach the required documents with their offers on line as per clause no. 8.1.

5.3. Agencies are advised to digitally sign the documents that are uploaded and encrypt the file data before submitting to the e-tendering portal according to procedure mentioned in respective sections of the e-tender portal (Help for contractors/Bidders Manual Kit/Special Instruction to Bidders).

5.4. Users may note that the incomplete bids will not be saved by the system and are not available for processing and evaluation.

5.5. The PRICE PART shall contain only “Schedule of Rates” duly filled in and any other information / document which has been specifically asked to be furnished along with the price part. It is to be noted that the Price part shall contain only PRICES and no conditions whatsoever.

5.6. The bid shall be digitally signed by someone legally authorized to enter into commitment on behalf of the Bidder. Bidder shall upload along with
5.7. PCRA will not be bound by any Power of Attorney granted by the Bidder or changes in the constitution of the firm made subsequent to submission of the bid or after the award of the contract. PCRA may, however, recognize such Power of Attorney and changes after obtaining proper legal advice, the cost of which will be borne by the Bidder.

5.8. The cancellation of any document such as Power of Attorney, Partnership Deed, etc. should be communicated by the Bidder to PCRA in writing well in time, failing which PCRA shall have no responsibility or liability for any action taken by PCRA on the strength of the said documents.

5.9. Should the Bidder have a relative or relatives in PCRA or one or more of its shareholders are employed in a superior capacity in PCRA, the relevant authority inviting bids shall be informed of the facts at the time of submission of the bid, failing which the bid may be disqualified or if such fact subsequently comes to light, PCRA reserves the right to take any other action as it deems fit in accordance with any applicable law, Rules, Regulations of the like in force.

6. COST OF BIDDING:

The bidder shall bear all direct and indirect costs associated with the preparation or delivery/submission of their Bid, participating in discussions etc. including costs and expenses related with visits to the OWNER’s offices, digital signatures etc. PCRA will in no case be responsible or liable for reimbursement of those cost and expenses regardless of the outcome of the bidding process.

7. ARRANGEMENT OF BID

Bids should not contain any terms and conditions, which are not applicable to the bid. Insertions, postscripts, additions and alterations shall not be recognized.

8. BID REQUIREMENTS

8.1. PROPOSAL OF THE BIDDER

The Bidder shall arrange his bid as detailed in Clause-5.0 herein above.

In the Techno-commercial & Un-priced Bid (Part-I) apart from the Tender submitted on-line, the following attachments shall be uploaded along with the Part-I of the offer:

DOCUMENTS TO BE UPLOADED ALONG WITH TECHNO-COMMERCIAL PART OF E-BID (PART-I):
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

a. Submission of bid letter along with the Bidding document.

b. Copy of Earnest Money Deposit (EMD).

c. Power of Attorney of the person who has signed the tender.

d. Compliance to Bid Document as per Annexure-I to ITB.

e. Details about Tenderer as per Annexure-II to ITB. Organization details
   - In case of a proprietorship firm, the name and address of proprietor, and certified copy of ‘Certificate of Registration of firm’.
   - In case Bidder is a partnership firm, certified copy of the partnership deed.
   - In case of company (whether private or public), certified copy of the Certificate of Incorporation together with certified Memorandum/Articles of Association.

f. Declaration by the bidder of having any relation with PCRA Director(s) as per Annexure-III to ITB

g. PQ Details along with supporting documents like copies of work order, completion certificate etc of similar works executed as per Annexure-IV to ITB.

h. Audited Balance Sheet including Profit and Loss Account for last three financial years along with annual turnover statement as per Annexure-V to ITB.

i. Valid Income-Tax Assessment orders/copy of the Income Tax return duly acknowledge by Income tax Department for the last three financial years.

j. Information about any Current Litigation/Arbitration, if any, in which bidder is involved.

k. Permanent Account No. (PAN) and Provident Fund (PF) No. of the bidder.

l. Any other information required in the Bidding Documents/NIT or considered relevant by the Bidder.

m. Duly filled Format for advice of Vendor detail as per Annexure VII of ITB.

n. If submitted Work order against PQ(Similar Nature Work) is a Running contract and bidder do not possess Completion certificate, bidder can
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

submit certificate from Engineer in Charge in Format given in Annexure-H to ITB/NIT.

8.2. PART-II - PRICED PART

Priced Part shall contain Schedule of Rate and the rates / percentage rate duly filled in on line in Excel Sheet.

No stipulation, deviation, terms & conditions, presumption, basis etc. shall be stipulated in Price part of bid. Owner shall not take cognizance of any such statement shall be summarily reject such Bids.

9. BIDDER RESPONSIBILITY FOR QUOTATION

Tenderers should study the tender documents carefully before quoting. Although all details presented in this bid documents have been complied with all reasonable care, it is the Bidder’s responsibility to ensure that the information provided is adequate and clearly understood.

Bidder shall inspect the site and surrounding area and shall satisfy himself of the existing facilities and shall collect any other information, which he may require before submitting the bid. Bidder’s quotation is the responsibility of the Bidder and no relief or consideration shall be given for errors and omissions.

10. PRE BID MEETING

As per information given in NIT, if PRE BID MEETING is scheduled to be organized, bidder has to attend the same (if he wishes to do so) at his own cost & arrangement, bidder cannot claim any relief from PCRA on this account. Pre-bid meeting will be held in the office of Tender Inviting authority unless specified in NIT otherwise.

11. BID CLARIFICATION / AMENDMENTS BY PCRA:

PCRA may issue clarifications / amendments in the form of addendum / corrigendum during the bidding period and may also issue amendments subsequent to receiving the bids. For the addendum / corrigendum issued during the bidding period, Bidder shall confirm the inclusion of addendum / corrigendum in their bid. For clarifications issued by PCRA subsequent to receiving the bids, the bidder shall confirm receipt on line and for any impact on the quoted prices, the bidder shall follow the instructions issued along with addendum / corrigendum.

Bidders shall examine the Bidding documents thoroughly and submit to PCRA any apparent conflict, discrepancy or error. PCRA shall issue appropriate clarification or amendment, if required. Any failure by bidder to comply with the aforesaid shall not excuse the bidder from performing the services in accordance with the agreement, if subsequently awarded the contract.
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

All questions and clarifications related to Bidding documents shall be addressed in writing to Tender Inviting authority specified in NIT.

PCRA reserve the right to circulate replies of such questions to one /some/ all bidders without identifying the source of inquiry.

12. CONFIDENTIALITY OF DOCUMENTS

The Bid documents are and shall remain the exclusive property of the OWNER without any right in the Bidder to use them for any purposes except for the purpose of bidding and for use by the successful Bidder with reference to the resultant contract. On no account will any person to whom the Bid documents are furnished, part with the possession thereof or copy or disclose the provision thereof or any of them or disclose or take copies of any drawings, plans or other documents comprised therein, it being understood that information given in the Bid documents is the proprietary and confidential information of the OWNER, and that the Bid documents are therefore being furnished only in the strictest confidence. The intending Bidder may, however, disclose the Bid documents and/or furnish copies in whole or part thereof to employees, Contractors and/or potential Indian Engineering subcontractors involved in the preparation of the Bid who have understood the proprietary and confidential nature of the documents and have undertaken to be bound by and maintain confidentiality. The Bid of any bidder who contravenes any of the foregoing provisions hereof is liable to be rejected.

13. PCRA’s RIGHTS

13.1. PCRA reserves the right to accept a bid other than the lowest and to accept or reject any bid in whole or part, or to reject all bids with or without assigning any reasons. Such decision by PCRA shall bear no liability whatsoever consequent upon such decisions.

13.2. Incomplete bids, conditional offer, tenders received late (i.e. after due date and time for opening) and tenders not conforming to the terms and conditions prescribed in the tender documents are liable for rejection. PCRA is not bound to accept the lowest tender and reserves the right to reject any or all tenders and or to carry out negotiations with the tenderers in the manner considered suitable to the PCRA.

13.3. The intending tenderer as a pre-requisite must produce documentary evidence(s) of all documents required as per Clause 8.1 above and upload the same along with the techno-commercial part of their offer. In case of non-submission of above documents or submission of incomplete documents as per above documents or submission of incomplete documents as per above clause along with Part-I, PCRA reserves the right not to evaluate such offers further and not to enter into correspondence in this regard after opening of offer.
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

13.4. The subject work is indivisible if not stated otherwise elsewhere in the tender document and shall be awarded in part or full to single successful bidder. The bidder’s bid shall be valid for part or whole work of tender. The bidder cannot revoke/modify/alter his bid due to modification and the EMD of such bidder revoking/ modifying/altering his bid shall be forfeited.

14. APPLICABLE LANGUAGE:

The bids and all correspondence incidental to and concerning to this bid shall be in English language only. For documents submitted in any other language, an English Translation shall also be submitted, in which case, for interpretation of the offer, the English Translation shall govern.

15. CURRENCIES OF BID AND PAYMENT

Bidders shall quote their prices in the Indian currency as specified in BOQ / price part (Part-II)

16. PRICES, TAXES, DUTIES

The Bidder should quote firm prices/ rates taking in to account of all Taxes, Duties, Levies, Personal Tax, Corporate Tax, Service Tax and all other expenditure required to be incurred by him/her for providing required services etc. during the contract period as indicated under his contract and after wards no variation on any account unless otherwise specifically mentioned will be allowed.

17. OPENING AND EVALUATION OF BIDS

17.1. OPENING OF TECHNO-COMMERCIAL BID

17.1.1. The Techno-commercial part of the Bid shall be opened on date or time specified in NIT or thereafter at a convenient time. For e-tenders bid will be opened on-line on the date & time mentioned in the NIT. No Bidder shall be required to be present in PCRA’s office for any E-Tender opening process. Bidders can view the status & tender opening statement by logging on to the website.

17.1.2. DETAILED EVALUATION

Only Techno-commercially acceptable Bids will be considered for opening of price bid & L1 bidder will be decided on landed cost basis.

17.1.3. SCOPE OF WORK

The complete scope of work and the basic scheme has been defined in the Bidding Document. The bidder who undertakes
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

to take total responsibility for the complete scope of work as defined in the Bidding document shall only be considered.

17.1.4. TIME SCHEDULE OF COMPLETION

The time schedule for completion is given in the Bidding Document. Bidder is requested to confirm to the completion period unconditionally.

Owner expects Tenderer’s compliance to requirement of Tender Document in toto without any deviation.

Bids based on the process/ basic schemes other than mentioned and/or not conforming to the technical specifications/ requirements of the bidding document will not be considered.

17.2. OPENING AND EVALUATION OF PRICE BID

The Price Bids on only those bidders shall be considered for electronic opening and evaluation, whose bid is determined to be technically and commercially acceptable to PCRA. The Evaluation Committee will assess the completeness of the Financial Proposals.

Bidder shall quote competitive prices. The bidder shall quote percentage rate as asked in BOQ in the given column/cell of SOR.

Conditional discount, if offered, the bid shall not be considered for evaluation. Prices may be loaded for the retained terms & conditions, which are quantifiable and acceptable to PCRA.

Negotiations will not be conducted with the bidders as a matter of routine. However, PCRA reserves the right to conduct negotiation with the quoted price.

Although ordinarily the lowest responsive bid amongst the bids submitted by tenders and considered qualified and competent by PCRA shall be preferred, PCRA reserves the right not to accept the lowest bid if, in its opinion, this would not be in the interest of works.

18. AWARD OF WORK

18.1. The technically & commercially acceptable lowest (L1) Tenderer shall be issued Letter /Fax of Acceptance (LOA/FOA) prior to expiry of Tender Validity. Bidder shall acknowledge of receipt by returning a signed copy of LOA/FOA.

PCRA shall not be obliged to furnish any information/ clarification/ explanation to the unsuccessful bidder as regards non-acceptance of their tenders. Except for refund of EMD (if applicable) to unsuccessful
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

Tenderers, Owner shall correspond only with the successful Tenderer(s).

19. CONTRACT/ CONTRACT DOCUMENT

19.1. The Bidder whose bid has been accepted by PCRA shall enter into formal agreement with PCRA (as per Proforma enclosed) on the date and place to be notified by PCRA.

19.2. Contract Documents for agreement shall be prepared offline in Hard Copy after award of work as intimated to the successful Bidder by a Fax / Letter of Intent. Until the final Contract Documents are prepared and executed, the Bidding document together with the annexed documents, modifications, deviations agreed upon by PCRA during pre-bid and Bidders/Consultant's acceptance thereof shall constitute a bidding contract between the successful Bidder and PCRA.

19.3. The statement of Agreed Variations during pre-bid, if any, shall be prepared based on the finally retained and agreed deviations, all relevant correspondences, minutes of meetings, addendum / amendments issued by PCRA. Above-mentioned contract document shall supersede all correspondences and Minutes of Meetings (MOMs) etc. held between PCRA and the Bidder prior to issue of Fax / Letter of Intent. Any deviations of stipulations made and accepted by PCRA after award of the job shall be treated as amendments to the contract documents made as above.

19.4. The Bidder (Name of the Company) in whose name this tender document is downloaded/submitted offer shall only be eligible for making contract agreement with PCRA.

20. DISCUSSIONS AND NEGOTIATIONS

PCRA shall be free to engage in discussions or negotiations with the bidder concerning the terms of their respective bids at all time prior to execution by both parties of the Contract.

21. MODIFICATIONS AND WITHDRAWAL OF BIDS

No bid may be withdrawn in the interval between the closing date for receipt of bids and expiration of the period of bid validity specified by the Bidder in the bid. Any Suo-moto modification or withdrawal of bid shall be liable for rejection, blacklisting & forfeiture for Earnest Money Deposit.

22. SITE LOCATION / SITE VISIT

Bidder is advised to visit & examine the site (s) of work & its surrounding & obtain for himself on his own responsibility all information that may be
necessary for preparing the bid & entering into the contract. The cost of visiting the site shall be at Bidders own expenses.

The Tenderer or his authorized representative(s) will be granted permission by the Owner to enter upon his premises and lands for the purpose of such inspection, but only upon the explicit condition that the Tenderer or his authorized representative(s) will release and indemnify the Owner ie PCRA from and against all liability in respect thereof and will be responsible for personnel injury (whether fatal or otherwise), loss of or damage to property and any other loss, damage, cost and expenses incurred as a result thereof.

23. OWNER’S RIGHT TO ACCEPT ANY BID AND REJECT ANY OR ALL BIDS

PCRA reserves the right to accept or reject any Bid and to annul the Bidding process and reject all Bids at any time, without incurring any liability to the affected Bidder(s) or any obligation to inform the affected Bidder(s) of the grounds for the PCRA’s action.

24. CONTACTING THE OWNER

No bidder, their representatives or agents shall contact the OWNER ie PCRA on any matter relating to this Bid from the time of submission of Bids, unless requested so in writing. Any effort by a Bidder to influence the OWNER in the OWNER’s decisions in respect of Bid evaluation will result in the rejection of that Bidder’s Bid.

25. CONTRACT PERIOD

The contract shall be valid till completion of work.

26. BILLING AND PAYMENTS

26.1. Bill shall be released only after signing of the contract agreement and submission of Service Tax registration. The agency shall submit the bill/s in a format prescribed by PCRA.

26.2. PCRA shall release the payments of R.A bills within reasonable period from the receipt of bill complete in all respect by Engineer-in-charge.

26.3. The bill/s in the prescribed format shall be duly authenticated by authorized representatives of the Contractor and supported with the monthly wage bill, salary disbursement sheet for the previous month duly certified by the Officer- in-Charge or his representative as per the Contract Labour (R&A) Act 1970 and or amended thereto, and a copy of challans each as proof of deposit of Provident Fund (PF) & Employees State Insurance (ESI) contributions.

26.4. PCRA shall effect payments to the vendors through E-payments only, during operation of the said contract/PO/WO. For this purpose, the
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

 vendor/ contractor/ supplier shall provide his bank details in the format enclosed as Annexure-VII to ITB.

26.5. Mobilisation advance and related clauses for the same in GCC will not be applicable

27. TENDERER / CONTRACTOR, TENDER DOCUMENT/ BIDDING DOCUMENT AND TENDER / BID

The terms BIDDER/TENDERER or CONTRACTOR/CONSULTANT, TENDER DOCUMENT or BIDDING DOCUMENT and TENDER or BID appearing in this document are synonymous
Name of Work: Providing Assistance to PCRS in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

Instruction to Bidders: ANNEXURE-I

COMPLIANCE TO BID REQUIREMENTS

We confirm that our bid complies with the total techno-commercial requirement of Tender Document without any deviation.

Bidder's Signature & Stamp
INFORMATION ABOUT TENDERER

(To be furnished with Techno Commercial Part)

1. Name and Address of the Company:

2. Name of Director(s):

3. Date of Registration/ Date start of Business of the Company:

4. Type of Company (Proprietary /Partnership / Limited Company/PSU):

6. Attach Copies of:
   a) Memorandum of Association /Article of Association/ Certificate of Incorporation/ Partnership deed.
   b) Certificate of Commencement of Business.
   c) Date of Subsidiary Agreement(if any).
   d) Copies of the Balance Sheet of Company for the Last three years.

Bidder’s Signature & Stamp
Instruction to Bidders: ANNEXURE-III

DECLARATION BY THE BIDDER REGARDING RELATION TO PCRA DIRECTOR.

a. Are you a relative of any Director of PCRA?

| Yes | No |

b. Is any Director of PCRA or his relative a partner in your firm?

| Yes | No |

c. If answer is YES for any of above (a & b) please furnish detail:
TENDER NO: PCRA/IND/PT-03/16-17

Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

Instruction to Bidders : ANNEXURE-IV

DETAILS OF SIMILAR WORK DONE (Maximum Three) DURING LAST FIVE YEARS IN SUPPORT OF PQ CRITERIA

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Full Postal Address of Client &amp; Name &amp; Contact Detail Of Officer-In-Charge</th>
<th>Description Of The Work</th>
<th>Contract Value In Rs.</th>
<th>Final Executed Value (without Service tax) In Rs.</th>
<th>Date Of Commencement Of Work</th>
<th>Scheduled Completion Time (Months)</th>
<th>Date Of Actual Completion</th>
<th>Reasons For Time Over-Run, If Any</th>
</tr>
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</table>

NOTE: Copy of Letter of Award and Completion Certificate for above mentioned maximum three relevant works shall be submitted along with the bid. Please note that without the documentary evidence, the experience criteria cannot be evaluated and offers are liable for rejection.
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

Instruction to Bidders: ANNEXURE-V

ANNUAL TURNOVER STATEMENT

The bidder shall indicate herein his annual turnover during preceding 3 years based on the Audited Balance Sheet/ Profit & Loss Account Statement.

<table>
<thead>
<tr>
<th>FINANCIAL YEAR</th>
<th>ANNUAL TURNOVER (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td></td>
</tr>
<tr>
<td>2014-15</td>
<td></td>
</tr>
<tr>
<td>2015-16</td>
<td></td>
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</tbody>
</table>

NOTE: Documentary proof in support of above data i.e. Balance sheet /Profit & Loss account statement shall be submitted.
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

Instruction to Bidders: ANNEXURE-VII

FORMAT FOR PAYMENT ADVICE (VENDOR DETAILS)

(On the Letterhead of the Bidder)

To

Additional Director Industries
Petroleum Conservation Research Association
Sanrakshan Bhawan,
10, Bhikaji Cama Place, New Delhi – 110 066

Date:

Dear Sir,

With reference to the P.O/W.O/Contract Ref No.____ dated____ awarded to us by PCRA, we hereby give our consent to accept the related payments of our claims/bills on PCRA through Cheques or Internet based online E-payments system at the sole discretion of PCRA. Our Bank account details for the said purpose are as under:

<table>
<thead>
<tr>
<th>S. No</th>
<th>Particulars</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Name and address of the Beneficiary.</td>
<td></td>
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<tr>
<td>2</td>
<td>Account Number of Beneficiary</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Account Classification (CA/CC-11 or 29) &amp; SB-10 as per cheque leaf.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Name &amp; Address of the Bank Branch (where payments are to be sent by PCRA)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Branch Name/Code</td>
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<tr>
<td>6</td>
<td>The 09 Digit MICR code of the Branch (as appearing on the MICR cheque)</td>
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</tr>
<tr>
<td>7</td>
<td>IFSC Code of the bank Branch for RTGS mode.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>IFSC Code of the bank Branch for NEFT mode.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>E-mail ID of Beneficiary.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Any other Particulars (to be advised by beneficiary for the E payments purposes)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Vendor Code (to be filled by PCRA’s Deptt Only)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>PERMANENT ACCOUNT NUMBER</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>MOBILE NUMBER (FOR SMS ALERTS)</td>
<td></td>
</tr>
</tbody>
</table>
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

Please attach a blank copy of the cancelled cheque/photocopy of the cancelled cheque issued by your bank relating to the above account Number for verifying the accuracy of bank account is enclosed.

A Copy of PAN Card duly attested by authorized signatory for verifying the accuracy of the PAN is enclosed.

1/We hereby declare that the particulars given above are correct and complete

Date:/Place Signature Of account Holder With Company Stamp (if a company)

(Encl: one cheque/photocopy of cheque duly cancelled & copy of PAN card)

*** We hereby confirm that the above bank account details of beneficiary are correct in all respects and the account of beneficiary (PCRA Vendor) is maintained at out bank branch

(Name of the Bank & Branch) Authorized signatory

*** Verification required only in case
   a) Vendors not providing a cancelled cheque leaf or if vendors name is not printed/appearing on the cancelled cheque leaf submitted to PCRA office.
   b) Change in existing bank details.
1. DETAILS OF P.F. REGISTRATION

Tenderer to furnish details of Employees Provident Fund (EPF) Registration

Registration No.:

District & State:

We hereby confirm that the above PF Account is under operation presently and shall be used for all PF related activities for the labour engaged by us in the present work (if awarded to us).

2. DETAILS SERVICE TAX REGISTRATION

Service Tax Registration

No: District & State:

3. DETAILS OF E.S.I REGISTRATION

Tenderer to furnish details of ESI Registration:

ESI REGISTRATION No.:

District & State:

We hereby confirm that the above ESI Account is under operation presently and shall be used for all ESI related activities for the labour engaged by us in the present work (if awarded to us).

4. TIN NO:

District & State:

(STAMP & SIGNATURE OF TENDERER)
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

Instruction to Bidders: ANNEXURE-IX

DECLARATION OF BLACK LISTING/ HOLIDAY LISTING

In the case of a Proprietary Concern:

I hereby declare that neither I in my personal name or in the name of my proprietary concern M/s which is submitting the accompanying Bid/ Tender nor any other concern in which I am proprietor nor in any partnership firm in which I am involved as a Partner, are presently or have during last three years, been placed on any blacklist or holiday list declared by PCRA or by any department of any Government (State, Provincial, Federal or Central) or by any Public Sector Organization in India or in any other country nor is there pending any inquiry by PCRA Or any Department of the Government or by any Public Sector Organization in India or in any other country, in respect of any corrupt or fraudulent practice(s) against me or any other of my proprietorship concern(s) or against any partnership firm(s) in which I am or was at the relevant time involved as a partner, except as indicated below:

(Here given particulars of blacklisting or holiday listing, and /or inquiry and in absence thereof state “NIL”)

In the case of a Partnership Firm:

We hereby declare that neither we, M/s submitting the accompanying Bid/ Tender nor any partner involved in the said firm either in his individual capacity or as proprietor or partner of any other firm or concern presently are or within the past three years have been or has been on any blacklist or holiday list declared by PCRA Or by any department of Government (State, Provincial, Federal or Central) or by any Public Sector Organization in India or in any other country nor is there pending any inquiry by PCRA Or any Department of any Government (State, Provincial, Federal or Central) or by any Public Sector Organization in India or in any other country, in respect of any corrupt or fraudulent practice(s) against us or any partner or any other concern or firm of which he is proprietor or partner, except as indicated below:

(Here given particulars of blacklisting or holiday listing, and /or inquiry and in absence thereof state “NIL”)

In the case of Company

We hereby declare that neither we or a parent, subsidiary or other company under direct or indirect common parent (associate company) are presently nor have within
the past three years been placed on any holiday list or blacklist declared by PCRA
Or by any Department of any Government (State, Provincial, Federal or Central) or
by any Public Sector Organization in India or in any other country; and that there is
no pending inquiry by PCRA or by any Department of any Government (State,
Provincial, Federal or Central) or by any Public Sector Organization in any country
against us or a parent or subsidiary or associate company as aforesaid in India or
in any other country, in respect of corrupt or fraudulent practice(s), except as
indicated below:

(Here given particulars of blacklisting or holiday listing and/or inquiry and in
absence thereof state “NIL”)

It is understood that if this declaration is found to be false in any particular, PCRA
Shall have the right to reject my/our bid, and if the bid has resulted in a contract, the
contract is liable to be terminated without prejudice to any other right or remedy
(including black listing or holiday listing) available to PCRA.

Place: Signature of Bidder : _____

Date: Name of Signatory :
TENDER NO.: PCRA/IND/PT-03/16-17

Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

Instruction to Bidders : ANNEXURE-X

UNDERTAKING BY THE TENDERER(S)

TENDER NO.: _________________________

NAME OF WORK: __________________________________________________________

I/We have downloaded the tender form from the internet site https://eprocure.gov.in/cppp/ and I/we have not tampered with / modified the tender forms and electronic data contained therein in any manner. In case, if the same is found to be tampered with / modified, I / we understand that my / our tender will be summarily rejected and full Earnest Money Deposit will be forfeited and I/we am/are liable to be banned from doing business with PCRA and/or prosecuted.

SIGNED FOR AND ON BEHALF OF

__________________________________________

(Name of Tenderer)

Seal & Signature of Tenderer

Date: ________________
TENDER NO.: PCRA/IND/PT-03/16-17

Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

UNDEARTAKING BY THE TENDERER(S)
with respect to compliance of General Conditions of Contract.

TENDER NO.: ______________________

NAME OF WORK: __________________________________________________________

We certify that we have gone through the "General Conditions of Contract (GCC) along with Corrigendum-1 & 2 and Amendment to GCC & Child Labour" and accept all terms and conditions spelt out there without any deviation/qualifications.

Bidder’s Signature & Stamp
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

FORMAT FOR INDEPENDENT ESI (Annexure E)

Strike out Not Applicable Clause / section and furnish relevant document.

(a) If Available : If independent ESI code is available, please indicate code and annex the copy of the same.

(b) If independent ESI code is presently not available: Party will be governed by the following:

“In case job is awarded, party will acquire independent ESI code within 15 days of the date of issue of Work order. The gate pass for labour shall be issued only after furnishing the independent ESI code to Engineer-in-Charge (EIC). In case party fails to acquire the independent ESI code, EIC reserves the right to cancel the work order, forfeit the EMD and initiate suitable penal action as deemed fit by PCRA.

(c) In case of exemption claim:

In case bidder claims exemption from obtaining independent ESI code, bidder must submit documentary evidence towards the same along with the bid. PCRA will examine the submitted documents during tendering and convey the decision to the party. If the exemption claim is accepted by PCRA, the party will have to furnish an indemnity bond indemnifying PCRA against any eventuality regarding ESI becoming applicable to the party during the tenure of the contract. In case the exemption claim of party is not acceptable to PCRA the same will be conveyed to the party and party will be governed by above clause (b). In response to PCRA communication conveying non-acceptance of party’s exemption claim, party will submit acceptance to above clause (b).

In case party does not agree to any of the above clauses (a), (b) or (c) the offer of party shall be liable for rejection.

Signature & Stamp of Bidder
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

(Annexure- H to ITB/) Format for Certification of Contractual Completion for running Contract Under Extension

<table>
<thead>
<tr>
<th>S. NO.</th>
<th>DESCRIPTION</th>
<th>DETAILS TO BE FILLED</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Name of Work</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Work Order Number</td>
<td></td>
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<tr>
<td>3</td>
<td>Work Order Value</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Date of Commencement</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Contractual Completion Date</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Executed Value Upto Contractual Completion</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>WO extended upto date</td>
<td></td>
</tr>
</tbody>
</table>

The above details have to be duly certified by EIC/ WO Issuing Company with signature and seal/stamp.
DEFINITIONS:
The following words and expressions shall have the meaning hereby assigned to them except where the context otherwise requires:

a) “Petroleum Conservation Research Association/PCRA” shall mean the Office

Petroleum Conservation Research Association
Sanrakshan Bhawan,
10, Bhikaji Cama Place, New Delhi – 110 066

b) “OWNER” shall mean PCRA at all places in this document.

c) "APPROVAL" shall mean the written consent, either manuscript, typewritten or printed statement, under signature or seal, as the case may be, of PCRA or their authorized representative on documents, drawings or other particulars in relation to this Agreement.

d) "CONTRACT" shall mean all documents of the tender, clarifications, negotiations conducted including all exhibits hereto and all documents herein specified and amendments which the parties may hereinafter agree in writing to be made.

e) “ENGINEERING IN CHARGE” shall mean the officer of PCRA (by designation) who shall sign the contract.

f) "Work" shall mean work for " Providing Assistance in carrying out Energy Audit of Designated Consumers ".

g) “Contractor” shall mean the individual, firm or company, whether incorporated or not, appointed by PCRA for the work and shall include the legal/ personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.

h) “PROJECT IN CHARGE” shall mean the designated person appointed by the Consultant as overall In Charge for the entire Work from commencement to completion including being a single point of contact on all matters concerning this contract.

i) "WORK/ SERVICES" shall mean the responsibilities to be discharged by the Consultant for fulfilling the obligations under this contract.

j) “COMMENCEMENT DATE OF CONTRACT” shall mean the 7th day from date of issue of Letter of Acceptance or the date of commencement order whichever is earlier as issued by PCRA.

k) "COMPLETION PERIOD" shall mean the period from the ‘Commencement Date of Contract’ to the date of “ Completion”
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

l) "MONTH" shall mean English calendar month comprising of 30 days.

m) "WRITING" includes matter either in whole or in part, in manuscript, typewritten, lithographed, cyclostyled, photographed or printed under or over signature or seal as the case may be.
SPECIAL TERMS AND CONDITIONS:

The tender will be governed by the following terms and conditions:

These special terms and conditions shall be read in conjunction with the technical specifications, drawings, instructions to bidders and any other document forming a part of the tender, wherever the tender so requires.

1. **SELECTION PROCEDURE:**

   The tenderers are advised to submit their offer strictly as per the terms and conditions and scope contained in the tender document and not put forth conditions/counter conditions. Conditional tenders received subsequent to the pre bid meeting shall be liable for rejection.

   a) The tenderers must note that the rates to be quoted in percentage over the estimated amount indicated in price bid documents must be limited to a maximum of 2 decimal places. In case, the tenderer submits the rates for more than 2 decimal places then, the amount quoted towards the tender shall be computed to the first 2 decimal places without rounding off.

   b) In case identical rates are received (percentage rates quoted on the amount indicated by the PCRA in the price bid document working out to identical amount towards the tender) then, the tender having higher average annual turnover in the last three financial years shall be given precedence.

   c) The PCRA reserves the right to accept any tender in whole or in part and reject any or all tenders. The PCRA reserves the right to accept more tenders in part. The PCRA also reserves the right to accord purchase/price preferences to the public enterprises as per the prevailing policy. Decision of the PCRA in this regard will be final.

   d) Tenderers may note that negotiations will not be conducted with the bidders as a matter of routine. However, PCRA reserves the right to conduct such negotiations.

   e) Document verification with originals shall be carried out only for the successful bidders (s) after opening of price bids. The technical qualification of the bidders shall be based on the document submitted by bidders in the tender. Recommendations for award of contract shall be made only after verification of documents with originals of the successful bidder (s).

   f) As the documents are being submitted by the bidders in tenders, the responsibility of authenticity of documents shall be with bidders.

   g) Only documents against Pre Qualification criteria shall be verified with originals.
h) In case it is observed that the L1 party has submitted forged documents, besides cancellation of tender, necessary action for holidays listing of the party in line with guidelines shall be carried out including forfeiture of EMD.

i) However statutory documents may be verified from online portal.

j) The bidders shall be required to present their original documents to tender inviting authority within a period of 7 days from date of opening of Price bids or date of intimation as specified in the tender.

k) Please note that in event of failure of the bidder to get the documents verified as per the specified schedule, the EMD of the party shall be forfeited.

l) It must be noted that notarized copy in lieu of producing original documents will not be acceptable to the PCRA.

m) Tenderers will have to attend to the office of the PCRA for Verification of documents/negotiations/ clarifications required in respect of their quotations without any commitment on the part of the PCRA.

n) Incomplete tenders, conditional offer, tenders received late (i.e. after due date and time for opening) and tenders not conforming to the terms and conditions prescribed in the tender documents or not accompanied by the requisite EMD will be rejected. Requests for adjustment of pending bills or any other amount towards earnest money deposit will not be accepted. The PCRA is not bound to accept the lowest tender and reserves the right to reject any or all tenders and or to carry out negotiations with the tenderers in the manner considered suitable to the PCRA.

2. **VALIDITY OF TENDER:** The tender will be valid for a period of 04 (FOUR) months (120 days) from the date of opening the tender. PCRA reserves the right to place work order at anytime within 4 months from date of opening of tender. Once work order is placed the rates shall remain firm till completion of entire work in all respects.

3. **ACCEPTANCE OF WORK ORDER:**

a) After communication of the PCRA’s acceptance of the contractor’s tender, if the contractor fails to return the duplicate copy of the work order and agreement duly signed in token of their acceptance within 7 days, the EMD may be forfeited by the PCRA, without any further reference to the contractor.

b) On acceptance of the quotation, the successful contractor will have to execute an agreement with the PCRA covering all aspects of the contract in standard form, immediately before commencement of the works. The intending tenderers should acquaint themselves with the provisions of standard agreement prior to quoting.

c) When the party signing the agreement is not the sole proprietor, the necessary power of attorney authorizing the person who is acting on behalf of the firm should be produced before execution of the agreement.
d) If the Contractor does not start the work by the above stated period and if the PCRA is not satisfied with the reason for not starting the work in time or if Contractor refuses to carry out the work due to any other reason, the PCRA can cancel that work order by giving a Registered Notice after the expiry of the specified period as per the order and the same work shall be carried out by any other Contractor at the entire risk and cost of original Contractor.

e) In the event of such cancellation, the ISD/SD for the subject work, Earnest Money Deposit and/or Permanent Earnest money Deposit will be forfeited and the empanelment of the contractor in all categories shall be cancelled forthwith, without any further intimation to the contractor. In addition the PCRA also reserves the right to holiday list the contractor in the event of such default.

f) The PCRA reserves the right to accept any tender in whole or in part and reject any or all tenders. The PCRA reserves the right to accept more tenders in part. The PCRA also reserves the right to accord purchase/ price preferences to the public enterprises as per the prevailing policy. Decision of the PCRA in this regard will be final. Any additional work that may become necessary during course of execution of works as authorized by our site in charge shall be immediately got approved prior to taking up the work duly forwarding the details, nature of works etc as per relevant clause of the GCC.

g) **PCRA’s right:** The PCRA reserves the right to increase/ decrease the tendered quantity of any or every item and delete any item at any stage of work at the accepted rates. Contractor’s claim for compensation or damages on account of these shall not be entertained.

h) **Revisions:** The PCRA reserves the right to revise the Scope of work/ services at any stage of work. Such deviations shall be adjusted at the rates already contained in the work order or at the mutually agreed terms, if the rates are not available in the work order.

4. **SECURITY DEPOSIT:**

The successful tenderer shall pay security deposit up on placement of work order equivalent to 10% of the work order value in line with clause no 2.1.1.0, Section- 2 of the GCC. Alternatively the successful bidder can pay 2.5% of the work order value as Initial Security Deposit(ISD) and balance 7.5% of the security deposit will be recovered at the rate of 10% from the running account bills.

The security deposit collected as per the terms shall be released after a period of 12 months from the date of completion of works/services as part of the Work. The SD shall not carry any interest.
5. **FIRM PRICE:**

   a) Once the offer is accepted and agreement executed, the rates shall be valid till the completion of works in all respects and no escalation whatsoever will be entertained on any grounds. Similarly no variation or reimbursement shall be entertained due to revisions in statutory tax or levies imposed by the Governments of State or Centre except Service Tax.

6. **SPECIAL CLAUSE:**

   **Cost to be borne by the Contractor:** The Contractor shall bear the cost for the following and these are deemed to have been included in the lump sum charges payable by the PCRA to the contractor.

   The contractor shall make their own back office accommodation /arrangements for rendering the services required for the Project including travelling cost etc. The Contractor shall employ their own services / Manpower/Resources and PCRA shall not responsible for absorbing any of them in its Service after Completion of the Project.

7. **SECRECY AGREEMENT:**

   Contractor as a part of his obligation sign an agreement for secrecy of the drawings / documents with PCRA. We, hereby, expressly undertake to keep all the drawings/documents as well as other Technical information given in the CONTRACT-DOCUMENT secret and shall not divulge or leak or otherwise cause to be known to the competitors or others having any interest in such process in anyway the contents in any form, shape or method.

8. **PENALTY CLAUSE IN CASE OF BREACH OF SAFETY:**

   The penalty for breach of safety during execution of works shall be levied by the PCRA as below:

   I. Violation of applicable safety, health and environment related norm, a penalty of Rs.5000/- per occasion.

   II. Violation as above resulting in;

   a) Any physical injury, a penalty of 0.5% of the contract value (max. of Rs 2 lacs) per injury in addition to Rs. 5000/- as mentioned above.

   b) Fatal accident, a penalty of 1% of the contract value (max. of Rs. 10 lacs) per fatality in addition to Rs 5000/- as mentioned above.
9. **INCOME TAX, SALES TAX, WORKS CONTRACT TAX & SERVICE TAX:**

The contractor shall take note that rates quoted shall be inclusive of all taxes, statutory levies, Royalty, Income tax, sales tax, works contract taxes, transportation etc. & except Service Tax. PCRA shall not entertain any request for payment of any taxes/levies separately.

10. Wherever taxes are charged on PCRA, the contractor shall provide Tax Invoice to PCRA to enable it to avail tax benefits and all RA / Final Bills shall be accompanied by a valid Tax invoice with but not restricted to the following details:

   a) Invoice/bill/challan should be signed by the person authorized to sign such invoice/bill/challan.

   b) Invoice/Bill/Challan should be serially numbered

   c) Invoice to contain name address and the registration number of service provider

   d) Invoice to contain name and address of service receiver

   e) Invoice to contain description, classification and value of taxable service provided

   f) Service tax to be mentioned separately.

   g) The party shall also be required to mention the service tax required to be paid directly by PCRA if any under reverse charge mechanism.

11. **SERVICE TAX:**

   a) Tenderers are advised to note the newly introduced changes in Service Tax by the Government

   b) Successful tenderer shall possess valid Service Tax registration number and document proof towards the same to be submitted to the PCRA.

   c) Service Tax shall be applied on the finalized amount (work order value) @ prevailing rate as per the Government’s Rule from time to time.

   d) Successful tenderer need to submit INVOICE as per the format, for every bill, as required by the PCRA segregating the portion of service tax to be deducted from their bill & remitted by the PCRA as per Government’s Rule.

12. In case of contradiction between Indian Standards, General Conditions of Contract, Special Conditions of Contract, Specifications, Drawings, Schedule of Rates, the following shall prevail in order of precedence;
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

a) Formal contract
b) Acceptance of tender
c) Price schedule annexed to the letter of acceptance
d) Agreed variations annexed to the letter of acceptance
e) Addenda to tender documents (if any)
f) Special terms and conditions of contract
g) Scope of works/services
h) General conditions of contract
i) Instructions to bidders

13. A variation or amendment issued after the execution of the formal contract shall take precedence over the formal contract and all other Contract Documents.

a) ARBITRATION CLAUSE: The reference to arbitration and alternative dispute resolution machinery provision contained elsewhere in the tender document which may be general or special in nature shall stand deleted to the extent that the said contents are applicable to the arbitration provisions. At all places OWNER shall mean PCRA, located at Sanrakshan Bhawan, 10 Bhikaji Cama Place, New Delhi 110066. The court of jurisdiction for all matters/any disputes under the tender shall be at NEW DELHI.

b) TYPOGRAPHICAL OR CLERICAL ERRORS:

The PCRA’s clarifications regarding partially omitted particulars or typographic or clerical errors shall be final and binding on the Contractor.

14. MEASUREMENTS FOR WORKS/RECORD MEASUREMENTS/ BILLS:

a) All the payment for quantities certified in the running account/final bill shall be as per the details recorded in the standard measurement book of the PCRA and jointly signed by the Contractor/site engineer of PCRA.

b) Method of measurement shall be strictly in accordance with the technical specification for this work.

c) The payment shall be as per the details entered in the standard Measurement Certificate bills of the PCRA.
15. **PAYMENT SCHEDULE**

The stage wise payments to this work are indicated broadly on the services to be completed. The Payments shall be made as “on account” and shall be adjusted against the final bill. The % payment defined below shall be on the finalized rate.

a. 15% on submission of field measurements and acceptance of the same by Engineer Incharge

b. 40% on submission of draft report based on discussions and guidance of PCRA and acceptance of the same by Engineer Incharge

c. 35% on acceptance of the report by the client/Refinery and release of the payment for the same to PCRA

d. 10% on submission of the final mea report by our Accredited Energy Auditor.

16. **OTHER IMPORTANT EXECUTION RELATED DETAILS**

a. The job shall be executed under the supervision of Chief Regional Coordinator (Western Region) PCRA, as the Engineer-in-Charge in terms of the Contract.

b. The job shall be carried out under the directions, guidance specifications and advice of PCRA’s Site Engineer as per the job requirements specified in Scope of Work and Special Terms & Conditions.

c. All correspondence subsequent to placement of order must be addressed to

   **Chief Regional Coordinator (Western Region)**
   **Petroleum Conservation Research Association,**
   **C-5, Kesva Building,**
   **Gr Floor, Bandra Kurla Complex,**
   **Bandra East,**
   **Mumbai-400 051**

   Direct correspondence with our client is not permitted.

d. Successful bidder shall deploy a team of qualified technical personnel having experience to carrying out the energy audit under the scope of work. The team will consists of four groups of three members each. Each of the four group shall be led by a BEE certified Energy Auditor/Energy Manager. The details of the team constitution along with the names and details of the registration of the Energy Auditors/Energy Managers will be communicated by the successful bidder along with the acceptance of LOI. The abovementioned strength of the team is nominal and the numbers may have to be increased based on the requirement to meet the schedule for completion within stipulated time.
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

**e.** The designated team leader ie whose certificate has been uploaded along with the bid shall be present to lead the audit team for the Contractor until completion of the work.

**f.** The successful bidder has to submit identity /address proof details for necessary verification by CISF Security personnel to issue gate pass for entry into licensed premises. These should be readily submitted along with acceptance of LOI. Delay if any on part of contractor in submission of relevant documents will be considered as delay in execution of work.

**g.** Immediately after the kick off meeting the plan for execution of the field data collection work within 30 days has to be submitted by successful bidder. This is the most crucial aspect of the work and therefore has to be adhered to. The successful bidder may have to plan for working extended hours/round the clock to achieve the target of completing Field data collection within 30 days.

**h.** Since the Refinery works round the clock, the teams have to be prepared to work round the clock as and when the fronts are released for measurements or shutdowns/permits are released. It shall be the role of the successful bidder to arrange/obtain work permits from the Safety Department/concerned Department of the Refinery.

**i.** Fronts for which work permits are required by the Refinery has to be informed to Refinery personnel two days in advance to facilitate the release of front.

**j.** The successful bidder shall have to plan & mobilise the resources at site to complete the entire audit work within scheduled time without interrupting the running equipment/operations at site. Schedule for collection of the entire Field data within one month will be prepared by the successful Bidder within three days of the kick off meeting with the Refineries. The schedule shall be broken down unit wise day wise and week wise to enable accurate monitoring and follow up with Refinery. Additional resources may be deployed by the contractor without extra cost to account for the slippage if any.

**k.** The audit shall be conducted as per guidelines of BEE (BEE notification No. 02/11(6)/05 dated 26th December, 2009 and amendments thereto, if any) meeting the objectives defined in the act. The Process units and other utility facilities to be covered in the energy audit are given below to enable directional assessment regarding quantum of the audit work at hand. The details provided may vary, however the contractor is obliged to undertake the audit and survey of all equipment defined in the scope of work at clause 17.
**Name of Work:** Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

<table>
<thead>
<tr>
<th>Sr NO.</th>
<th>Units</th>
<th>Capacity IN MMTPA</th>
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<tbody>
<tr>
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</tr>
<tr>
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<td>13</td>
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<tr>
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<tr>
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<tr>
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<tr>
<td>18</td>
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<tr>
<td>19</td>
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<tr>
<td>20</td>
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<tr>
<td>21</td>
<td>HCU</td>
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<td>22</td>
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<tr>
<td>23</td>
<td>SRU-1</td>
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</tr>
<tr>
<td>24</td>
<td>SRU-2</td>
<td>2 x 35 TPD</td>
</tr>
<tr>
<td>25</td>
<td>ISOM</td>
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<td>26</td>
<td>Delayed Coker Unit</td>
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<tr>
<td>27</td>
<td>Diesel Hydrotreater</td>
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<tr>
<td>28</td>
<td>HGU-3</td>
<td>0.0725</td>
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</tbody>
</table>
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

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<table>
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<tr>
<td>29</td>
<td>VGO Hydrotreater</td>
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<tr>
<td>30</td>
<td>SRU-3</td>
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<tr>
<td>31</td>
<td>FCC LPG MEROX</td>
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<tr>
<td>32</td>
<td>ATF MEROX</td>
</tr>
<tr>
<td>33</td>
<td>COKER LPG MEROX</td>
</tr>
</tbody>
</table>

a. The successful bidder shall have to bring all necessary instruments, manpower, tools & tackles required to carry out the audit work within Refinery premises. The following is the minimum requirement of the instruments which have to be placed at the designated Refinery site besides the elementary tools as pen/pencils note books, graph paper, measuring tape, calculators, scale etc.

i. Digital Power recorder - 4 nos
ii. Portable three phase Digital Power Analyser - 4 Nos
iii. Ultrasonic Flow Meters – 4 Nos
iv. Digital Tachometer - 4 Nos
v. Non contact / Infrared Temperature sensor – 4 Nos.
vi. Lux Meter – 4 Nos.
vii. Anemometer – 4 nos
viii. Pitot tube with Digital Differential pressure meter for Air / Gas velocity measurement in ducts. – 2 Nos
ix. Pressure gauge as and when required
x. Dry-Wet Buls Psychrometer – 4 Nos.
xi. Ultrasonic air/gas leak detector – 2 Nos.
xb. Flue Gas Analyser – 4 nos
xiii. Thermal Imager/Scanner – 1 Nos
xiv. Any other instrument/equipment required to measure the energy consumption
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

Details of aforesaid equipment along with the certified copy of valid calibration certificates shall be submitted by the successful bidder along with the acceptance of LOI to enable us in placement of work order.

b. The responsibility for all safety measures during the audit lies with the contractor. Contractor shall ensure that safety rules are observed to avoid accident, which may cause loss of life or damage to their staff / PCRA’s client’s staff and property. Entire responsibility will be on the contractor for safety.

c. The contractor shall insure at his own cost all his staff and workers against accidents and any damages, loss or injury due to fire, accidents, thefts and all other risks including flood, storms, earthquakes, riots, malicious damages etc. PCRA or its client shall not be liable for any damages or compensation payable by law in respect of or in consequence of any accident or injury to any contractor/ workman or other person in the employment of the contractor. No claim for any type of loss shall be entertained by PCRA or its client.

d. Contractor has to maintain complete and absolute confidentiality of all data and information gathered during the study.

e. It is mandatory for the successful bidder to make a presentation of the Energy Audit findings in PCRA’s office / client place, as and when required. Further, every Saturday afternoon presentation on the progress will be reviewed vis a vis the planned progress.

f. Successful Bidder will furnish the audit timeline / bar chart/ PERT schedule of all the activities to be carried out for completing energy audit assignment within one week after placement of work order.
17. **Scope of Work**: The scope of the audit is to exhaustively cover the utilities detailed in the following table available in different units of Refinery and captive Power plant(CPP). Broad details of the units are given in clause 16(h)

<table>
<thead>
<tr>
<th>Sn.</th>
<th>Description</th>
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</table>
| 1   | **Boiler(CPP)**  
- Evaluation of boiler efficiency by loss method including stack losses etc. & losses due to leakages at load.  
- Boiler outlet temperature/pressure, and excess air level  
- Sectional (SH/RH, economizer) heat transfer efficiency  
- Performance evaluation and Power consumption of ID fan, FD fan and PA fan.  
- Fan loading and combined efficiency of fan and motor  
- Boiler feed Pump (power consumption and performance evaluation).  
- Assessment of air ingress at different levels of boiler. |
| 2   | **Condensate-pre heater(CPH)/ Air Pre heater(APH)**  
- Performance testing to determine gas side efficiency, leakages (%), X-Ratio, flue gas temperature etc. |
| 3(a) | **Captive Power Plant**  
**Heat Rate**  
- Calculation of Turbine Heat Rate (Efficiency)/Combined cycle efficiency and Heat Rate of the plant  
- Turbine pressure survey  
- Performance of turbine glands  
- TG cycle losses / deviation computation  
- High pressure drain valve survey |
| (b) | **HP/ LP Heaters**  
- HP and LP heaters performance evaluation (including TTD & DCA calculation).  
- Heat duty, Overall heat transfer coefficient  
- Degree of Sub-cooling etc. |
| (C) | **GTS/ STs/HRSG/Waste heat Recovery Boilers:**  
- including Plant Performance of GT, ST HRSG and Waste Heat Recovery Boilers  
- Study to evaluate their average cost of power generation, specific energy generation and subsequently identify areas of energy saving. Review of performance including major auxiliaries and suggestion for optimization.  
- To identify individual and combined cycle efficiency. |
| (d) | **Calculation of HP / IP / LP Cylinder efficiency**  
- Calculation of Turbine cylinder efficiency and cycle efficiency. |
| (e) | **Condenser**  
- Performance & study of deviation of indicated condenser vacuum from the expected values and deterioration in the performance of condenser due to dirty tubes, scale formation, air ingress, CW inlet temperature & CW flow.  
- Condensate pumps power consumption and performance evaluation. |
| (f) | **Thermal Insulation including radiation losses inside CPP Battery Area**  
- Heat loss calculation  
- Insulation of Boiler, Air and Flue gas path and Steam piping.  
- Surface temperature measurement at the damaged and Hot spot area by infrared thermal camera.  
- Estimation of Heat loss in the hot spots and damaged insulation area |
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

(g) APC and Performance
- Evaluation of unit auxiliary power consumption & performance including Specific Energy Consumption (SEC) of critical drives where output parameters is available on line, cooling water pumps and Cooling Towers using power analysers.

4 Cooling Water System
- Including operational performance of the cooling towers through measurements of temperature differential, water flow rate etc.
- Assessment of cooling tower capacity and efficiency/ effectiveness.
- Evaluate circulating water pump flow rate, head developed, and pressure of pumping system and power consumption.
- Assessment of condenser heat load, deviation indicated in respect of the CW pump performance.
- Water circulation, condenser efficiency, and turbine heat rate
- Assessment of Vacuum system and fan performance.

5 Raw Water System and DM /RO Plant
- Capacity utilization and power consumption of all major drives.
- Performance evaluation of pumps& motor system.

6 Total electrical System Audit:
- Assessment of the loading pattern of installed transformers(>1000 KVA) in all substations to identify measures for reduction of losses.
- Electrical parameters like current, voltage, power factor and power by using power measurement analysers for all transformers (>1000 KVA).
- Assessment of health of capacitors and adequacy of the existing VAR compensation system
- HT/LT motor rated capacity more than 75 KW need to be checked for measuring electrical parameters and performance.
- System Distribution losses.
- Harmonic analysis at all incomers.
- Identification of Energy Conservation opportunities.

7 HVAC system(including all units and Admin Block):
- Performance evaluation of the chilling plant including performance study of chiller/condenser pump by measuring head /pressure and flow, measurement of TR capacity of chiller and AHU. Suggest improvement viz. capacity control for matching demand optimization of running chiller system
- Review of present HVAC system
- Performance assessment of chillers, cooling towers AHU and cold insulation of Centralised AC system.
- Analysis of HVAC performance like estimation of TR generation, EER (Energy efficiency Ration i.e. KW/TR), SEC of chilled water pumps, condenser water pumps with design data.
- Exploring Energy conservation opportunity for present system.
- Performance evaluation of existing VAM (Vapour Absorption Mechanism) system

8 Blowers/Fans:
- Performance evaluation of major blowers and Fans (ID/FD) by measurement of discharge /suction static pressure, Flow(CFM) and power consumption. Determining efficiencies based on measured parameters and study of piping/ducting/valves /damper losses.
- Review of fans and blowers operating systems.
- Study of whole system for flow control method, pressure drops etc.
- Exploring the energy conservation option (ENCON) in fan system

9 Pump and Motors system (> than 75 KW):
Including study of motors in terms of measurement of voltage (V), Current (I), Power (KW) and power factor and thereby suggesting measures for energy saving like reduction in size of motors or installation of energy saving device in the existing motors. Study of Pumps and their flow,
thereby suggesting measures for energy saving like reduction in size of Motors and Pumps or installation of energy saving device in the existing motors / optimization of pumps

<table>
<thead>
<tr>
<th>10</th>
<th><strong>Air /Nitrogen Compressor System:</strong></th>
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<tbody>
<tr>
<td></td>
<td>Compressed air system study which include determination of individual compressor capacity testing, leakage testing, system pressure optimization end use application study and also determination/detection of leakage in network using ultrasonic air/gas leak detector and suggest improvements.</td>
</tr>
<tr>
<td></td>
<td>• Review of present compressors and distribution system</td>
</tr>
<tr>
<td></td>
<td>• Performance assessment of all air compressors i.e. power consumption Vs Flow Delivered, estimation of compressor efficiency.</td>
</tr>
<tr>
<td></td>
<td>• Exploring Energy conservation opportunity in Air System</td>
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<thead>
<tr>
<th>11</th>
<th><strong>Lighting Systems:</strong></th>
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<tbody>
<tr>
<td></td>
<td>• To check the illumination survey of all lighting areas of the plant by measuring lux level, lighting power and suggest improvements in lighting type / fixtures. Study of type of lamps used, type of chokes used, day and night time lighting etc.</td>
</tr>
<tr>
<td></td>
<td>• Review of present lighting system, lighting inventories etc.</td>
</tr>
<tr>
<td></td>
<td>• Determining System Distribution losses, by measurement of Electrical parameters like current, voltage, power factor, harmonics and power using power measurement analysers</td>
</tr>
<tr>
<td></td>
<td>• Estimation of lighting load at various locations feeder wise/Transformer wise like different floors, outside (campus) light, Street lighting and other important locations.</td>
</tr>
<tr>
<td></td>
<td>• Details lux level Survey at various locations and comparison with applicable standards.</td>
</tr>
<tr>
<td></td>
<td>• Study of present lighting control systems and recommend for improvement.</td>
</tr>
<tr>
<td></td>
<td>• Analysis of lighting performance indices like lux/watt/M² and comparison with norms.</td>
</tr>
<tr>
<td></td>
<td>• Exploring energy conservation option (ENCON) in lighting system</td>
</tr>
</tbody>
</table>

18. **ENERGY AUDIT REPORT (DRAFT & FINAL):**

   a. The comprehensive audit report should contain all energy saving measures, which are identified and quantified. The following outlines a final report of an energy audit.

   i. A table of contents.

   ii. Executive Summary.

   iii. Field measurement details of all energy consumption

   iv. Schematic diagram with mass & energy balance all measured system, including Sankey diagrams.

   v. Identifying relationship of production processes & operational methods being followed and details of changes required for energy saving.

   vi. Identifying the major factors, which are contributing to high-energy consumption for all systems.

   vii. Recommendations to reduce energy consumption relating to system changes (process improvement, maintenance practices, replacement or modification etc.).

   viii. Detailed estimates of encon recommendations, with supporting documents from vendors and equipment specifications.
Name of Work: Providing Assistance to PCRA in carrying out Energy Audit of Designated Consumer IOCL, Gujarat Refinery

ix. Comprehensive benefit / cost analysis and Payback period calculation keeping in view the energy cost of the Refinery

x. Total impacts on the system on implementation of all the recommendations with various level of production.

xi. Related impact, on the system reliability, availability and stability.

19. Final preparation of Technical and Economical viable energy conservation report which Include:

a. Technical viability

b. Economical feasibility along with back up calculations

c. Calculation of investment & payback period

d. Suggestion of name of supplier/ contractor for further implementation

e. Working/explanatory notes on any other observations/requirements of the Client Refinery /PCRA regarding the draft report

20. The Audit of CPP will be done under the supervision and guidance of CPP Expert nominated/designated by PCRA. Role of the contractor will be to act on advice of the expert to obtain the field data and prepare the report in the manner advised by the CPP Expert. One team for collection/analysis of Field data shall be exclusively dedicated to the CPP. The portion of the report related to the CPP will be vetted and approved in principle by the CPP Expert.

21. The audit report shall include references taken for technical inputs as papers, journals, handbooks, publications etc. The software’s & charts used for analysis to be given along with the report. Soft copies of calculations/data analysis/backup calculations is to be provided along with the report.

22. The Draft Report of each unit (Hard Copy-Spiral Binding and editable soft copy) should be submitted maximum within 10 weeks from date of issue of work order. The Final Report of each unit (6 sets of Hard Copy-Spiral Book Binding and editable Soft copy) should be submitted within two weeks after submission of comments on draft report by the Client Refinery and PCRA.

23. The Executive Summary of the Energy Audit Report will contain following:

a. Savings Identified: 1. Electricity in kWh/year 2. Oil in KL/Year (Coal /F.O./Diesel etc. to be converted to oil equivalent with conversion factor to be given).

b. Estimated Yearly Consumption (EYC): 1. Electricity in kWh/year 2. Oil in KL/Year (Coal /F.O./Diesel etc. to be converted to oil equivalent with conversion factor to be given).

Below listed performance test code procedures are to be followed to carry out the test. These are not exhaustive, however wherever standards are not given applicable Indian standard/reputed International standard are to be followed in consultation with EIC. Best Engineering practices will always be followed to ensure accuracy of data collected and safety of personnel.

<table>
<thead>
<tr>
<th>S No.</th>
<th>Description</th>
<th>Codes/Standards</th>
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<tbody>
<tr>
<td></td>
<td>Name of Work</td>
<td>ASME PTC</td>
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</tr>
<tr>
<td>2.</td>
<td>Performance Test Code on Steam Turbine</td>
<td>ASME PTC: 6</td>
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<tr>
<td>5.</td>
<td>Temperature Measurement</td>
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<td>Closed Feed water Heaters</td>
<td>ASME PTC: 12.1</td>
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<td>13.</td>
<td>Steam Traps</td>
<td>ASME PTC: 39</td>
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<td>15.</td>
<td>Air Heaters</td>
<td>ASME PTC: 4.3</td>
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<td>17.</td>
<td>Particulate Matter Collection Equipment</td>
<td>ASME PTC: 21</td>
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<tr>
<td>19.</td>
<td>Cooling Technology Institute Acceptance Test Code for testing mechanical draught &amp; natural draught cooling towers</td>
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<td>22.</td>
<td>General Instructions</td>
<td>ASME PTC: 1</td>
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