E-TENDER DOCUMENT

for

(Retender-2\textsuperscript{nd} call)

NON COMPREHENSIVE ANNUAL MAINTENANCE AND OPERATION CONTRACT OF ELECTRICAL, FIREFIGHTING & FIRE ALARM SYSTEM, BMS, STP, WTP AND SOLAR SYSTEM FOR SCIENCE RESEARCH PARK, RAJARHAT of IIT KHARAGPUR.

Notice Invitation Tender Serial No. IIT/IW/EM/NIT/19/2021-22 dated-01.10.2021

Tender Serial No. _______________________ Issued to:

_____________________________________

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1. NOTICE INVITING TENDER

1.1. INTRODUCTION

Indian Institute of Technology (IIT) Kharagpur, hereinafter called IITKGP, invites sealed tenders from the eligible contractors for “NON COMPREHENSIVE ANNUAL MAINTENANCE AND OPERATION CONTRACT OF ELECTRICAL, FIREFIGHTING & FIRE ALARM SYSTEM, BMS, STP, WTP AND SOLAR SYSTEM FOR SCIENCE RESEARCH PARK, RAJARHAT of IIT KHARAGPUR.” Particulars of the project are as following.

1.2. PARTICULARS

<table>
<thead>
<tr>
<th>1. NIT Number</th>
<th>NON COMPREHENSIVE ANNUAL MAINTENANCE AND OPERATION CONTRACT OF ELECTRICAL, FIREFIGHTING &amp; FIRE ALARM SYSTEM, BMS, STP, WTP AND SOLAR SYSTEM FOR SCIENCE RESEARCH PARK, RAJARHAT of IIT KHARAGPUR.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Name of Work</td>
<td>IIT Kharagpur. Kharagpur-721302</td>
</tr>
<tr>
<td>3. Location of Work</td>
<td>₹ 74,64,968/- (Rupees Seventy four lakh Sixty four thousand Nine hundred Sixty eight only)</td>
</tr>
<tr>
<td>4. Estimated Cost (including GST)</td>
<td>05 Years from date of start. (Contracts will extended yearly on the basis of performance)</td>
</tr>
<tr>
<td>5. Time Limit for Execution</td>
<td>Two stage (Technical Bid &amp; Financial Bid)</td>
</tr>
<tr>
<td>6. Tender Basis and Mode</td>
<td>NSIC/MSEs Registration Certificate OR Bid Security Declaration Form (Annexure-III).</td>
</tr>
<tr>
<td>7. Earnest Money Deposit</td>
<td>21st October 2021 at 11.30 am, in the meeting room of ESTATE (E&amp;M), Head Office, 1st Floor, Old Building, IIT Kharagpur, Kharagpur WB 721302 or online link meeting link: <a href="https://meet.google.com/wib-bvfw-you">https://meet.google.com/wib-bvfw-you</a></td>
</tr>
<tr>
<td>8. Date, Time &amp; Venue of Pre-bid Meeting</td>
<td>28th October 2021 up to 11:00 AM</td>
</tr>
<tr>
<td>09. Closing Date &amp; Time for Receipt of bids</td>
<td>29th October 2021 at 11:30 AM</td>
</tr>
<tr>
<td>11. Date&amp; Time for Opening Technical of Bid</td>
<td>To be informed later to the successful bidder</td>
</tr>
<tr>
<td>11. Date&amp; Time for Opening of Price Bid</td>
<td>Mr. S. Sarkar, Exe. Engineer Tel: 03222-282533, Email: <a href="mailto:ssarkar@hill.iitkgp.ernet.in">ssarkar@hill.iitkgp.ernet.in</a></td>
</tr>
<tr>
<td>12. Engineer-in-charge and contact details.</td>
<td>Office of the Superintending Engineer (E&amp;M), 1st Floor, Old Building, IIT Kharagpur, Kharagpur WB 721302</td>
</tr>
<tr>
<td>13. Address for tender issue, submission and opening</td>
<td><a href="http://www1.iitkgp.ac.in/tcpfiles/tenders.php">http://www1.iitkgp.ac.in/tcpfiles/tenders.php</a>; <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a></td>
</tr>
</tbody>
</table>

1.3. ELIGIBILITY CRITERIA

1.3.1. The bidder must be registered in appropriate class of works with Government organization like CPWD/ PWD/ MES or PSUs or OEM or Authorized supplier and installer of OEM (Authority must be signed by OEM official not lower than General Manager or equivalent in corporate structure).

1.3.2. The bidder must have done at least 1 (ONE) similar work of value of 80% of the estimated cost or 2 (TWO) similar works for projects each of value 60% of the estimated cost or 3 (THREE) similar work for projects each of value 40% of the estimated cost with Government/ Semi-government/ PSU/ Government Funded Autonomous Organization during last 7 (seven) years preceding last date of the month of tender submission.

Note:
(i) The estimated cost is Rs. 74,64,968/- (Rupees Seventy four lakh Sixty four thousand Nine hundred Sixty eight only)

(ii) The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to the last date of receipt of applications for tender.

(iii) Similar works shall mean: Maintenance works of MAINTENANCE & OPERATION OF ELECTRICAL, FIREFIGHTING & FIRE ALARM SYSTEM, BMS, STP, WTP AND SOLAR SYSTEM.

1.3.3. The bidder or the specialized agency the bidder intends to associate with must be registered with appropriate government authority as a bonafide business entity and must have GST registration certificate and Permanent Account Number of income tax.

1.3.4. Electrical work shall be executed by selected bidder through agency holding Electrical license valid on date of execution.

1.3.5. The registrations and licenses should be valid during the execution phase.

1.3.6. The Average annual turnover of the bidder as per ITCC or profit & loss statement shall not be less than 30% of the estimated cost of project, not having incurred loss in more than two years, during last 5 years ending 31 Mar 2021. The documents submitted should be duly certified and audited by Chartered Accountant.

1.3.7. Net worth Certificate of minimum 15% of the estimated cost i.e. Rs. 11,19,745/- issued by certified chartered accountants is to be submitted. Format for the same is enclosed in Annexure-V.

On behalf of the Director, Indian Institute of Technology Kharagpur

Copy to:
1) Superintending Engineer (E&M)
2) Senior Executive Engineer (E&M)
3) Senior Executive Engineer (CCM)
4) Engineer (E&M)
5) Assistant Engineer / Jr. Engineer (E&M)
6) Notice Board
7) Tender Notice uploaded to CPPP portal & Institute Website
    Office file
2. INFORMATION TO BIDDERS

2.1 SCOPE OF WORK

2.1.1 The IIT KGP intends for NON COMPREHENSIVE ANNUAL MAINTENANCE AND OPERATION CONTRACT OF ELECTRICAL, FIREFIGHTING & FIRE ALARM SYSTEM, BMS, STP, WTP AND SOLAR SYSTEM FOR SCIENCE RESEARCH PARK, RAJARHAT of IIT KHARAGPUR.

2.1.2 Constraint: The job needs to be executed in Academic area without causing any disturbances to the normal functioning of routine activities/ road networks.

2.1.3 The vendor shall work out execution sequence and methodology so as to complete the project within the envisaged time and the estimated cost, duly handling the constraint mentioned above.

2.2 GENERAL INSTRUCTIONS

2.2.1 Bidding documents are to be obtained electronically through websites: http://www1.iitkgp.ac.in/topfiles/tenders.php, ii)https://eprocure.gov.in/eprocure/app

2.2.2 This bid document shall be read in conjunction with GCC (General Conditions of Contract) available on http://www1.iitkgp.ac.in/topfiles/tenders.php.

2.2.3 The bidder shall visit and inspect the site and obtain all information on his own responsibility and at own cost, which may be necessary for the purpose of quoting and submitting the tender. No excuse or ignorance as to site conditions and local information shall be accepted after awarding of the contract. Access to the site will be granted by the Engineer-in-charge on all working days within working hours.

2.2.4 IITKGP shall not provide any space at site for labour hutsments.

2.2.5 All clarifications about the tender shall be sought by bidder on or before pre-bid meeting. The bidders may make suggestions which shall be considered during the Pre Bid Meeting. Intending bidder(s) may also send their queries or suggestion, if any, through e-mail to the Engineer-in-charge on ssarker@iitjii.iitkgp.ernet.in on or before 21st October 2021, 10:30 hrs. No queries shall be entertained after notification of replies to noteworthy queries received till the date of pre-bid meeting.

2.2.6 Completion certificate issued by Competent Authority will only be considered as credential. If the Completion certificate issued by Competent Authority does not reflect the type of work, then Final bill / Schedule of Quantity of the qualifying works also to be attached along with the Completion certificates. Certificate from private individuals / organizations for whom such works have been executed shall not be accepted.

2.2.7 The bidding document (consisting of specifications, the schedule of quantities of various types of items to be executed, the set of terms and conditions of the contract and other documents / drawings, if any), Addendum/Corrigenda, Clarifications to Pre-bid queries can be downloaded from the websites: i)http://www1.iitkgp.ac.in/topfiles/tenders.php; ii)https://eprocure.gov.in/eprocure/app. Corrigenda, if any shall be published only on these website sat any time before the closing time of tender. The institute shall not be responsible for any delay / difficulties / inaccessibility of downloading facility for any reason what so ever. The tenderers who have downloaded the tender documents from website must visit the website and ensure that such addendum(s)/corrigendum(s) (if any) is also downloaded by them. This shall be the responsibility of the prospective registered bidders to check the web site for any such corrigendum/addendum before closing time of tender and ensure that bid submitted by them are in accordance with all the corrigendum’s/addendums.

2.2.8 All costs, charges & expenses that may be incurred in connection with the preparation of his tender shall be borne by him and the Institute accepts no liability whatsoever therefore.

2.2.9 Rates quoted by the bidders shall be inclusive of GST (Goods and Services Tax - Central, State and Interstate) and all applicable taxes. Income Tax and all other statutory deductions like labour cess etc. will be deducted from the bill as per prevailing rules.

2.2.10 Exemption to IITKGP against any tax/ duty/ fee/ surcharge/ charge/ cost, if any, found applicable or sought later from IITKGP after award shall be passed on to IITKGP by the contractor without dispute.

2.2.11 IITKGP reserves the right to reject any or all of the bids without assigning any reason.

2.2.12 Bid Validity: Bid shall remain valid for 120 days from the date of submission.

2.2.13 Firm Price: Bidder’s quoted Rates/Prices for executing the activities under the Contract shall remain till completion of the entire work & shall not attract any escalation under any circumstances whatsoever.

2.2.14 If any information furnished by the bidder is found as false / fabricated, then his bid will be rejected and treated as cancelled. Even if such manipulation is detected at any stage after signing of the contract, it would lead to termination of the contract besides enforcing actions as mentioned in the Bid Security Declaration Form (Annexure-III) and liabilities towards prosecution. In such cases the bidder will be debarred from participation in future tendering process in IITKGP for next 01 (One) year.

2.2.15 Earnest Money Deposit (EMD): As per amendment in GRF-2017, No.F/9/4/2020-PPD dated 12.11.2020, no provision for EMD has been kept in this tender. However the bidder has to submit a Bid Security Declaration as per Annexure-III. MSEs registered with District Industries Centers, National Small Industries Corporation and any other body specified by Ministry of MSME or Startups as recognized
by Department of Industrial Policy and Promotion shall be exempted from payment of EMD in the bid. The self attested photocopy of their evidence should be submitted by the bidder(s) along with the formal request letter for exemption.

2.2.15.1 In case the NSIC/MSEs registration certificate is found invalid during evaluation, the bid of such bidder shall be rejected.

2.2.15.2 Bidder so exempted for submission of EMD shall have to submit an undertaking as per Annexure-II.

2.2.15.3 Bidder not having NSIC/MSEs registration has to submit Bid Security Declaration Form (Annexure-III) alongwith an undertaking as per Annexure-II.

2.3 SUBMISSION OF TENDER

2.3.1 Help for Contractors, FAQ, Information about DSC and Bidders Manual Kit containing the detailed guidelines for e-Procurement system are also available on Central Public Procurement Portal.[https://eprocure.gov.in/eprocure/app]

2.3.2 It is mandatory for all the bidders to have a valid Class-II/Class-III Digital Signature Certificate (in the name of person having power of attorney to sign the Bid) from any of the licensed Certifying Agency (Bidders can see the list of licensed CA’s from the link www.cca.gov.in) to participate in e-Procurement of IIT KHARAGPUR.

2.3.3 It is mandatory for the bidders to get their firm/company registered with e-procurement portal https://eprocure.gov.in/eprocure/app to have user ID & password.

2.3.4 Tender documents will be available online on website https://eprocure.gov.in/eprocure/app which can be downloaded free of cost.

2.3.5 Bidders may download and refer the “Instructions for Online Bid Submission” from (https://eprocure.gov.in/eprocure/app;jsessionid=2A56E178EED5C7D8536175EFBB573C9F.eprocgep2?page=HelpForContractors&service=page).

2.3.6 The tender documents shall be submitted online in the prescribed format given on the websites and technical bids received online shall be opened as per NIT or Corrigendum thereof. No other mode of submission is acceptable. Detailed credentials as per the requirement of eligibility criteria and all tender papers except Bill of Quantities are to be submitted in “Technical Bid”.

Bill of Quantities with rates duly filled in are to be submitted in the format provided online in the name of “Financial Bid”. Hence, physical submission of the documents is limited to submission of MSE registration certificate as per provision given in sub-clause 1.2.7 of NIT & 2.2.15 of Information to Bidders.

Representative of the bidder, who chooses to attend, may attend the online opening of the technical bids on the scheduled date and time of Bid opening. However, such representatives shall be allowed to attend the opening of the Technical Bids, only, if such person presents the letter of authority issued in his name by the bidder on his letter head.

2.3.7 Bidders cannot submit the tender after the due date and time of e-bid submission. Time being displayed on Central Public Procurement Portal https://eprocure.gov.in/eprocure/app (“Server System Clock Time”) shall be final and binding on the bidder. e-Bids are required to be submitted by bidders, only as per the Indian Standard Time (IST) and not the time as per their location/country.

2.3.8 The bidders are advised to submit their e-bids well before the e-bid due date. IIT KHARAGPUR shall not be responsible for any delay in submission of e-bids for any reason including server and technical problems.

2.3.9 The Technical and Financial Bid shall be digitally signed by the Authorized Signatory of the bidder & submitted “on-line” only. The authorized signatory of the bidder must be in possession of Power of Attorney before submitting the digitally signed bid. Scanned copies of various documents can be prepared in .pdf file format.

2.3.10 Any tender received without original Earnest Money in the form as specified in clause 1.2.7 of tender documents shall not be considered and shall be summarily rejected.

2.3.11 IIT KHARAGPUR reserves the right to cancel the tenders before submission/opening of tenders, postpone the tender submission/opening date and to accept/reject any or all tenders without assigning any reasons thereof. IIT KHARAGPUR’s assessment of suitability as per eligibility criteria shall be final and binding.

2.3.12 Tenderers may note that they are liable to be disqualified at any time during tendering process in case any of the information furnished by them is not found to be true. The decision of IIT KHARAGPUR in this regard shall be final and binding.

2.4 EVALUATION OF BIDS AND AWARD OF WORK

2.4.1 The Bid of bidder will be opened electronically on the specified date and time of opening at the Electrical Maintenance Section, 1st Floor, Old Building, IIT Kharagpur, Kharagpur WB 721302 in the presence of willing bidders or their authorized representatives.

2.4.2 Date, time and place of opening of Financial Bid will be informed after evaluation of Technical Bid to the Technically Qualified Bidders.

2.4.3 Bids shall, first, be checked for NSIC/MSEs registration certificate or Bid Security Declaration Form (Annexure-III). Only those bids found to have duly submitted NSIC/MSEs registration certificate or Bid Security Declaration Form (Annexure-III) shall be considered for evaluation.
.4 Evaluation of Technical Bid: The bids received will then be assessed on the eligibility criteria mentioned at Para 1.3 of Notice Inviting Tender. Bids found not meeting the eligibility criteria shall be considered non-responsive and shall be rejected summarily.

2.4.5 IITKGP retains the right to revert back to individual bidders with further clarifications / queries on the Technical Bid. The bidder has to respond to the queries within the specified time mentioned in the covering letter.

2.4.6 On the date & time specified for opening of Financial Bid or the Revised Financial Bids as the case may be will be opened on specified date and time.

2.4.7 EVALUATION OF Financial Bids: The Financial Bid should contain the complete bid document with duly filled in Schedule of Financial Quote. Financial Bids opened as above will be checked for arithmetical errors.

2.4.8 Letter of Acceptance: The successful bidder shall be issued Letter of Acceptance (LOA) of the bid, and be required to furnish a Performance Guarantee as per General Conditions of Contract, Program Schedule with specific Milestones to be achieved as to complete the work within the stipulated time limit, details of his Technical Staff to be deployed as per ANNEXUREI, and complaint handling arrangement for the Defect Liability Period.

2.4.9 Letter of Award (Work Order) shall be issued to the successful bidder only after receipt of the Performance Guarantee, along with Program Schedule, details of Technical Staffs to be deployed for the work and Complaint Redressal Mechanism as per following para.

(a) Contractor shall submit Complaint redressal arrangement with name & contact number of the contractor's authorized representative for the purpose.

2.4.10 Agreement (Contract) consisting of complete tender document including conditions, bill of quantities, technical proposal and specialized services, drawings, if any, and acceptance thereof together with any correspondence leading thereto, shall be drawn and signed with the awardee within 10 days of the Letter of Award.

2.4.11 Date of start of work shall be reckoned from the 07th day of the issue of the Letter of Acceptance.

2.4.12 Defect Liability Period (DLP): In partial modification to clause no.16 of General Conditions of Contract (GCC), the Defect Liability Period shall be 12 months after the certificate final or otherwise of its completion of work or till the final bill has been prepared.

2.5 COMPLAINT REDRESSAL MECHANISM

2.5.1 All maintenance complaints shall be got addressed by the contractor to the satisfaction of Engineer-in-charge within 06 hours from the date of issuance of the “Job Card” from IIT Kharagpur.

2.5.2 Complaints requiring completion time more than 24 hours shall be responded specifically by the contractor with the scheme, in consultation with Engineer-in-charge, and timeline for compliance, to the Engineer-in-charge within 24 hours from the date of issuance of the “Job”

2.5.3 Any complaints and to attend to the breakdowns within 6 hours, in case any system out of order for more than 24 hours continuously, recovery@200 - per system/hour shall be deducted from their bill as penalty upto maximum of 5% of the contract value of the specified system.

2.6 PAYMENT TERMS

No advance payment will be entertained by the Institute. However, monthly or quarterly payment will be made subsequent to satisfactory completion of AMC obligations.

2.7 BIDDING CAPACITY OF CONTRACTORS

1) The bidding capacity of the contractor should be equal to or more than the estimated cost of the work put to tender. The bidding capacity shall be worked out by the following formula:

\[ \text{Bidding Capacity} = \left\lfloor \frac{A \times N}{2} \right\rfloor \]

Where,

A= Maximum turnover in construction works executed in any one year during the last five years taking into account the completed as well as works in progress. The value of completed works shall be brought to current costing level by enhancing at a simple rate of 7% per annum.

N= Number of years prescribed for completion of work for which bids has been invited.

B= Value of existing commitments and ongoing works to be completed during the period of completion of work for which bids have been invited.
SCOPE OF WORK

NON COMPREHENSIVE ANNUAL MAINTENANCE AND OPERATION CONTRACT OF ELECTRICAL, FIREFIGHTING & FIRE ALARM SYSTEM, BMS, STP, WTP AND SOLAR SYSTEM FOR SCIENCE RESEARCH PARK, RAJARHAT

MAINTENANCE OF ASSETS (AMC)

Preventive & corrective action has to be taken by the agency for 5 years as per the approved schedule.

Preventive maintenance: Shall be carried out as per OEM recommendation / CPWD/IIT check list. A complete check list shall be prepared in consultation with IIT Engineer – in-charge to carry out the preventive maintenance schedule

Corrective Maintenance: The Corrective / Breakdown Maintenance is to be carried out any time during 24 hrs x 365 days inclusive of all Sundays & Holidays.

1. For Corrective/breakdown condition: Response Time(Max)-01Hrs
2. To attend the Minor repair : Response Time(Max)-24Hrs
3. To attend the Major repair : Response Time(Max)-48Hrs

However, the decision regarding minor/major maintenance shall be of Engineer in Charge, IIT, which will be binding on the contractor.

[A] General Arrangements

1. Agency shall set up a Service Center which will operate in full from round the clock on all working days except Sundays and Gazetted Holidays.

2. The Agency shall hire adequate Engineers from Electrical field on Part Time basis and Supervisors on full time basis who shall have a mobile phone to enable the Engineer-in-charge for timely communication.

3. The Agency shall maintain all complaints either through email or lodged manually at Service Centre in Desk top that will also be provided by the Agency with Internet connection. A land line telephone shall also be installed by the Agency for receiving complaints and other instructions.

4. The staff employed by the agency shall be present at the site from round the clock on all working days.

5. All T&P including ladders, wire drawing equipment, chase cutting equipment, drilling machine, Megger, earth resistance testing equipment, crimping tool etc. required for the work shall have to be arranged by the agency. No T&P shall be issued by the Department.

6. Staff employed by the agency shall be well behaved, polite & courteous. In case of any complaint against staff such staff shall be replaced by the agency on demand from Engineer-in-Charge. Agency will submit police verification of worker employed for the maintenance work.

7. The agency shall make all safety arrangement required for the labour engaged by him at his own cost. All consequences due to negligence or due to lapse of security/safety or otherwise shall remain with the agency.

The department shall not be responsible for any mishap, injury, accident or death of the agency’s staff. No claim in this regard shall be entertained/accepted by the department.

8. The agency shall take immediate action to attend to any complaint assigned to him through site order book/verbal instructions from Engineer-in-Charge or on telephones/Internet from occupants.

9. Agency shall be fully responsible for any damage caused to Govt. property or allottee’s property by him or his labour in carrying out the work and the same shall be rectified by the agency at his own cost. Chases, holes & drilling works etc. shall be done using only power operated tools. The defective items, materials, finishes, fitting shall be replaced with items of same specifications and compatible to the work.
10. All the malba or rubbish obtained from dismantling or otherwise during the execution of the work shall be brought down through the staircase and shall not be thrown to the ground directly from the floors etc. After the collection of full truck load of the said malba (approx. 4.5 cubic metre), the same shall be disposed of by the agency to the authorized municipal dumping ground. In case of non-removal/disposal in the specified period, a penalty of Rs. 500/- (Rupees Five Hundred) per day shall be imposed on the agency.

11. The facilities to be made available at the Service Center:

One Counter for Computer Operator cum Service Coordinator/supervisor to receive complaints.

All furniture required for agency’s staff shall be arranged by the agency on his own cost.

12. The assistance shall be provided by the agency to Engineer-in-Charge in the following: Informing the Engineer-in-Charge regarding the failure of any service being provided by other agencies, in so far as they affect the assets being maintained under this contract so that they can be taken up with the concerned local body/departments for rectification.

13. The agency shall be provided with an inventory list of items in campus to be maintained. The agency shall be responsible for watch and ward of such items. The loss, if any shall be made good by the agency at his cost. The decision of Engineer-in-Charge in this respect shall be final and binding on the agency.

14. Stores and bins shall be provided by the agency for storing the Materials.

15. The labour deployed for attending complaints should carry necessary toolkit, container, required for mixing any cement sand or other material and should carry with them water bottle and waste bag for collection of minor rubbish material if received during attending the complaints, so that the site of work shall remain neat and clean.

16. Each worker shall maintain a complaint diary and get the feedback recorded from the allottees regarding attending the complaint. In case, it is found that the complaint has been attended unsatisfactorily, it will be considered as unattended. List of such complaint shall be submitted to the Engineer-in-charge or his representative in daily basis.

17. The agency will maintain attendance records of the staff, which may be checked by the Engineer-in-charge or his representative of the work. In case of absence of any staff, recovery shall be made at the following rates:

<table>
<thead>
<tr>
<th>Sr no</th>
<th>Description of staff</th>
<th>Rate of Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Engineering staffs</td>
<td>At the double rate of minimum labour wages issued time to time by government</td>
</tr>
<tr>
<td>2</td>
<td>Supervisory staffs</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Skilled labour</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Unskilled labour</td>
<td></td>
</tr>
</tbody>
</table>

18. Bad workmanship whenever noticed and conveyed to the agency shall be rectified by the agency to the satisfaction of the Engineer-in-charge

19. After the expiry of the contract, the Agency shall hand over the complete installations to the department in proper working order. All defects and deficiencies shall have to rectified by the firm to the entire satisfaction of Engineer-in-charge failing which the work shall be got done at the risk and cost of the firm.

20. Contractor has to submit the bio-data of staff to be deputed at site for evaluation and confirmation by Engineer In-charge.

21. Police verification of every staff deployed by the agency shall be got done by the agency compulsorily and a copy of police verification shall be provided to Engineer-in-Charge after which an identity card duly countersigned by Engineer-in-Charge or his representative shall be issued to each employee of
22. The agency shall provide uniform along with Badge and shoes wearing logo of agency. In the event of non-compliance, a recovery of Rs. 25/- per day per employee shall be made. Agency will provide neat & clean uniform to all workers. Color & pattern of uniform shall be as per decision of Engineer-in-charge.

23. The agency shall have registration with Employees Provident Fund Commissioner and employees State Insurance Corporation for safeguarding interest of his workmen. He shall obtain all other necessary approvals from statutory bodies as per law in force. The contribution made towards EPF and ESI shall be reimbursed on the production of receipts for workers engaged on this work.

24. No residential accommodation shall be provided to any of the staff engaged by the agency. The agency shall also not be allowed to erect any temporary setup for staff in the campus.

25. All consumable/spare items except sundry items (i.e. cotton waste, grease etc.) will be provided by the institute on indent from the agency. Material at site and dismantle registered are to be maintain by the Agency in CPWD format.

**NON-COMPREHENSIVE MAINTENANCE AND OPERATION OF FIRE FIGHTING & FIRE ALARM**

Non Comprehensive maintenance comprises of

(i) Repair and replacement of all the faulty/defective parts of the equipment of firefighting system, fire alarm system and public address system.

(ii) Preventive and break down maintenance including daily, weekly, monthly, quarterly and yearly maintenance of the system.

1. For firefighting system: All firefighting system to be provided under this contract shall be maintained properly. All defective parts shall be replaced; all types of defects major or minor shall be attended within a prescribed time limit. The entire installation shall be maintained in such a way to keep the entire system pressurized round the clock and to keep the installation ready to use for any fire hazard. Regular testing, mock drill, shall be a part of the maintenance work. Technical representative from the company having knowledge of all types of firefighting system shall visit the site on regular basis for testing and maintenance of the system. Weekly testing shall be carried out by the agency in presence of staff deployed by IIT and the same shall be recorded.

2. For Fire alarm and PA system: This parts involves routine checkup for healthiness of fire alarm system comprising of addressable type all types of detectors, sounders, control panels etc., get verified from competent authorities, replacement of defective parts, attending major or minor complaints within a predefined time schedule etc. One Fire alarm technician shall remain present during office hour for keeping the system healthy.

3. The Technician engaged for maintenance shall provide at site training for firefighting system and fire alarm system to security staffs or any other maintenance personnel deployed by IIT. They will also be trained for any change in technology free of cost for proper maintenance and safety of system. It should be insured by the company that the technician engaged is fully trained and no claim whatsoever may be regarding damage to the equipment and machinery by the faulty operation by the technician.

**General conditions:**

(i) Successful tenderer shall maintain complaint register / log books and preventive maintenance work of installation work under taken by him time to time shall be entered in
the record and on the basis of such record payment shall be released. Contractor shall obtain counter signature of Junior Engineer/Assistant Engineer/ Caretaker of building/ Users of Buildings. The required stationary/forms registers etc. shall be arranged by contractor.

(ii) Contractor will also be responsible for general daily like cleaning of Fire Control Room, pump room. The required material for daily cleaning i.e. broom, cotton waste, dhoti etc. Will be arranged by contractor within tender cost.

(iii) Dismantle material received from site has to be returned back to department.

(iv) All the related documents such as log book, complaint registers, attendance register etc. should be available at site for inspecting officer.

(v) All the complains received at site has to be attended within 24 hours otherwise penalty of Rs.1000/- each complaint shall be imposed due to non-attending within 24 hours if any hindrance to attend the complaint, has to be reported to Executive Engineer.

(vi) The material required for the maintenance work shall be arranged by the agency in quoted rate.

(vii) The contractor shall arrange own T&P nothing shall be given by department.

(viii) The staff deputed by the contractor shall be liability of contractor no claim for regulation wages etc. shall be entertained by department.

**Additional Technical conditions:**

(i) 1. For operation of Fire Fighting/Fire Alarm System.
   
a. Routine checking of installation and their cleaning as per maintenance manual.
   b. However work also includes routine running of pump set manually and operation of hose reel / hose pipes physically and fire alarm system by making smoke near the detector and checking the display / sounder activation and entry shall be made in the register and periodical cleaning of these system as per direction of Site Engineer. Mock drill of down comer / Fire Fighting /Fire Alarm system has to be done in presence of & also in the presence of available Security personals / watchman's/Junior Engineer/Assistant Engineer/ Sr.AE(EW)/ Caretaker of building/ Users of Buildings etc. as per directions & guidelines and as per maintenance manual.

(ii) Routine maintenance of following:

   (A) Wet riser/down comer/sprinkler system:

   1) Check water level in base of tank and operate pumps.

   2) Check up the water in the collection chamber and operate the priming pump as and when required.

   3) Check pumps sets for excessive gland leakage/vibration and heating and take corrective measures.

   4) Check the water in radiator.

   5) Check the batteries for its healthy charging and its specific gravity.

   6) Apply grease on battery terminals and put distilled water to maintain the electrolyte level.

   7) Test the wet riser system every day for at least 10 min. And see the performance of all the equipment. If found any equipment's working unsatisfactory take corrective measures.

   8) Test the auto/manual mode and record the parameters every day and also start the set as and when required.

   9) Check the engine oil in crank case and do the topping up as and when required.
10) Checking and filling the fuel tank as and when required.

11) Check the values and glands for dripping of water through gland and take correcting measures, if necessary.

12) Greasing of motors and pumps as and when necessary.

13) Keep the installation neat and clean all time.

14) Check the earth continuity and earth resistance and insulation resistance for motors alternator and the result at least once in 06 months.

15) Check the wet riser control panel for its healthy working and for loose connection if any.

16) Checking of shaft alignment.

17) Checking of all material arrangement for its working.

18) Cleaning of all hydrant valve hose reel and hose boxes with brass/silver polish.

19) In case of fire arisen, developed, the operator shall have to check for cause and render necessary help to extinguish fire in co-ordination with AFAS, and security staff.

(iii) (A) Checking of wet riser system/down corner system/automatic sprinkler system:-(Daily)

1) Operate the Bypass valve (water to flow back to sump) & see the operation of the jockey pump and then the electrical fire pump and Diesel fire pump / sprinkler pump / terrace pump.

2) After Electric fire pump has run for 5 minutes, switch off the normal electric supply and then watch for automatic operation of diesel pump.

3) Note various reading of current, voltage, pressure etc. of the system.

4) Operate booster pump & also keep it in working condition. To check the hydrants performance makes the plan for operation of these on holidays/Sundays. Check to be done in auto mode also.

(B) FIREALARMSYSTEM:

Weekly inspection of fire alarm system:-

1) Cleaning all the control panels, sounder sand call boxes.

2) While cleaning each panel, verify whether any fault indication lamp is on with or without an alarm, investigate and rectify the fault.

3) Check whether all panel lamps are healthy by the "panel amp test button" in each panel.

4) Check that the system operates under mains failure condition, by switching of the mains supply to the control & indicating panel and testing any zone for fault / fire condition from the zonal panel.
   Confirm also that the audio visual alarm comes up in the C & I panel. Restore mains supply after the test.

5) Log all the panel instruments in C&I Panel.

6) If Lead Acid type battery issued for Fire Alarm System, check the electrolyte level (and top up with distilled water, as required) and specific gravity.

Check on control panel operation:

1) All Zonal (sector) panels and C&I panel should be checked once a month.

2) Repeater panels if any should also be checked once a month.

3) The check is to confirm operation of the system in each zone, through the test button
in zonal(sector) panel. Concerned and in the C&I panel and also relevant sounders.

4) Check the Talk back system from both ends and also PA system of C&I panel.

5) Check the battery condition from the log book readings of voltage. Check the charger, if is any problem. Check battery terminal and replace old grease with fresh grease to corrosion. Consult manufacture for replacement after 3 to 4 years of battery life.

NON COMPREHENSIVE MAINTENANCE AND OPERATION OF SUB STATION EQUIPMENTS

Brief description of existing electrical system: Power is received at 33 KV substation from 33kV Substation through XLPE underground cable in one circuit. MRSS having 33kV Switch gears panels, 33KV switch gears panels, Battery Banks, 33/0.433kV Transformers with allied equipment’s, various sizes of HT cables, Control & protection system of 33 KV MRSS with indoor CT & PT metering unit.

1. This part involves routine checkup for healthiness of all substation equipment’s. Regular servicing shall be carried out. All types of preventive maintenance and routine check shall be a part of this work. All major or minor complaints shall be attended within pre determined time. Replacements of all defective parts are under the scope of this work. An electrician with helper will attend the installation during office hour to keep the system upto date. Round the clock attendant is not under the scope of this work.

The following equipment’s are covered under the scope of Comprehensive Maintenance Contract for Sub-stations.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Description</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Annual comprehensive maintenance of following capacity and type of transformers with all associated equipments like HT switch gear panel sets, Capacitor panels, LT panels with entire switch gears, LT / HT cabling etc that is under the scope of Construction work.</td>
<td></td>
</tr>
<tr>
<td>a)</td>
<td>33/433 kV 1250 kVA dry type transformer</td>
<td>2.00 Nos.</td>
</tr>
<tr>
<td>b)</td>
<td>VCB</td>
<td>4.00 No</td>
</tr>
<tr>
<td>c)</td>
<td>L T Panels, APFC Panel, AMF Panel, Feeder Pillars etc</td>
<td>Lot</td>
</tr>
<tr>
<td>d)</td>
<td>Cables, Rising Main Bus ducts etc</td>
<td>Lot</td>
</tr>
</tbody>
</table>

NOTE: Any item / instrument not mentioned above but necessary for smooth functioning of sub-stations shall be covered in the scope of work.

SPECIAL CONDITIONS (SCOPE OF WORK)

1. The installation shall be maintained in the existing original condition/position. The contractor shall be solely responsible for maintenance and upkeep of the equipment’s in good conditions.

2. The supplying and topping up of transformer oil as and when required, filtration and centrifuging of oil once in a year and with required quantity of material for maintenance such as tools & instruments, CTC, cloth, sand paper, nut and bolts with washer (S.S.), petroleum jelly, lubricating oil greases, HRC fuses for control supply & indication lamps shall also be covered in scope of work.

3. The preventive maintenance schedule shall be prepared and submitted in advance. The necessary shut down may be taken with prior permission of the Institute.

4. Proforma for weekly, quarterly & yearly checking should be filled up after doing preventive maintenance of equipment’s. The maintenance records shall be checked & verified by the competitive authority. (One set of Weekly, quarterly, half yearly and yearly maintenance & repair chart/proforma shall be provided by IIT)

5. A suitable complete shutdown shall be given once in a year for preventive maintenance of the complete system. All the equipment’s should be thoroughly checked & maintained for proper functioning/operations of the equipment. All major structures, cable supports and steel frames
shall be painted once in a year with approved colour.

6. Complete transformer and switch room cleaning should be done once in every month time and grass roots should be removed.

7. All the types of repairing works will be carried out by the agency on his own cost.

8. The payment against maintenance during the contact period shall be made against quarterly running bills of the accepted amount for AMC subject to satisfactory maintenance of the installation and submission of all formats such as weekly, monthly, quarterly & yearly as provided by the Institute duly checked filled and accepted by JE/AEE of the work.

9. Testing, calibrating & setting of all the relays, kWH meters installed at different sub-stations has to be done ones in year and report has to be submitted by the contractor in the office of JE/AE of the work. All Energy meters reading will be taken monthly.

10. The adequate team of manpower shall be available at site as per quantum of the work. Also it is responsibility of the contractor to provide the manpower within 2-3 hours on call by any representative of the Institute in case of breakdown.

11. A list of spares (which are usually used) for each equipment shall be submitted by the contractor to the dept. along with the rates and pricelist.

Weakly Checking

1. Transformers:

For dry type transformer: Evidence of rusting, corrosion, and deterioration of the insulation, varnish or paint should be checked, and corrective measures taken. Auxiliary devices should be inspected and serviced during these inspections. Windings should be inspected for contaminants, especially on insulating surfaces or where they could restrict airflow. Check for loose connections, condition of tap changers, terminal boards and for the general condition of the transformer. Check for signs of overheating and tracking or carbonization marks.

2. HT Panel (33 kv Switchgear):

To be checked, indicating lamps, Ammeter, voltmeter along with selector switches earthing connection of panels, cleaning of external panel, these should be closed properly and no space be left which may allow the lizard or insects to enter.

3. Capacitor Panels:

To be checked, indicating lamps, KWH meter, Ammeter, Voltmeter along with selector switches, earthing connection of panels, cleaning of external panel, these should be closed properly and no space should be left which may allow the lizards or insects to enter, visual inspection of contactors, SFU/FSU/MCCB, exhaust fan & APFC relay for any abnormality.

4. LT Panel (0.433 kv Switchgear):

To be checked, indicating lamps, Ammeter, Voltmeter along with selector switches, earthing connection of panels, cleaning of external panel, these should be closed properly and no space should be left which may allow the lizard or insects to enter, visual inspection of ACB’s, MCCB’s SFU/FSU, all relays for any abnormality.
Quarterly Checking

1 For Dry type transformer:

Dust, director residues on windings or insulators should be removed to permit free circulation of air and to reduce the possibility of insulation break downs. Particular attention should be given to cleaning windings and vents.

2 HT Panel (33kv Switchgear):
   - Internal & external cleaning of panel.
   - Tightening of main connection busbar and cable connection (outgoing).
   - Checking interlocking system.
   - Oilig, greasing of operating mechanism.
   - Auxiliary contacts, indicating devices, voltmeter, ammeter, KWH meter and selector switch etc. Check and repair/replace if required.
   - Instrument & potential transformer to be checked.
   - To check setting the relay time and contacts of relay of each breaker and record.
   - Servicing of breakers.
   - Checking of panel’s heater and thermostats.

3 Capacitor bank panel:
   - Internal & external cleaning of panel
   - Tightening of connection busbar.
   - Checking of APFC relay for proper functioning.
   - Auxiliary contacts, indicating devices, voltmeter, ammeter and selector switch etc. check and repair/replace if required.
   - Instrument & current transformer to be checked.
   - Checking of contactors and SFU/FSU/MCCB.

4 LT Panel (0.433kv Switchgear):
   - Internal & external cleaning of panel
   - Tightening of connection bus-bar and cable connection (outgoing)
   - Checking of interlocking system (if required)
     - Oilig, greasing of operating mechanism.
     - Auxiliary contacts, indicating devices, voltmeter, ammeter, and selector switch etc. check and repair/replace if required.
   - Instrument & potential transformer to be checked.
   - To check setting the relay time and contacts of relay of each breaker and record.
   - Servicing of breakers.
Half Yearly

1. Dry Type transformer: The windings may be cleaned with a vacuum cleaner, a blower, or with compressed air. The use of a vacuum cleaner is preferred, followed by compressed air or nitrogen. Maintain adequate ventilation during cleaning. The compressed air or nitrogen should be clean and dry and should be applied data relatively low pressure. Lead supports, tap changers and terminal boards, bushings, and other major insulating surfaces should be brushed or wiped with a dry lint-free cloth.

2. HT Panel (33kvSwitchgear):
   - Internal & external cleaning of panel.
   - Tightening of main connection busbar and cable connections
   - Checking of interlocking system.
   - Oiling greasing of operating mechanism
   - Auxiliary contacts, indicating devices, voltmeter, ammeter and selector switch etc. check and repair/replace if required.
   - Instrument & potential transformer to be checked.
   - To checking setting/calibrating the relay time and contacts of relay of each breaker and record.

3. Capacitor bank panel:
   - Internal & external cleaning of panel.
   - Tightening of connection busbar and cable connection
   - Checking of APFC relay for their function.
   - Auxiliary contacts, indicating devices, voltmeter, ammeter, and selector switch etc. check and repair/replace if required.
   - Instrument & potential transformer to be checked.
   - Cleaning of main and auxiliary contact of contactors and overhauling of exhaust fans.

4. LT Panel (0.433kvSwitchgear):
   - Internal & external cleaning of panel
   - Tightening of connection busbar and cable connection
   - Checking of interlocking system
   - Oiling and greasing of operating mechanism.
   - Auxiliary contacts, indicating devices, voltmeter, ammeter, and selector switch etc. check and repair/replace if required.
   - Instrument & current transformer to be checked.
   - To check setting the relay time and contacts of relay of each breaker and record.
YEARY CHECKING

1. Dry Type Transformer: The insulation resistance test is used to determine the moisture content of a transformer’s insulation material.

   i. HT Panel (33 kv Switchgear): Servicing of breaker. Operation checking of breaker. Control circuit and its accessories i.e. aux Contactors, connection, coils etc. repair/ replace if required.
      · Cleaning of circuit

b. Capacitor bank panel:
   · Cleaning of panel internal & external.
   · Checking of APFC relay for their juncton.
   · Auxiliary contacts, indicating devices, voltmeter, ammeter, and selector switch etc. check and repair/replace if required.
   · Servicing of contactors, FSU/SFU.
   · Checking and replacing of defective capacitors.

c. LTPanel(0.433kvSwitchgear):
   · Servicing of ACB’s & MCCB’s.
   · Operation checking of ACB,s & MCCB,s
   · Auxiliary contacts, indicating devices, voltmeter, ammeter, and selector switch etc. check and repair/replace if required.
   · Instrument & current transformer to be checked.
   · To check setting the relay time and contacts of relay of each breaker and record.

Special condition for Safety at the Work Site

The contractor will identify one of the supervisors for taking care of implementation of Safety systems.

The Contractor should follow the following General Guidelines governing the safety rules as laid down under:

1. Smoking is strictly prohibited at work place.
2. Nobody is allowed to work without wearing safety helmet. Chin strap of safety helmet shall be always on Drivers, helpers and operators are no exception.
3. No one is allowed to work at or more than three meters height without wearing safety belt and anchoring the yarnd of safety belt to firms support preferably at shoulder level.
4. No one is allowed to work without adequate foot protection.
5. Usage of eye protection equipment shall be ensured when workmen are engaged for grinding.
chipping, welding and gas-cutting. For other jobs as and when site safety co-ordinator insists eye protection has to be provided.

6. All safety appliances like Safety shoes, Safety gloves, Safety helmet, Safety belt, Safety goggles etc. shall be arranged for starting the job.

7. All excavated pits shall be barricaded & barricading to be maintained till the back filling is done. Safe approach to be ensured into every excavation.

8. Adequate illumination at workplace shall be ensured before starting the job at night.

9. All the dangerous moving parts of the portable / fixed machinery being used shall be adequately guarded.

10. Ladders being used at site shall be adequately secured at bottom and top. Ladders shall not be used as work platforms.

11. Material shall not be thrown from the height. If required, the area shall be barricaded and one person shall be posted outside the barricading for preventing the tre-passers from entering the area.

12. Other than electricians no one is allowed to carry out electrical connections, repairs on electrical equipment or other jobs related thereto.

13. All electrical connections shall be made using 3or5 core cables, having a earth wire.

14. Inserting of bare wires for tapping the power from electrical sockets is completely prohibited.

15. A tools and tackles inspection register must be maintained and updated regularly.

16. Debris crap and other materials to be cleared from time to time from the workplace and at the time of closing of work every day.

17. All the unsafe conditions, unsafe acts identified by contractors, reported by site supervisors and/or safety personnel to be corrected on priority basis.

18. No children shall be allowed to enter the work place.

19. All the lifting tools and tackles shall be stored properly when not in use.

Non Comprehensive maintenance and operation of Other Installation Work:

Additional specifications

A. Internal & External Electrical installation, Solar Plant, Water supply Pump, Solar Water heater, STP, WTP are under the scope of this work. All preventive maintenance & operation i/c routine check up on regular, attending breakdown, replacement of faulty parts, everything are under the scope of this work. Regular operation for smooth functioning of the above work is in the scope of this work.

SCOPe OF WORK

Non- Comprehensive maintenance comprises of

i) Repair and replacement of all the faulty parts of the equipment of above mentioned work including light fittings & Fixtures.

ii) Preventive and break down maintenance including daily, weekly, monthly, quarterly and yearly maintenance of the above mentioned installed system.

iii) Round the clock maintenance & operation of above system.

iv) Agency has to provide escalation matrix.
Types of maintenance activity:

A. PREVENTIVE MAINTENANCE: Monthly:
   I. Routine inspection and maintenance works of the Solar Plant, STP, Water Pump to be done in any one of working day.
   II. All safety and indicating devices to be checked up.
   III. Current & Voltage measurements for all the plants in full load.
   IV. Routine inspection and maintenance of all electrical items like switches/cables
   V. Cleaning of all solar panel.
   VI. Inspection of Water Pump, STP, Light Fittings and adjustment/replacements if required.
   VII. Checking of electrical panels.

Quarterly:

1. Lubrication of bearings of motors and other machinery.
2. Cleaning of Pot Strainers in water circuit.
3. Checking of safety control and switches/replacement if required.
4. Calibration of meters and gauges/replacement if required.
5. Cleaning of contact switches, checking of relays, timer etc. /replacement if required.

Solar System

a. The Selected Bidder shall carry out all operations of solar PV & solar water heating systems of Sc. Research Park

b. The Contractor shall replace or rectify the breakdown of solar panels, inverters, batteries in coordination with OEM.

c. Malfunctioning of all parts will be rectified or replaced by the Contractor

d. Clean PV module on regular basis, tighten all electrical connections on a daily, weekly, fortnightly, monthly, quarterly, half yearly or yearly basis as may be required to minimize breakdowns or defects and to ensure smooth and trouble free running of the Solar System.

e. Undertake necessary maintenance or troubleshooting work of the Solar PV Power System & solar water heating systems and ensure that the down-time shall not be more than 72 (seventy-two) working hours from time of occurrence thereof.

f. Take adequate measures for prevention of wear and tear of the Solar System

STP/Water supply system

1. The Selected Bidder shall carry out all operations of STP/water supply System including the respective pumps installed at Science Research Park, Newtown, Rajarhat, Kolkata,

2. The Contractor shall rectify any breakdown or defect due to workmanship and inherent manufacturing defects in STP/Water supply system /including pipeline network (surface, concealed, underground) for fresh water, sewage or waste water, etc. in coordination with the OEM.

3. The Contractor shall rectify or replace defects due to workmanship, to mishandling.

4. Except asunder above Clause, Bidder shall carry out all the maintenance of the Plumbing System such as:
a. Ensure that Water supply system is taken special care of to ensure uninterrupted supply of water to the 
   Building.

b. Monitor the quality of water level of water table, etc. In case of water table being considerably low, the Selected 
   Bidder shall inform IITKGP.

c. Ensure that sewage or effluent treatment plant is taken special care of to ensure uninterrupted treatment of 
   untreated sewage or effluent and proper disposal of treated sewage and solid waste.

d. Inspect all reservoirs regularly and repair leakage from structure, pipes and valve immediately.

e. Perform detailed inspection by draining individual reservoirs and then cleaning or washing the entire interior 
   surface of the reservoirs including removal and disposal of silts or sediments and foreign matters.

f. Clean or flush pipe lines. However, during low water level, flushing shall be done with prior permission from the 
   IITKGP.

g. Repair all leaks immediately on its detection.

h. Shall inspect all valves regularly.

i. Shall investigate and repair decreased flow through outlets and fixtures.

In case of any blockage or partial sedimentation in the network system, that portion shall have to be cleared

**BMS System Non Comprehensive Maintenance and Operation**

1. Check the system errors from OEM software (Software will be arranged by bidder)
2. Necessary inspection of BMS System and take necessary action for corrective measure.
3. Identifying correct replacement and for future system upgrade.
4. Cable and conduit related rectification will be covered under proposed O&M contract
5. Windows and PC related fault/rectification will be covered under proposed O&M contract

**B. BREAKDOWN MAINTENANCE:**

The firm has to attend to the unscheduled service calls as and when required for locating the faults and rectify the same within 04 hours. In case of any breakdown or any abnormal functioning of the equipment, the same has to be brought to the notice of the Engineer-in-Charge immediately and necessary remedial measures would be taken immediately as required/advised.

**GENERAL CONDITIONS**

1. No additional payment will be made for transportation of equipment from the IIT to parties workshop or delivery of the materials to the IIT at any point of time.

2. The works of urgent nature should be attended immediately whether it is office hours or holidays for which no additional charges will be payable. If the party fails to maintain or to carry out the repairs of any defect to the satisfaction of the office, then the IIT, in order to keep the system running will undertake the works of getting it done through outside agency and cost incurred there by will be deducted from the firm’s bills.
3. All such items should be original and no additional charges will be payable for these materials at any point of time.

4. The agency must ensure availability of the spares in the stock to handle any breakdown without delay. IIT will provide necessary spare/consumable on prior demand with justification and supporting current price list of Make.

5. The agency shall make good all the losses occurred during servicing, overhauling repairing and maintenance of plants.

List of Major Items

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Item</th>
<th>Unit</th>
<th>Qty</th>
<th>Scope of Work in brief</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>33 kV SF6 RMU Panel</td>
<td>No</td>
<td>1</td>
<td>Non comprehensive Maintenance. &amp; operation</td>
</tr>
<tr>
<td>b.</td>
<td>1.25 MVA, 33/0.433 kV Dry type Transformer with offload Tap Changer</td>
<td>Nos</td>
<td>2</td>
<td>Non comprehensive Maintenance. &amp; operation</td>
</tr>
<tr>
<td>c.</td>
<td>33 kV HT Panel</td>
<td>Set</td>
<td>1</td>
<td>Non comprehensive Maintenance. &amp; operation</td>
</tr>
<tr>
<td>d.</td>
<td>LT Panels</td>
<td>Set</td>
<td>2</td>
<td>Non comprehensive Maintenance. &amp; operation</td>
</tr>
<tr>
<td>e.</td>
<td>200 kVAR capacitor with control panel</td>
<td>Set</td>
<td>2</td>
<td>Non comprehensive Maintenance. &amp; operation</td>
</tr>
<tr>
<td>f.</td>
<td>1010 kVA DG set</td>
<td>Set</td>
<td>2</td>
<td>Operation only</td>
</tr>
<tr>
<td>g.</td>
<td>Raising Mains</td>
<td>Set</td>
<td>6</td>
<td>Non comprehensive Maintenance. &amp; operation</td>
</tr>
<tr>
<td>h.</td>
<td>Lift</td>
<td>Nos</td>
<td>7</td>
<td>To Lodging complaint to AMC agency only</td>
</tr>
<tr>
<td>i.</td>
<td>Water Supply</td>
<td>Set</td>
<td>1</td>
<td>Non comprehensive Maintenance. &amp; operation</td>
</tr>
<tr>
<td>j.</td>
<td>STP Plant</td>
<td>Set</td>
<td>1</td>
<td>Non comprehensive Maintenance. &amp; operation</td>
</tr>
<tr>
<td>k.</td>
<td>Electrical driven fire pump</td>
<td>Set</td>
<td>2</td>
<td>Non comprehensive Maintenance. &amp; operation</td>
</tr>
<tr>
<td>l.</td>
<td>Electrical motor driven automatic pressurization pump</td>
<td>Set</td>
<td>1</td>
<td>Non comprehensive Maintenance. &amp; operation</td>
</tr>
<tr>
<td>m.</td>
<td>Fire Panel</td>
<td>Set</td>
<td>1</td>
<td>Non comprehensive Maintenance. &amp; operation</td>
</tr>
<tr>
<td>n.</td>
<td>Solar System with panels 75kWp</td>
<td>Set</td>
<td>1</td>
<td>Non comprehensive Maintenance. &amp; operation</td>
</tr>
</tbody>
</table>
For day to day maintenance / repair of Electrical fittings, fixtures & switchgears etc. of Internal & External Electrical installation, Solar Plant, Water supply Pump, Solar Water heater, STP, WTP of Research Park.

<table>
<thead>
<tr>
<th>SI No.</th>
<th>Description of minimum staffs deployed by the contractor</th>
<th>Qualification /Experience</th>
<th>Duty hour</th>
<th>Jurisdiction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Semi - Skilled Technician</td>
<td>Valid wireman license.</td>
<td>Round the clock.</td>
<td>Day to day maintenance /operation/ repair of Electrical fittings, fixtures &amp; switchgears etc. of Internal &amp; External Electrical installation, Solar Plant, Water supply Pump, Solar Water heater, STP, Water supply system, DG sets, Sub-station equipment all types of fire alarm Fire Fighting system installed of Research park. Contract</td>
</tr>
<tr>
<td>2</td>
<td>Highly Skilled Technician -</td>
<td>Diploma holder having experience of 03 years respectively</td>
<td>As and when required</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Engineer</td>
<td>Degree/ Diploma holder having experience of 3/5 years respectively</td>
<td>As and when required</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: Contractor has to submit the bio-data of staff to be deputed at site for evaluation and confirmation by Engineer In-charge.
2. UNDERTAKING BY THE BIDDER

UNDERTAKING

I / We have read and examined the Tender document including terms & conditions, specifications, bill of quantities, drawings and designs, general rules & directions, General Conditions of Contract, Special Conditions of Contract and all relevant other documents, publications and rules referred to in the Conditions of Contract and all other contents in the tender documents for the work.

I / We, hereby tender for execution of the work specified for the Indian Institute of Technology Kharagpur within the time specified and in accordance in all respects with the specifications, designs, drawings and instructions in writing.

We agree to keep the tender open for 120 days from the last date of its submission and not to make any modifications in its terms and conditions. A sum of Rs. __________ has been deposited in cash / demand draft of a scheduled bank / Pay order as earnest money. If I / we, fail to furnish the prescribed performance guarantee within prescribed period, I / we agree that the said Director, Indian Institute of Technology Kharagpur or his authorized officer shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I / we fail to commence work as specified, I / we agree that the Director, Indian Institute of Technology Kharagpur shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein.

Further, I / We agree that in case of forfeiture of earnest money or both Earnest Money & Performance Guarantee as aforesaid, I / We shall be debarred for participation in the re-tendering process of the work.

I / We hereby declare that I / We shall treat the tender documents, drawings and other records connected with the work as secret / confidential documents and shall not communicate information derived there-from to any person other than a person to whom I / We am / are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Seal & Signature of Contractor
Postal Address

Dated

Witness

Address

Occupation
**TECHNICAL STAFF OF CONTRACTOR**

Name of the Work: NON COMPREHENSIVE ANNUAL MAINTENANCE & OPERATION CONTRACT OF ELECTRICAL, FIREFIGHTING & FIRE ALARM SYSTEM, BMS, STP, WTP AND SOLAR SYSTEM FOR SCIENCE RESEARCH PARK, RAJARHAT of IIT KHARAGPUR.

<table>
<thead>
<tr>
<th>DISCIPLINE</th>
<th>NAME</th>
<th>QUALIFICATION</th>
<th>EXPERIENCE</th>
<th>CONTACT NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Project In-charge</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Engineer - Structure and Civil Works</td>
<td></td>
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<tr>
<td>Engineer – Electrical &amp; Mechanical Works</td>
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<tr>
<td>In-charge - Safety, Health &amp; Environment</td>
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<tr>
<td>In-charge for Maintenance (DLP) period</td>
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</tbody>
</table>

Seal & Signature of Contractor
UNDEARTAKING FOR GCC COMPLIANCE

UNDEARTAKING

We hereby undertake that we shall fulfill all the terms & conditions within the specified time frame, after the acceptance of our offer in case our offer is accepted; failing which IIT KHRAGPUR may go ahead to take necessary action such as reporting the non-compliance to appropriate Government authorities and barring us from future participation in IIT KHRAGPUR works.

Seal & Signature of Contractor

DATED:
Bid Security Declaration Form

Date: ________________________ Tender No. ________________________ To (Insert complete name and address of the purchaser)

I/We, The undersigned, declare that:

I/We understand that, according to your conditions, bids must be supported by a Bid Security Declaration.

I/We, accept that I/we may be disqualified from bidding for any contract with you for a period of one year from the date of notification if I am/We are in breach of any obligation under the bid conditions, because I/We

   a) Have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or

   b) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i) fail or refuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the Instruction to Bidders.

I/We understand this Bid Securing Declaration shall cease to be valid if I am/We are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Signed: (insert signature of person whose name and capacity are shown)

In the capacity of (insert legal capacity of person signing the bid Securing Declaration)

Name: (insert complete name of person signing he Bid Securing Declaration)

Duly authorized to sign the bid for an on behalf of (insert complete name of Bidder)

Dated on ..............................................day of .............................................. (Insert date of signing)

Corporate seal (where applicable)
## DETAILS OF THE FIRM

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Name of Firm</td>
</tr>
<tr>
<td>2.</td>
<td>Registered / Postal Address</td>
</tr>
<tr>
<td>3.</td>
<td>Working Office Address</td>
</tr>
<tr>
<td>4.</td>
<td>Working Email id</td>
</tr>
<tr>
<td>5.</td>
<td>Mobile No.</td>
</tr>
<tr>
<td>6.</td>
<td>Telephone No.</td>
</tr>
<tr>
<td>7.</td>
<td>Particulars of Registration with various government bodies/organization.</td>
</tr>
<tr>
<td>8.</td>
<td>Were you ever debarred/ blacklisted by any department during the past seven years?</td>
</tr>
<tr>
<td>9.</td>
<td>Name of Directors /Partners with Address</td>
</tr>
<tr>
<td>10.</td>
<td>Permanent Account Number (PAN) No</td>
</tr>
<tr>
<td>11.</td>
<td>GST Registration No.</td>
</tr>
</tbody>
</table>
Format for Net Worth Certificate

It is to certify that as per the audited balance sheet and profit & loss account during the financial year ................, the net worth of ... (individual/farm/company) having registered address at ......................... as on 31.3.2021 is Rs..............................after considering all liabilities. It is further certified that the net worth of the company has not eroded by more than 30% in the last three years ending on 31.3.2021.

Signature of Chartered Accountant

.............

Name of Chartered Accountant

.............

Membership No. of ICAI

Date & Seal
1. Checklist for Documents to be uploaded on https://eprocure.gov.in/eprocure/app

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Documents</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tender Documents (Please upload with signature of all pages)</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>EMD (NSIC/MSEs Registration Certificate OR Bid Security Declaration Form (Annexure-III)</td>
<td>1.2.5</td>
</tr>
<tr>
<td>3.</td>
<td>Company registered by Govt. Organisation like CPWD/PWD/MES/Autonomous bodies or Other PSUs</td>
<td>1.3.3</td>
</tr>
<tr>
<td>4.</td>
<td>GST Registration Certificate</td>
<td>1.3.3</td>
</tr>
<tr>
<td>5.</td>
<td>Permanent Account Number</td>
<td>1.3.3</td>
</tr>
<tr>
<td>6.</td>
<td>Completion Certificate during last 07yrs.</td>
<td>1.3.2</td>
</tr>
<tr>
<td>7.</td>
<td>Updated Electrical Contractor License</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>ANNEXURE-I, II,III and IV</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Net worth Certificate (ANNEXURE-V)</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>The Average annual turnover of the bidder as per ITCC or profit &amp; loss statement, during last 5 years ending 31 Mar 2021.</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>BOQ under financial bid section</td>
<td></td>
</tr>
</tbody>
</table>

**Please upload necessary documents only.**

Special Condition for Electrical work

Signature of contractor
1. The work shall be carried out as per national code or C. P. W. D. specifications for works with correction slips issued up-to date unless otherwise specified in the schedule of quantities for the works.

2. The following Indian Standard Specifications and Codes of Practice will apply to the equipment and the work covered by the scope of this contract. In addition the relevant clauses of the Indian Electricity Act 1910 and Indian Electricity Rules 1956 as amended up to date shall also apply. Wherever appropriate Indian Standards are not available, relevant British and/or IEC Standards shall be applicable.

   BIS certified equipment shall be used as a part of the Contract in line with Government regulations. Necessary test certificates in support of the certification shall be submitted prior to supply of the equipment.

   It is to be noted that updated and current Standards shall be applicable irrespective of those listed below.

   Low voltage Switchgear and Controlgear specifications
   Part I – General
   Part 2 – Circuit Breakers
   Part 3 – Switch Fuse Units
   Part 4 – Contactors and Motor Starters
   Part 5 – Control Circuit Devices
   Electrical Relays for power system protection
   Low voltage Switchgear and Control gear assemblies
   Marking of Switchgear busbars
   Degree of Protection of Enclosures for low voltage switchgear
   Code of Practice for selection, installation and maintenance of Switchgear

   IS 13947:1993
   IS 3231:1986
   IS 8623:1993
   IS 11353:1985
   IS 2147:1962
   IS 10118:1982

4. No under-ground work or above the false ceiling shall be covered until the same has got approved by the Engineer-in-charge. The contractor will supply the drawings of specific works for approval, if required

5. All the old wiring has to be dismantled with proper care. The reusable old materials if any are to be handed over to departmental store with proper documentation and the other non-reusable (nil reselling value) will be disposed by the contractor. The contractor shall clear the site thoroughly of all scaffolding materials & rubbish etc. left out of his work & dress the site around the building to the satisfactions & his decision in writing shall be final & binding on all concerned

6. Special care to be taken to avoid any theft of electrical fittings and fixtures while executing the work.

7. The location of Panel / DB / Switch board / Light point / Fan point will be as per existing location or as per the instruction of Engineer-in-charge.

8. All the wiring will be done with feruling and cable / Wire termination by required size or lugs of required materials and It should be noted that license wire man shall only be allowed for the wiring work.

   Electrical safety at work site

   The contractor will identify one of the supervisors for taking care of implementation of Safety systems.

   The Contractor should follow the following General Guidelines governing the safety rules as laid down under:

   Usage of eye protection equipment shall be ensured when workmen are engaged for grinding, chipping, welding and gas-cutting. For other jobs as and when site safety co-ordinator insists eye protection has to be provided.

   1. All safety appliances like Safety shoes, Safety gloves, Safety helmet, Safety belt, Safety goggles etc. shall be arranged before starting the job.

   2. All excavated pits shall be barricaded & barricading to be maintained till the backfilling is done. Safe approach to be ensured into every excavation.

   3. All the dangerous moving parts of the portable / fixed machinery being used shall be adequately guarded.

   4. Ladders being used at site shall be adequately secured at bottom and top. Ladders shall not be used as work platforms.

   5. Material shall not be thrown from the height. If required, the area shall be barricaded and one person shall be posted outside the barricading for preventing the trespassers from entering the area.
6. Other than electricians no one is allowed to carry out electrical connections, repairs on electrical equipment or other jobs related thereto.
7. All electrical connections shall be made using 3 or 5 core cables, having an earth wire.

8. Inserting of bare wires for tapping the power from electrical sockets is completely prohibited.

9. A tools and tackles inspection register must be maintained and updated regularly.

10. Debris, scrap and other materials to be cleared from time to time from the workplace and at the time of closing of work every day.

11. All the unsafe conditions, unsafe acts identified by contractors, reported by site supervisors and/or safety personnel to be corrected on priority basis.

12. No children shall be allowed to enter the workplace.

13. All the lifting tools and tackles shall be stored properly when not in use.

14. Clamps shall be used on Return cables to ensure proper earthing for welding works.

15. All the pressure gauges used in gas cutting apparatus shall be in good working condition.

16. Proper eye washing facilities shall be made in areas where chemicals are handled.

17. Connectors and hose clamps are used for making welding hose connections.

18. All underground cables for supplying construction power shall be routed using conduit pipes.

19. Spill trays shall be used to contain the oil spills while transferring/storing them.

20. Tapping of power by cutting electric cables in between must be avoided. Proper junction boxes must be used.

21. Non-compliance to above shall invite a penalty recovery as per 3.22.8.