

# NATIONAL INSTITUTE OF TECHNOLOGY TIRUCHIRAPPALLI – 15

# NOTICE INVITING TENDER ESTATE MAINTENANCE DEPARTMENT/ELECTRICAL

	BID SYNOPSIS		
Tender Number	Tender Number. NITT/EMD/AEE (E)/ AE (P&D)/ Outsource - HT/ Enq.No.15, dated 27.07.2016		
Name of the Work	Tender for Comprehensive Annual Maintenance Contract of HT installations Electrical System.		
Estimated cost put to tender	₹ 27.20 Lakhs		
Duration of the Contract	Initially for a period of one year extendable for further one year based on satisfactory performance.		
Tender Application Fees (Non Refundable)	₹ 525/- (Rupees Five Hundred and Twenty Five only) for each enquiry no to be remitted through Demand Draft drawn in favor of the Director, NITT.		
EMD Amount (Refundable)	₹ 54,000/- To be remitted through Demand Draft drawn in favor of the Director, NITT.		
Date and Venue for Pre bid meeting	Tuesday 16 <sup>th</sup> August 2016 at 11.00 A.M (Venue: A-11 Hall of the Administrative Building, NITT)		
Last date and time of submission of Tender	Tuesday 23 <sup>rd</sup> August 2016 up to 3.00 P.M		
Date and Time of opening of Tender (Technical Bid)	Tuesday 23 <sup>rd</sup> August 2016 up to 3.30 P.M		
Date and Time of opening of Price bid	Will be intimated to the technically qualified bidders after evaluation of technical bid.		
Address for submission of Tender	The Director, National Institute of Technology, Thuvakudi, Tiruchirappalli – 620 015		
Contact person for technical queries or clarifications on the tender document	Mr.C.Nallathambi, Assistant Engineer/ Electrical Estate Maintenance Department/Electrical, National Institute of Technology, Tiruchirappalli-15, Land line: 0431 250 3840 Mobile: 94890 66205. Mail ID: <a href="mailto:thambi@nitt.edu">thambi@nitt.edu</a>		
Inspection of the Premises	To assess the scope of work involved, bidders can inspect the electrical installation at the NITT premises under prior appointment from the above mentioned official during the period from 01 <sup>st</sup> August 2016 to 15 <sup>th</sup> August 2016 during office hours.		

# NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

## NOTICE INVITING TENDER

# ◆ *INTRODUCTION*

The National Institute of Technology (formerly known as Regional Engineering College) Tiruchirappalli, is an Engineering College of National Importance. It is functioning under the control of Ministry of Human Resources Development, Government of India. Presently over 6000 students hailing from various States are pursuing their under graduate and post graduate education in the field of Engineering.

For Administrative convenience, NITT, through this open tender intends to tender for Comprehensive Annual Maintenance Contract of HT installations Electrical System.

HT Installations - Comprehensive Annual Maintenance Contract

Scope of work, under this tender, inter alia, includes the following:

# I. Preventive, Routine & Breakdown Maintenance of Electrical System.

All the electrical equipment shall be serviced in a specific and phased manner as per the schedule of works (Price Bid A) to avoid frequent break-down and to ensure maximum utilization of the equipment. Generally, following activities are to be done during routine maintenance.

# 1. Transformer: 1000 kVA -2 No's, 500 kVA -9 No's, 250 kVA - 2Nos,200 kVA-1No.

- a. The periodical checking of transformer oil level in conservator once in a month, In case the oil level falls below the minimum level it should be topped up by new tested insulating oil of appropriate grade as per IS: 335 and to be examined for leakage of oil, if detected, the leakage is to be repaired.
- b. The various connections of the transformer e.g., L.T connections neutral & body-earthings are to be checked once in a month and if found loose, are to be tightened.
- c. Bushings are to be examined for crack and dirt deposit and is to be cleaned or replaced as necessary.
- d. Testing of transformer oil for dielectric strength and acidity are to be done as per IS: 1866 once in a year.

- e. In case of failure of oil sample in dielectric strength the entire oil is to be filtered and dehydrated till it achieves the specific strength (as per IS: 1866) or replaced if necessary. In case of failure in acidity test, the entire oil is to be replaced by new tested oil of appropriate grade (as per IS: 335) and sludge are to be cleaned from the inside of the tank of the transformer.
- f. Checking of neutral earth and equipment body earth once in a year.
- g. Insulation testing of the following once in a year.
- h. Between L.T and earth with 1000V Insulation tester.
- i. Between H.T and earth with 1000V Insulation tester.
- j. Between H.T and L.T winding with 1000V Insulation tester.
- k. Silica Gel is to be examined for color and is to be changed as and whenever required.
- 1. To check noise/humming sound, temperature rise (over heating) and crack in bituminous

Compound once in a month.

m. General cleaning of transformer to keep it free from dust and soots once in a month.

## 2. H.T Panel & H.T UG Cable System

- a. The panel shall be maintained as per the frequency indicated below; shut down in prescribed proforma must be taken before attending to this panel. Solid earthing must be done after making bus bars dead. Only licensed and registered technician/ supervisor shall attend to H.T.Panel System.
- b. General cleaning of the H.T, VCB inside and outside once in six months.
- c. Checking of power auxiliary contacts, minor fittings to be cleaned with emery cloth and circuit breaker oil once in six months.
- d. Greasing /oiling of the moving/sliding mechanism of VCB (Vacuum Circuit Breaker) once in six months.
- e. Tightening of termination nuts /bolts/screws once in six months.
- f. Checking of closing and tripping mechanism of VCB &Testing of relays once in six months
- g. Measuring insulation of bus –section i.e. phase to phase and phase to earth once in a year.
- h. Insulation resistance of H.T cables incoming to and outgoing from consumer H.T.VCB is to be measured including transformer H.T winding once in a year.
- i. Di-electric strength and acidity value of the insulation oil inside the tank of VCB to be checked once in a year.
- j. In case of failure of oil sample, same actions are to be followed as indicated in case of transformer in clause (e), and oil level of H.T.VCB tank and condition of all gaskets shall be checked once in a month and it shall be

- ensured that there is no leakage.
- k. If necessary, replacement of the defective and damaged component is to be done once in a year to keep the system in operation.
- 1. Checking, cleaning, testing and calibration of relays in H.T panel for protection once in a year.
- m. To check overheating, crack in bituminous compounding once in a month.
- n. Checking of specific gravity of the liquid of the battery cell and maintenance of minimum level by adding distilled water checking ampere capacity of the battery cell with cell tester once in a month(not applicable for maintenance free battery).
- o. Checking of battery charger and its operation once in three months.
- **3.** Maintenance and attending faults in HT installation.
- **4.** Attending complaints in any mode
- **5.** Electrical Materials needed for attending HT fault/complaints are NIT's scope.
- **6.** Any other works relating to HT installation not explicitly mentioned in the Tender, shall also be carried out by the Contractor as per the instruction of Engineer-in-Charge.

#### 3. L.T MV Panel with ACB

- a. General cleaning of the L.T. Panel, inside and outside for removal of dust and soot once in a month.
- b. Checking the tightness of the connection of the bus-bars, with gear, control wiring for indicating lamps, voltmeter with selector switches, ammeter with selector switches, incoming and outgoing cables once in a month.
- c. Visual inspection of the main contacts of the ACB is to be carried out once in six months. Minor pitting of the contacts of the ACB is to be cleaned with emery cloth and carbon tetrachloride/contact cleaning liquid. Major pitting or damaged contacts are to be replaced.
- d. Castle locking arrangement is to be checked for correct operation once in six months.
- e. Relays for protection are to be checked and cleaned once in year.
- f. Replacement of damaged /burnt out component when necessary.
- g. Greasing /oiling of moving or sliding parts of ACB/MCCB once in six(6) months
- h. Checking of tripping mechanism of ACB/MCCB once in a year.
- i. Testing and calibration of the relays once in a year.
- j. For L.T.Panel, insulation test for phase to phase and phase to earth with 1000V insulation tester.

# ♦ **Pre-qualifications**

- 1. For HT Works the bidder should possess a valid Electrical Contractor's license grade **EA or higher grade** license issued by Tamilnadu Electrical Licensing board. If he possesses any other license issued by other State Governments, the same has to be endorsed by Tamilnadu Electrical Licensing Board.
- 2. The contractor should have work experience with state PWDs, CPWD, Electricity Boards and Railways and Public sector organizations in past two years with performance letter/work completion letter/credentials if any.
- 3. Contractor/Firm should have valid registration for Income Tax, Employees Provident Fund, Employees State Insurance Corporation and Service Tax Authorities.
- 4. Similar work experience in Public Sector Industries / Reputed establishments/ establishment is desirable.
- 5. Average Annual financial turnover during the last 3 years, ending 31<sup>st</sup> March of the previous financial year, should be at least 30% of the estimated cost. (Rs.8.16 Lakhs)
- 6. Experience of having successfully completed similar works during last 7 years ending last day of month previous to the one in which applications are invited should be either of the following: -
- a. Three similar completed works costing not less than the amount equal to 40% of the estimated cost. i.e Rs.10.88 Lakhs or
- b. Two similar completed works costing not less than the amount equal to 50% of the estimated cost. i.e Rs.13.60 Lakhs or
- c. One similar completed work costing not less than the amount equal to 80% of the estimated cost. i.e Rs.21.76 Lakhs.
- 7. Definition of "similar work" Similar work means execution of HT works/Fuse of calls in educational institution/Public sector.

In addition to above, the criteria regarding satisfactory performance of works, personnel, establishment, plant, equipment etc. may be incorporated according to the requirement of the Project.

# ♦ Pre bid Meeting

- ❖ It is proposed to conduct a Pre Bid meeting on Tuesday 16<sup>th</sup> August 2016 at 11.00 A.M (Venue: A-11 Hall of the Administrative Building, NITT) The purpose of the meeting is to clarify our requirements and to answer the questions of the prospective bidders on technical bid and commercial terms and conditions of this tender.
- ❖ View above, prospective bidders are advised to submit their doubts/ questions/ clarifications, if any, through Mail, (Mail ID: <a href="mailto:thambi@nitt.edu">thambi@nitt.edu</a>) before the date of Pre bid meeting. Further, on the date of the meeting, the questions should be given in writing.
- Any modification of the bidding documents which may become necessary as a result of the Pre bid meeting shall be made known to all the prospective bidders by the Selection Committee through a notification of amendment in the website of the NITT. No clarifications will be entertained beyond the date of pre bid meeting. No extension of time will be given for submission of tender on any account, beyond the last date for submission of tender.
- ❖ The prospective bidders are advised to visit Institute premises where the works are to be carried out at his own cost and examine the surroundings and collect all information that he considers necessary for proper assessment of prospective assignment during working hours with prior appointment from the Shri.C.Nallathambi, Assistant Engineer/Electrical, Mobile: 94890 66205, Phone: 0431 − 2503840, E-mail: <a href="mailto:thambi@nitt.edu">thambi@nitt.edu</a>, <a href="mailto:emc@nitt.edu">emc@nitt.edu</a>. Once the Tender is submitted, it will be presumed that the bidder has seen and under stood the complete scope of work involved.

# **◆** Instructions and General Terms and Conditions

- 1. The Tender documents can be seen/downloaded from our website: <a href="http://www.nitt.edu/home/other/tenders">http://www.nitt.edu/home/other/tenders</a>
- 2. The Tenderer should be required to deposit Earnest Money Demand (EMD) and the Demand Draft should be in favor of the **Director**, **National Institute** of Technology, Tiruchirappalli and must be enclosed with Technical-Bid. Tenders received without Tender cost and EMD will be rejected. The EMD can be submitted through Bank Guarantee also, instead of Demand Draft. The Earnest Money deposit shall not carry any interest.
- 3. The Tenders will be in **Two-Bid system**. **Envelope No.-1** shall be super scribed as **"Technical Bid" for each schedule** and shall contain the following:
  - a. Tender fee & Earnest Money Deposit details
  - b. Tender cost incl. VAT in ₹ 525/- (Non-refundable)
  - c. EMD amount incl VAT in ₹ 54,000/- (Refundable)
  - d. Copy of Service Tax registration.
  - e. Copy of PAN card.
  - f. Update copy of EPF & ESI registration.
  - g. Copy of Work completion / Experience certificates as described above.
  - h. Copy of Income Tax clearance certificate
  - i. Duly signed & stamped of Tender document by the authorized person.
  - j. Copy of valid EA or ESA Electrical Contractor License for HT installations
  - k. Copy of Customer performance certificate.
- 4. **Technical Bid** shall be submitted vide a letter on the letter head of the Tenderer as per the Proforma Technical bid format.
- 5. Envelope No.-2 should be super scribed as "Financial Bid" for each schedule and should contain only the Contractor's/Agencies quoted rates in the given format. Envelope No.-2 will be opened only if the Committee constituted by the Director, National Institute of Technology, Tiruchirappalli.
- 6. <u>Submission of Bids</u>; Bids with all complete relevant documents will be sent to the **Director**, **National Institute of Technology**, **Thuvakudi**, **Tiruchirappalli 620 015** on or before **23.08.2016 up to 3:00 PM**. Late Tenders /unsigned Tenders will Not be entertained. The bidder should sign each and every page of the tender Document.

## 7. **Opening of Technical - Bids**

- a. Technical-Bids shall be opened on 23.08.2016 at 3.30 PM in the A11 hall of the Administrative building of the Institute in the presence of Tenderers or their authorized Representatives who may wish to be present.
- b. The Technical-Bid shall be opened first. The Financial Bid (Envelope No.-2) will be opened only of those Tenderer whose Technical-Bid is found to be in order and for which they shall be intimated separately about date & time by email.
- c. The Bidder who has not submitted the documents as per Tender conditions, without proper Tender Cost, EMD, Valid Electrical License, and Experience certificates, tender documents etc. their Tender may be treated as non-responsive and their Financial Bid (Envelope No.-2) shall not be opened.
- 8. Institute will not be responsible for any postal delay.
- 9. An undertaking to the effect that the Bidder in the past has never been blacklisted, given any warning for non-performance and not put any penalty for lack of Performance.
- 10. If a later date, it is found that the documents and certificates submitted by the Tenderer are forged or have been manipulated the Work Order issued to the Tenderer shall be cancelled and Earnest Money issued to the Institute shall be Forfeited without any claim whatsoever on Institute and the Tenderer is liable for action as appropriate under the extant laws.
- 11. The successful Firms/Agencies/Contractors will be intimated and contract agreement will be entered into initially for a period of one year.
- 12. Except writing rates and amount, the Tenderer should not write any conditions or make any changes, additions, alterations and modifications in the printed form of Tenders.
- 13. The rates quoted by the tenderer must be reasonable & logical. The tender can be rejected on the basis of unreasonable or illogical rates.
- 14. "DISCOUNT" if any, offered by the bidders shall not be considered unless specifically indicated in the price schedule. Bidders desiring to offer discount shall therefore modify their offers suitably while quoting and shall quote clearly net price taking all such factors like discount etc. into account.

- 15. Bid Price shall be quoted exclusive of applicable taxes, duties, levies etc. Statutory taxes, duties, levies etc. applicable will be borne by the purchaser. However, at the time claiming, taxes, duties, levies etc. applicable should be specifically indicated in the bills. Copies of notifications issued authorities concerned specifying applicability & rates should be submitted to the purchaser along with the first bill and subsequently in case of any changes.
- 16. The Director, National Institute of Technology, Tiruchirappalli reserves the right to accept or reject any or all Tender Bids without assigning any reasons. Whatsoever and his decision will be binding on all the parties.
- 17. The Contractor shall take Insurance against all claims applicable for the Workman's compensation Act-1948, Agency shall take necessary Insurance cover for any persons deploy sites even for short duration. NIT, Trichy shall be indemnified totally on this account.
- 18. Contractor shall be solely responsible for payment of Minimum wages and variable Dearness Allowance to their personnel as per the rules or act applicable under Government order. Tiruchirappalli is a B class city under Central Minimum Wages. All Central, State, Local laws & Bye laws applicable will be observed by the Contractor and NIT, Trichy will be kept indemnified of such payable by the Contractor.
- 19. The deputed staff shall ensure the presence of duty at Right time in the Electrical Engineer-in-Charge.
- 20. Without taking prior approval from the Engineer-in-Charge of maintenance, no fittings/materials will be removed for the purpose of repairs. It will be the Contractor responsibility to provide alternative serviced temporary arrangements for such items removed during the period of repair.
- 21. Engineer-in-Charge, Maintenance/EMC, NIT, Trichy shall be at liberty to carry out surprise check on the persons as deployed by the Contractor in order to ensure that persons deployed by him are doing their duties.
- 22. For performing the assigned work, the Contractor shall deploy medically and physically fit persons (Preferably below the age of 50). The Contractor shall ensure that the persons are punctual and disciplined and remain vigilant in performance of their duty. Persons so engaged by the Contractor shall be from amongst properly trained Electrician & Supervisor of high integrity and good conduct, and shall be conversant in the local language i.e. Tamil. In no circumstances, persons below 18 years of age should be employed.

- 23. The Contractor shall further keep the NIT, Trichy indemnified against any loss to the NIT, Trichy property and assets. The NIT, Trichy shall have further right to adjust and/or deduct any of the amounts as aforesaid from the payments due to the Contractor under this contract.
- 24. The Contractor shall ensure that the persons so deployed do not allow any property of the NIT, Trichy related to equipment's to be taken out of the premises without a Gate Pass signed by the designated officials of the EMC/NIT, Trichy.
- 25. In case, any Staffs is not found up to the mark and not able to work properly, he will have to be changed as per the instruction of the Engineer-in-Charge of EMC, NIT, Trichy.
- 26. Institute reserves the right to terminate the contract with and advance notice of one months. The contract can also be terminated at the request of agency, with an advance notice of one month failing which, the agency is liable to pay liquidated damages @5% of tendered value besides forfeiture of security deposit.
- 27. The Contractor shall keep the equipment well maintained, neat and clean and adhere to the maintenance schedules of various equipment. On placement of Work Order they will prepare the maintenance schedule and discuss the same with Engineer-in-Charge of EMC/NIT, Trichy for its implementation. This may be revised from time to time as per the requirement.
- 28. The Contractor/Agency shall submit list of technicians & their working hours to be furnished and any change must be informed to the Institute accordingly before the changes is affected.
- 29. The persons deployed by the Contractor for the services mentioned above shall be the employees of the Contractor for all intents and purposes and that the persons so deployed shall remain under the control and supervision of the Contractor.
- 30. For the purpose of proper identification of the employees of the Contractor deployed for the work, Contractor shall issue identity cards bearing their Photographs /identification etc. and such employees shall display their identity cards at the time of duty.
- 31. The Contractor shall be liable for the payment of wages and all other dues which they are entitled to receive under the various Labour laws and other statutory provisions.

- 32. The Contractor shall comply with the statutory provisions of Contract Labour (Regulation & Abolition) Act, 1970; Employees State Insurance Act; Workman's Compensation Act, 1923; Payment of Wages Act, 1936; the Employees Provident Fund (and Miscellaneous Provisions) Act, 1952; Payment of Bonus Act, 1965; The Minimum Wages Act, 1948; Employer's Liability Act, 1938; and/or any other rules/regulations and/or statues that may be applicable to them. The Contractor shall indemnify the Institute against all claims which may be made upon the Institute whether under the aforesaid statutes or any other statute in force during the currency of this contract. In a Nutshell, there is no employer employee relationship between NITT and the personnel deployed by the contractor.
- 33. Contractor shall deploy his persons in such a way that they get weekly rest. The working hours / leave, for which the work is taken from them, do not violate relevant provisions of Shops and Establishment Act. The Contractor shall arrange to provide reliever equally qualified in case of absence/leave/off etc. The Contractor shall in all dealings with the persons in his employment have due regards to all recognized festivals, days of rest and religious or other customs. In the event of the Contractor committing a default or breach of any of the provisions of the Labour laws including the provisions of Contract Labour (Regulation and Abolition) Act, 1970 as amended from time to time or in furnishing any information, or submitting or filling any statement under the provisions of the said regulations and rules which is materially incorrect, he shall without prejudice to any other liability pay to the Director, NIT, Trichy, a sum as may be claimed by NIT, Trichy.
- 34. **Tender Cost & Earnest Money Deposit:** To be remitted through Demand Draft drawn in favor of the Director, NITT. Submission of EMD & Tender cost is liable to be rejected.
- 35. Security Deposit: The successful tenderer will have to execute a Demand Draft (OR) Performance Bank Guarantee (PBG) Annexure-IV in favor of the Director, National Institute of Technology, Tiruchirappalli within 15 days of the issue of the formal order, for a sum equivalent to 10% of contract value and this will be refunded after the contract has been ended. The PBG should remain valid for a period of 90days beyond the date of completion of all the completion of all the contractual obligations of the supplier. PBG will be discharged after three months (from the end of contract) after compliance of contractor's performance obligations under the contract.
  - a. If the agency fails to deploy manpower against the initial requirement within 15 days from date of placing the order, the PBG shall be realized without giving any further notice.

- b. If the contractor fails or neglects any of his obligations under the contract it shall be lawful for the NIT Trichy to realize either whole or any part of PBG furnished by the bidder as compensation for any loss resulting from such failure. In case of breach of any terms and conditions attached to this contract, the PBG of the agency will be liable to be realized besides annulment of the contract.
- 36. Contractor shall keep the NIT, Trichy indemnified against all claims whatsoever in respect of the employees deployed by the Contractor, in case any employee of the Contractor so deployed enters in dispute of any nature whatsoever, it will be the primary responsibility of the Contractor to contest the same. In case NIT, Trichy is made party and is supposed to contest the case, the NIT, Trichy will be reimbursed for the actual expenses incurred towards Counsel fee and other expenses, which shall be paid in advance by the Contractor to NIT, Trichy on demand. Further, the Contractor shall ensure that no financial or any other liability comes on NIT, Trichy in this respect of any nature whatsoever and shall keep NIT, Trichy indemnified in this respect.
- 37. Income Tax deduction at source as per the rules in force will be deducted from the bill and the amount so deducted will be credited to the Income Tax authority and a certificate of the amount credit will be issued by the Account Section of Institute.
  - 38.Institute reserve the right to curtail or enhance the scope of work either by deletion of certain items entirely or by reducing/increasing the quantities of certain items as required and reviewed by the Institute from time to time and therefore, the final value of the work shall be worked out and paid to the extent of work actually carried out.
  - 39.In the event of any question, dispute/difference arising under the agreement or in connection herewith (except as to matters the decision of which is specially provided under the agreement) the same shall be referred to the sole arbitration by the Director, NIT, Trichy & his decision will be final and binding.
  - 40. The Arbitrator may give interim awards and/or directions, as may be required, Subject to the aforesaid provisions the Arbitrator & Conciliation Act, 1996 and the rules made hereunder and any modification thereof from time to time being in force shall be deemed to apply to the arbitration proceedings under this clause.

- 41. Payment Terms: Payments will be made within 45days from the date of submission of Monthly bills. Payment will be made monthly after satisfactory completion of service on submission of bill on pro rata basis as per Engineer-in-Charge certification. No advance payment will be made.
- 42. **Penalty provisions**: All complaints shall be attended on the same day. The penalty will be imposed as below.

	Period	Particulars (Penalty)
Complaint	Below 12 Hrs	No Penalty
Complaint discharge	Above 12 Hrs. to 48Hrs	A Penalty of 0.5% of the contract amount
time		A Penalty of 1% of the contract amount
	Above 96 Hrs.	Contract will be terminated.
	Period	Particulars (Penalty)

- 43. <u>Replacement of Materials:</u> Replaced old material shall be handover to EMC. The replaced parts shall have a warranty of 1 year.
- 44. The L1 bidder item rate will be negotiated and fixed on par with other bidders/each zone L1 item rates.
- 45. Soft copy of Price bid schedule should be submitted to Engineer In charge at the time of Price bid opening.
- ♦ <u>ADDITIONAL INFORMATION AND ADDITIONAL</u> INSTRUCTION TO BIDDERS

## 1. General

- ❖ The "TECHNICAL BID" (application to qualify) shall contain data and information to enable the institute to draw up a list of agencies who can take part in the Tender process and whose "Financial Bids" (Tenders) can be opened.
- ❖ The decision of the NIT, Trichy Outsourcing Committee is final in all matters of Tender. In case of dispute, the matter will be subject to Tiruchirappalli, Tamil Nadu, Jurisdiction only.

## 2. Final Decision Making Authority

The Director, NIT Tiruchirappalli reserves the right to accept or reject all or any of the applications and to annul the qualification process / tender process at any time without assigning any reason or incurring any liability to the applicants.

- 3. The applicant should have sufficient Instruments, Tools and tackles like
  - 1. Chase cutting machine
  - 2. Electrical wire drawing equipment
  - 3. Conduit die set, Pipe Vice & Bench Vice
  - 4. 1000 V LT insulation tester
  - 5. 2.5 kV insulation Tester for HT works
  - 6. Cable fault locator
  - 7. Tong Tester
  - 8. Multi Meter
  - 9. hydraulically operated & hand operated crimping machines
  - 10.Earth tester
  - 11.portable drilling machine
  - 12. Overhead conduit puller.
  - 13. Measurement tape.
  - 14.Ladder

However, no tools and plants will be provided by the NITT. The Successful bidder shall arrange for the same, on his own.

**4.** The applicant's performance in respect of completed works and ongoing works should be certified by an officer.

# 5. Evaluation By Scoring

- **a.** The applicants, who qualify the eligibility criteria mentioned under clause 1 of Notice Inviting Tender, shall be further evaluated for the following criteria by scoring method based on the details submitted by them.
- **b.** Inspection committees will carry out surprise visit to tenderers clients' places and their reports, form valuable inputs for the short-listing process.

- c. The final selection of the contractors will be based on a weighted criteria system to be derived from the tender documents of the bidders. The tender will be considered as a whole and hence overall lowest value will be the lowest tenderer. Quoting all the items is mandatory and partial offer will be treated incomplete tender and rejected.
- **d.** Only the applicants who fulfill the eligibility criteria as stated earlier shall only be evaluated further for the following criteria:-

1	Functional Strength	Maximum 30 Marks
2	Experience in similar nature of	Maximum 25 Marks
	work during last five years	
3	Performance on Works	Maximum 20 Marks
4	Equipment, Tools and Tackles	Maximum 25 Marks
	Total	Maximum 100 Marks

<u>Note:</u> To qualify, the applicant must secure at least 60% (Seventy percent) marks in aggregate. The Director, NIT, Trichy reserves the right to restrict the list of prequalified contractors to any number deemed suitable by it. Even though an applicant may satisfy the above requirements, he would be liable to disqualification if he has:

- a. Made misleading or false representation or deliberately suppressed the information in the forms, statements and enclosures required in the qualification document.
- b. Record of poor performance such as, abandoning work, not properly completing the contract, or financial failures / weaknesses etc.

# 6. Tender Submission and Decision:

After the details submitted by the applicant regarding his financial capacity, previous experience etc. are studied and evaluated, a list of agencies who can take part in the Tendering process shall be prepared and all concerned will be intimated. The financial bids (Tender) of the applicants who have not been qualified after evaluation, shall be returned unopened. Other Tenders shall be opened on the date and time to be intimated, in the presence of the Tenderers or their authorized representatives who may be present by the committee constituted for this purpose.

# **♦** ADDITIONAL CONDITIONS

- 1. The contractor should employ supervisors who have experience in this type of work.
- 2. Child Labour is strictly prohibited and if there is any violation, the contract will be terminated.
- 3. Permits for workers and supervisor to the campus / building shall be obtained by the contractor from the concerned authorities. Only photo passes shall be issued and no group passes shall be issued.
- 4. Necessary Quarterly bills should be submitted by the contractor after obtaining the signature from the Engineer-In-Charge on or before tenth of subsequent month by obtaining all formalities.
- 5. All expenses related to the functioning of the employees engaged by the contractor shall be in the scope of the contractor. The Contractor is solely responsible for the payment of minimum wages for their employees as per the Government of India norms and E.S.I. The record of duty hours and pay structure should be maintained as per rules for inspection by authorized government personnel and meeting other statutory and non-statutory benefits/obligations.
- 6. The contractor shall bring the required equipment's at his/her own cost and risk and no extra payment will be made for the same.
- 7. The contractor should maintain an attendance register in each Institute and Department buildings and the same should be certified by the nominated officials from NIT Administration and hand over a copy to The Assistant Engineer, EMD/EMC, NIT, Trichy on the next working day and it should be followed throughout the year.
- 8. The contractor should pay the labour wages in the first week of the successive month and delay / failure will attract fine as deemed fit by the Institute.
- 9. The contractor must ensure that no labors shall work without uniforms and other safety accessories like mask, shoes and gloves etc.,
- 10. Rate per each quantity of work should be quoted in Rupees only. In case of any difference in rate quote in figures and words, the lower of the two rates will be taken as the tendered rate

- 11. The rate quoted in the tender shall remain valid for a period of four months from the date of opening Financial Bid. Once the contract is awarded after acceptance of tender, the rate as accepted by NITT shall be valid for billing till the entire work is completed and final bill is paid.
- 12. The bidders should provide warranty period of 2years minimum or as per manufacturer specified warranty period whichever is maximum.

## 13. Working Conditions:

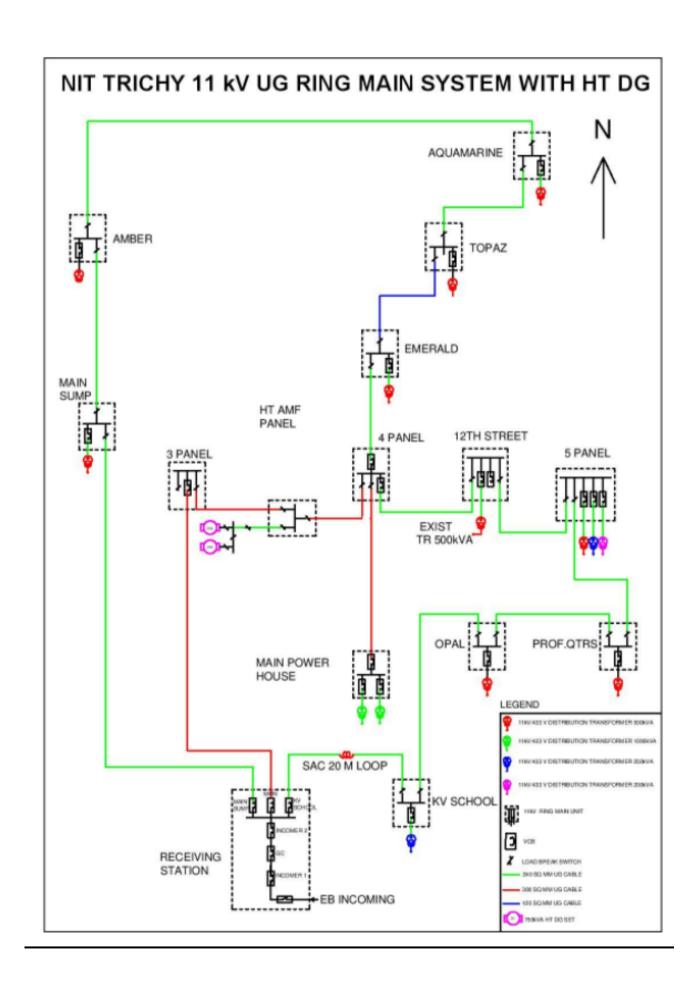
- a.Sufficient man power is required to be provided to all the work.
- b. Strict discipline must be observed by the workers.
- c. The labourers put in work must be provided with the proper uniform to distinguish them from other staff.
- d. The labourers and other staffs must be provided with identity card with the NITT's approval of Institute Authorities.
- e.The supervisors, under whom the labourers work, shall have to report before and after completion of work to the **Assistant Engineer/Electrical.**
- f. No payment will be made for a non-working days, proportionate reduction will be made if any item of work is not carried out or work is not carried out on any day due to any reason, as indicated in the bill of quantities.
- g. The rate quoted shall have to take care of increase in minimum wages and any other incidental charges.
- h. The payment will be made after deducting Income Tax, **Labour Welfare Cess** etc.
- 14. **Timings**: Whenever fault occurs the contractor shall depute adequate staff immediately to set right the fault in addition to routine maintenance of HT electrical installation works. (Including Sundays & holidays) at NITS.
- 15. Qualification and experience of various categories of staff deputed by contractor shall be as follows:
  - a. Technician (skilled): Having Diploma in Electrical Engineering or certificate in Electrician/Wireman trade issued by ITI/Local authorities/Govt. of India and minimum 2years experience in this field.
  - b. Supervisor: Having Diploma in Electrical Engineering with C Certificate and should have knowledge/certificate of 3years experience in this line or Higher Qualification.
  - c. The H.T.works shall be carried out by the qualified operator/switch board operator/technician, having valid certificate, to work on H.T.Installation.

- 16. Contractor shall ensure that his employee do not indulge in any unsafe or hazardous practices. They use safety equipment such as safety belts, safety shoes, goggles, helmet and masks where use of such equipment is required in day-to-day operations. All such safety gadgets will be provided by the contractor failing which the contract operating division will provide safety equipment to such employee of the contractor at the cost of the contractor to be recovered from his bills. Contractor shall fully indemnify NIT against any claim for damages for injury to person or property resulting from such accidents.
- 17. In case of any dispute or differences arising under the terms of this Agreement the same shall be settled by reference to arbitration by a sole Arbitrator to be appointed by Head, NIT. The provisions of Arbitration and Conciliation Act 1996 shall be applicable.
- 18. Any violation of instructions/agreement or suppression of facts will attract cancellation of agreement without any reference.
- 19. An agreement shall be signed with the successful bidder as per specimen enclosed.
- 20. <u>Jurisdiction:</u> Disputes of any nature that may be arise in connection with the execution of this order shall be governed by the Laws of India and subject to the jurisdiction of Courts situated in Tiruchirappalli, Tamil Nadu, India only.

# ♦ Location of HT Installations

# **HT Installations:** Entire Campus

- > Receiving station
- ➤ Main Power House
- ➤ Main Sump Substation
- > Amber Substation
- > Aquamarine Substation
- > Topaz Substation
- > Emerald Substation
- ➤ Ring Main Unit near Four pole structure
- ➤ 12<sup>th</sup> Street Substation
- ➤ 23<sup>rd</sup> Qtrs. Substation
- > Opal hostel Substation
- > KV School Substation
- ➤ Left out area if any



Signature & Stamp of Tenderer

# CHECKLIST FOR MONTHLY MAINTENANCE OF TRANSFORMER/HT & LT PANEL AND ITS CABLING SYSTE/RMU

NAME OF SUBSTATION
 CAPACITY OF TRANSFORMER
 RMU
 LOCATION
 MAKE
 SERIAL NO

## **JOBS TO BE ATTENDED**

Sl.no	Activities	Checks carried	Remarks
1.	Reading of MOG (Magnetic Oil Gage of Main tank		
	and Conservator tank)		
2.	Check for Silica Gel condition		
3.	Breathing holes in silica gel breather		
4.	Check for oil leakages		
5.	Check for oil level in the conservator tank is up to 3/4 <sup>th</sup> mark		
6.	Check for Dielectric strength, water content, acidity, sludge content, flash point,DDA,IFT and resistivity of transformer oil		

Sl.no	Activities	Checks carried	Remarks
7.	To check overheating, crack in bituminous		
	compounding		
8.	Checking of specific gravity of the liquid of the		
	battery cell and maintenance of minimum level by		
	adding distilled water checking ampere capacity of		
	the battery cell with cell tester		
9.	Cleaning of panels & Distribution boards.		
10.	To check tightness of the connection of the bus-		
	bars, with gear, control wiring for indicating		
	lamps, voltmeter with selector switches,		
	ammeter with selector switches, incoming and		
	outgoing cables, distribution boards,etc		
11.	Replacement of damaged /burnt out component		
	whenever necessary		
12.	Bushings are to be examined for crack and dirt		
	deposit and is to be cleaned or replaced		
13.	Any other abnormality		
	<u> </u>		

# History

Previously	Service date	Report No	Brief service details
1.			
2.			
3			
4			
Assistant E	Engineer/Electrical	Client's repr	esentative name & Signature

# CHECKLIST FOR HALF YEARLY MAINTENANCE OF TRANSFORMER/HT & LT PANEL AND ITS CABLING SYSTE/RMU

NAME OF SUBSTATION :
 CAPACITY OF TRANSFORMER :
 RMU :
 LOCATION :
 MAKE :
 SERIAL NO :

#### JOBS TO BE ATTENDED

Sl.no	Activities	Checks carried	Remarks
1	General cleaning of the H.T, VCB inside and		
	outside		
2	Checking of power auxiliary contacts, minor		
	fittings to be cleaned with emery cloth and		
	circuit breaker oil		
3	Greasing /oiling of the moving/sliding		
	mechanism of VCB (Vacuum Circuit Breaker)		
4	Tightening of termination nuts /bolts/screws		
5	Checking of closing and tripping mechanism of		
	VCB &Testing of relays		
6	Visual inspection of the main contacts of the ACB		
7	Castle locking arrangement is to be checked for		
	correct operation		
8	Greasing /oiling of moving or sliding parts of		
	ACB/MCCB		
9	Any other abnormality		

#### History

Assistant E	Engineer/Electrical	Client's rep	resentative name & Signature
3 4			
2.			
1.			
Previously	Service date	Report No	Brief service details

# CHECKLIST FOR YEARLY MAINTENANCE OF TRANSFORMER

CAPACITY OF TRANSFORMER
 LOCATION
 MAKE
 NAME OF SUBSTATION
 SERIAL NO

#### JOBS TO BE ATTENDED

Slno	Activities	Checks carried	Remarks
1	Obtain LC from Sub-station Operation		
2	Check for oil leakages		
3	Check for oil level in the conservator tank		
	is up to 3/4 <sup>th</sup> mark		
4	Check for Dielectric strength, BDV, water		
	content, acidity, sludge content, flash		
	point,DDA,IFT and resistivity of		
	transformer oil		
5	Check for Breather condition		
6	Check for Silica Gel condition		
7	Clean the body		
8	Open the terminal box check the following		
	Tightness of terminal connection		
	Tightness of terminal connection		
	Condition of bushings		
	Condition of bushings		
	Any sign of overheating.		
9	Check for any unplugged opening, missing		
	bolts		
10	Check all terminal box tightness		
11	Check oil/winding temperature setting		
12	Check earthing system is proper & intact		
13	Check cable support		
14	Check IR value		
	a) Primary : P-E		
	b) Secondary : P-E		

15	Check auto, remote, manual function of	
	cooling system. (Checking of oil pump, air	
	fans and other items engaged in cooling	
	system of transformer)	
16	Check for Proper function of Buchholz	
	relays & Pressure release device.	
17	Check for terminal connection for control	
	and relay wiring.	
18	Cleaning of relays, alarms, control switches	
	along with their circuits	
19	Checklist for Dissolve gas analysis	
	transformer oil	
20	Calibration of OIT and WTI	
21	Check list for Measurement of Bushing of	
	transformer TAN & DELTA	
22	Any other abnormality	

History

Previously Service date Report No Brief service details

1.

2.

3

4

**Assistant Engineer/Electrical** 

Client's representative name & Signature

# ANNEXURE - I FOR HT INSTALLATIONS PROFORMA FOR TECHNICAL BID

Sl.	Item/Requirement from the Bidder	Details	Pg.no
1	Particulars of remittance of EMD: Specify		
	(a) DD Number		
	(b) Amount		
	(c) Name of Issuing Banker		
	Note: Bids without EMD will be rejected summarily		
2	Particulars of remittance of Cost of Tender Document. Specify		
	(a) DD Number		
	(b) Amount		
	(c) Name of Issuing Banker		
	Note: Bids without cost of tender document will be rejected summarily.		
3	Name and Complete Postal address of the Applicant or Bidder Firm/ Company with phone/ Fax/ Mobile number		
4	Legal status / Constitution of the Bidder:  (a) Sole Proprietor  (b) Partnership  (c) Private Limited Company  d) Public Limited Company  (e) others  Please attach self-attested documentary proof		
5	Details of License obtained from the Licensing Authority (Attach Self-attested Xerox Copy) EA ESA	License No: Valid till :	

6	Nature of the Business of the Bidder		
7	Year of Commencement of Business		
8	Location of the Registered / Main Office		
9	(a) Name, (b) address ,(c) designation, (d) phone & cell number and (e) E mail ID of the CONTACT PERSON of the applicant/ bidder		
10	Name and address of your banker		
11	Copy of Income Tax Permanent Account Number (PAN Number) (Please Attach self-attested Xerox copy)		
12	Annual Turnover during the Last three financial years 2013-14, 2014-15 and 2015-16 (Profit and Loss Account and Balance sheet duly audited and certified by a Chartered Accountant and Income Tax Return Acknowledgement i.e., ITR for the last three years may be attached)		
13	Details of Manpower available with the bidder	Use separate sheet to furnish the list	
14	Details of Equipment/ Tools/ Tackles available with bidder	Use separate sheet to furnish complete details in Annexure-A.	
15	Registration with Employees Provident Fund (furnish documentary proof)		
16	Registration with Employees State Insurance (furnish documentary proof)		
17	Service Tax Registration Number, (Self-attested Xerox copy to be attached)		
18	Details of similar work, if any, executed or being executed along with address of the service receiver with contact number, value of the work.  Enclose a copy of the work order along with performance certification.		

Bidders Response should be definite, complete and legible. Use separate sheet wherever necessary.

- 1. I/we hereby certify that all the statements made and information supplied in the enclosed forms and accompanying statements are true and correct.
- 2. I / we have furnished all information and details necessary for deciding our eligibility to be qualified for taking part in the tendering process for the work. We have no further information to supply.
- 3. I/We also authorize the Director, NIT Tiruchirappalli or his representative to approach individuals, firms and corporations to verify our competence and general reputation.

Authorized signatory of Bidder with S	eal
Name	••••••
Designation	•••••
<b>PRICE BID for HT Installation:</b>	ANNEXURE – II Enclosed

# Annexure-A.

Sl no	Name of the tools &	Make	Year of	Available Qty
51.110	Instruments	Wake		with the bidders
	mstruments		necessary	with the bluders
			items	
1	Chase outting machine		Items	
1.	Chase cutting machine Electrical wire			
2.				
3.	drawing equipment Conduit die set			
3.				
4.	Pipe Vice & Bench Vice			
5.	1000 V LT insulation tester			
6.	2.5 kV insulation Tester fo			
	works			
7.	Cable fault locator			
8.	)			
9.	Multi Meter			
10.	hydraulically operated &			
	operated crimping machines			
	Earth tester			
12.	Portable drilling machine			
13.	Overhead conduit puller			
14.	Measurement tape.			
15.	Ladder			
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
			L	

# Annexure-B.

**Experience Certificate** 

			- Input		CCI				
Sl. No.	Name of the Contract	Name of the Client	Brief Description of Work	Date of Start	Date of complet- ion as per contract	Date of actual completio n of Work	Value (₹)	Type of Industry (MF/Inst itution)	Signature of Executive Engineer/ Project Manager/ Equivalent

The above projects have been satisfactorily completed.

Signature of t	he Customer
----------------	-------------

## ANNEXURE – III

(To be made on Rs 100.00 Non Judicial Stamp Paper)

#### DRAFT AGREEMENT

This agreement is made on	day of	Two thousand
sixteen between NATIONAL INSTIT	UTE OF TECHNO	OLOGY, TRICHY as one
part, hereinafter called 'NIT' and M/	S	, having its registered
office at		hereinafter called the
'Agency' for Comprehensive A		nce Contract for HT
installations. WHEREAS the NIT	is desirous to	engage the Agency for
<b>Comprehensive Annual Maintenane</b>	ce Contract for I	IT installations for NIT,
TRICHY on the terms and conditions s	stated below:	

- 1. The Agency shall be solely responsible for compliance to provisions of various labour, Industrial and any other laws applicable and all statutory obligations, such as, wages, Allowances, compensations, EPF, Bonus, Gratuity, ESI, etc. relating to electrical maintenance personnel deployed in NIT. The NIT shall have no liability in this regard.
- 2. The Agency shall be solely responsible for any accident/medical/health related Liability/compensation for the personnel deployed by it at NIT. The NIT shall have no liability in this regard.
- 3. Any violation of instruction/agreement or suppression of facts will attract cancellation of agreement without any reference or any notice period.
- 4. The contract can be terminated by giving one month notice on either side. In case of non-compliance with the contract, the NIT reserves its right to:
  - a) Cancel/revoke the contract; and/or
  - b) Impose penalty up to 10% of the total annual value of contract.
- 5. Security deposit equal to 10% of the Annual Contract Value (refundable Without interest after two months of termination of contract) in the form of Pay Order/Demand Draft or Bank Guarantee shall be furnished at the time of signing of the Agreement.
- 5. The Agency shall be fully responsible for timely monthly payment of wages and any other dues to the personnel deployed in NIT.

- 6. The Technical personnel provided by the Agency shall not claim to become the employees of NIT and there will be no Employee and Employer relationship between the personnel engaged by the Agency for deployment in NIT.
- 7. There would be no increase in rates payable to the Agency during the contract period except reimbursement of the statutory wages revised by the Govt.
- 8. The Agency also agrees to comply with annexed Terms and Conditions and amendments thereto from time to time.
- 9. Decision of NITS with regard to interpretation of the Terms and Conditions and the Agreement shall be final and binding on the Agency.
- 10. In case of any dispute between the Agency and NIT, NIT shall have the right to decide. However, all matters of jurisdiction shall be at the local courts located at TRICHY.

THIS AGREEMENT will take effect from day	y of
Two thousand Sixteen and shall be valid for one year	•
the contract may be extended for another one year on the basis of satisfactors service.	
IN WITNESS WHEREOF both the parties have set and subscribed trespective hands with their Seal in Trichy in the presence of the witness:	their
NATIONAL INSTITUTE OF TECHNOLOGY, TRICHY Witness: 1.	
2.	
AGENCY	
Witness: 1.	
2.	

Signature & Stamp of Tenderer

d

# ANNEXURE – IV BANK GUARANTEE FOR SECURITY DEPOSIT

- 1. THIS DEED OF GUARANTEE made this First Day of September 2016 By Name of Bank in favor of M/s.National Institute of Technology, Tamilnadu, Tiruchirappalli 620 015, having its registered office at National Institute of Technology, Trichy 620015.

- 4. AND WHEREAS the Name of the Contractor approached the Name of the Bank and at their request and in consideration of the arrangement arrived at between the said Contractor Name of the Contractor and the said Bank.
- 5. We Name of the Bank do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Company stating that the amount claimed is due by way of Inss or damage caused to or would be caused to or suffered by the Company by reason of breach by the said Contractor(s) of any of the terms and conditions contained in the said Agreement or by the reason of the contractor(s) 'failure to perform' the said agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding ₹ ------/-

6. We Name of the Bank further assure that the Contractor/ Supplier shall be responsible for the safe custody and protection of the raw materials that have been supplied/and to be supplied by NIT under the contract(s) already placed but pending as on date and to be placed up to 31.08.2017 against all risks till they are delivered back as finished products to NIT as per the terms and conditions of the Contract or as they may direct and until such time, the Contractor/ Supplier shall hold the raw materials in trust for NIT and shall not alienate the same in any manner whatsoever by way of sale or mortgage or charge or hypothecation etc. in favor of anyone else including the bank herein or any other banks /financial institutions etc.

- 7. We undertake to pay unconditionally to the Company any money so demanded notwithstanding any dispute(s) raised by the Contractor in any suit, or proceedings pending before any Court or Tribunal or Arbitration or before any other authority relating thereto our liability under this present being absolute and unequivocal. The payment under this guarantee would not wait till the disputes have been decided by any Court or Tribunal or in the arbitration proceedings or by any other authority. The payment so made by us under this Bond shall be a valid discharge of liability for payment there under and the Contractor(s) shall have no claim against us for making such payment.
- 8. We Name of the Bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken force of the said Agreement and that it shall continue to be enforceable till all the dues of the Company under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till 31.08.2017 Office / Department/ Division

- of the Company certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.
- 9. (i) Unless a demand or claim under this guarantee is made on us in writing on or before the 31.08.2017 we shall be discharged from all the liability under this guarantee thereafter. But where such claim or demand has been preferred by the Company with the Bank before the expiry of the said date, the claim shall be enforceable notwithstanding the fact that the said enforcement is effected after the said date.
  - (ii) For the purpose of this clause, any letter making demand on the Bank by M/s. NIT dispatched by Registered Post with Ack. Due or by Telegram or by any Electronic media addressed to the above mentioned address of the Bank shall be deemed to be the claim / demand in writing referred to above irrespective of the fact as to whether and when the said letter reaches the Bank, as also any letter containing the said demand or claim is lodged with the bank personally.
  - 10. We Name of the Bank further agree with the company that the Company shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor (s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Company against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by any reason of any such variation or extension being granted to the said Contractor(s) or for any forbearance, act or omission on the part of the company or any indulgence by the company to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating would but for this provision have effect of not so relieving us.
  - 11. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).

- 12. It shall not be necessary for the company to proceed against the contractor before proceeding against the guarantor-bank and the guarantee herein contained shall be enforceable against them notwithstanding any security, which the company may have obtained or obtain from the Contractor shall, at the time when proceedings are taken against the guarantor hereunder be outstanding or unrealized.
- 13. Any claim or dispute arising under the terms of this document shall only be enforced or settled in the Courts at Tiruchirappalli.
- 14. The guarantor hereby declare that it has power to execute this guarantee and the executant has full powers to do so on its behalf under the proper authorities granted to him/them by the guarantor.
- 15. We Name of Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the company in writing.

In witness whereof we Name of Bank have hereunto setout Bank Seal the Sth Day September 2016.

Dated:

(Name of the bank)

Note: This guarantee should be issued on non-judicial stamped paper, stamped in accordance with stamp act

# HT INSTALLATION - PRICE BID - ANNEXURE-II

		Unit	Qty	Material Cost	VA	T	Total Cost incl VAT	Labour cost	Service Tax	Total Cost	Total amount	Total amount	
SLNo	Description		Qty		5%	14.50%	B+C	Labour cost	15%	E+F	/Qty (D+G)	A*H	Rate in Words
			A	В	C		D	E	F	G	Н	I	
1	CABLES  Supplying of following size ISI marked XLPE insulated ,aluminium conductor H.T cable of 11 KV grade as required.												
1.1	(Make:Havells,Finolex,Gloster and Polycab) as per ISI Specification IS:7098/(Part-II) 1985 with latest amendments												
1.1.2	3X120 Sq mm	Mtr	25										
1.1.1	3X240 Sq mm	Mtr	25										
1.1.3	3X300 Sq mm	Mtr	150										
1.2	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.												
1.2.1	Upto 120 sq. mm	Mtr	50										
1.2.2	Above 120 sq. mm and upto 400 sq. mm	Mtr	150										
	SUB TOTAL I												
2	HV CABLE JOINTING & END TERMINATION												
2.1	Supplying and making indoor cable end jointing with cast resin compound, including lugs and other jointing materials, for following size of 3 core, XLPE aluminium conductor cable of 11 KV grade as required:												
2.1.1	120 sq. mm	No	50	NA	NA	NA	NA						

				Material Cost	VA	Т	Total Cost incl		Service Tax	Total Cost	Total amount	Total amount	
SLNo	Description	Unit	Qty		5%	14.50%	VAT B+C	Labour cost	15%	E+F	/Qty (D+G)	A*H	Rate in Words
			A	В	C		D	E	F	G	Н	I	
2.1.2	240 sq. mm	No	75	NA	NA	NA	NA						
2.1.3	300 sq. mm	No	100	NA	NA	NA	NA						
	SUB TOTAL 2												
3	CABLE JOINT												
3.1	Supplying and Making HV straight through cable jointing with heat shrinkable jointing kit complete with all accessories including ferrules suitable for following size of 3 core, XLPE aluminium conductor cable of 11 KV grade as required: \.Make: Mseal/Equivalent												
3.1.1	120 sq. mm	No	15	NA	NA	NA	NA						
3.1.2	240 sq. mm	No	15	NA	NA	NA	NA						
3.1.3	300 sq. mm	No	15	NA	NA	NA	NA						
	SUB TOTAL 3												
4	CABLE ROUTE MARKER												
4.1	Supplying and making HT cable route marker with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size ) of size 92 cm X 92 cm with a thickness of 10cm including inscription duly engraved as required.	No	20	NA	NA	NA	NA						
4.2	Find out HT cable fault	Nos	1	NA	NA	NA	NA						
4.3	HT Cable Joint Per Location 3 X120 - 300Sq.mm	Nos	1	NA	NA	NA	NA						
	SUB TOTAL 4	NUS											

		Unit	04	Material Cost	VA	T	Total Cost incl	T.1.	Service Tax	Total Cost	Total amount	Total amount	
SLNo	Description	Cint	Qty		5%	14.50%	VAT B+C	Labour cost	15%	E+F	/Qty (D+G)	A*H	Rate in Words
			A	В	C		D	E	F	G	Н	I	
5	HT INSTALLATION WORKS												
5.1	Receiving station Maintenance of 11kV AB switch , 11kV Breakers- 6Nos,Testing of relays,yard cleaning,earth pit resistance,measurement and documentation.Breakers, CT's, PT's, Battery Chargers & Batteries, Maintenance of Receiving Station equipment's as per standard ,attending faults in Receiving Station including Double pole Structure and checking and earthing of earth resistance value.	Nos	1	NA	NA	NA	NA						
5.2	Main Power House a.Maintenance of LT AMF panel-2No (4 breaker) Relay testing b.Maintenance system control breaker 3 Nos and relay testing. c.Maintenance of Tr 2X1000 kVA, Maintenance of Oil filteration,earth pit measurement etc d. Maintenance of 1000- 1600A MV panel- 6Nos, ACB-17Nos	Nos	1	NA	NA	NA	NA						
5.3	Substations: sump, amber, aquamarine, topax ,emerlad, 12th street,Prof.qua,opal hostel,KV school Maintenance of 11kV/33kV substations,transformer testing,oil filteration,cleaning,yard maintenance and earth pit resistant measurement.Tr 500kVA-1 No,ACB-1 No ,800A LV Panel-1 No	Nos	9	NA	NA	NA	NA						
5.4	Ouarters Substations: Maintenance of 11kV/33kV substations,transformer testing,oil filteration,cleaning,yard maintenance and earth pit resistant measurement. Tr 500kVA-1 No,Tr 250kVA -1 No,Tr 200kVA-1No, ACB-3 Nos, LT AMF-1No, 800A LV Panel-5Nos	Nos	1	NA	NA	NA	NA						
5.5	KV School Substations:  Maintenance of 11kV/33kV substations,transformer testing,oil filteration,cleaning,yard maintenance and earth pit resistant measurement.  Tr 250kVA-1 Nos,ACB-1No, 800A LV Panel-1 No	Nos	1	NA	NA	NA	NA						
5.6	RMU 3 Panel: Maintenance of RMU-1No, HT Breaker-1, HT Load breaker -2No,Relay testing,earth pit checking-2Nos	Nos	9	NA	NA	NA	NA						

		Unit	Qty	Material Cost	VA	Т	Total Cost incl VAT	Labour cost	Service Tax	Total Cost	Total amount /Qty	Total amount	
SLNo	Description				5%	14.50%	B+C		15%	E+F	( <b>D</b> + <b>G</b> )	A*H	Rate in Words
5.7	RMU 4 Panel: Maintenance of RMU-1No, HT Breaker-1, HT Load breaker -3Nos,Relay testing,earth pit checking-2Nos	Nos	<b>A</b> 2	B NA	NA	NA	<b>D</b> NA	Е	F	G	Н	I	
5.8	RMU 5 Panel: Maintenance of RMU-1No, HT Breaker-2, HT Load breaker -3Nos,Relay testing,earth pit checking-2Nos	No	1	NA	NA	NA	NA						
	SUB TOTAL 5												
	NET AMOUNT												

Note : NA - Not Applicable