

INDIAN INSTITUTE OF TECHNOLOGY
KHARAGPUR 721 302
ESTATE (E&M) WORKS SECTION

TENDER NOTICE

No. : IIT/E/E&M/T/34/2017-18
Dt. : 12.10.2017

The Executive Engineer (Electrical Works), IIT Kharagpur invites sealed item rate tenders in **Two Bid System containing Part-I (Technical Bid) & Part-II (Financial Bid)** from the registered and eligible contractors of the Indian Institute of Technology, Kharagpur/CPWD/WBPWD/MES/Railways (SER)/Kharagpur Municipality/PSUs and other bonafied agencies meeting the minimum qualification criteria for the following Work :

Sl. No.	Name of Work	Estimated Amount (₹)	Earnest Money (₹)	Cost of Tender Document (₹)	Completion Time
1	Supply, erection, testing and commissioning of single panel 11 kV Vacuum Circuit Breaker (VCB) unit for S/Stm No. 5,7,14 and (HVAC) NCRC Substation at IIT Kharagpur	25,26,681.00	50,534/- (To be submitted in a separate envelope)	2,000.00 (non-refundable)	3 Months

TENDER DOCUMENTS can be downloaded from the Institute website www.iitkgp.ac.in and apply. Requisite Tender fee (non-refundable) to be paid by demand draft in favour of "IIT Kharagpur" on any nationalized Bank of India payable at Kharagpur Branch as stated above at the time of submission of Bid.

- a) This tender is available at CPP Portal (<https://eprocure.gov.in/cpp/>)
- b) Amendments/Corrigendums will be published in website.
- c) Amendments/Corrigendums will also be published in CPP Portal for the first time.

TECHNICAL BID : Technical Bid must accompany the following documents with self attestation for Technical evaluation:

- A. i) GST
- ii) PAN

- iii) Completion Certificates of works justifying eligibility criteria.
- iv) Updated Contractor's Electrical Licence
- v) Updated Trade Licence

Kindly note the following information as per the Table below:

Date of Submission of Technical Bid, Price Bid	22 nd November 2017 upto 3:30 P.M.
Date of opening of Technical Bid	22 nd November 2017 at 4:30 P.M.
Date of opening of Price Bid	29 nd November at 4:30 P.M.
Tender Paper Cost (Non-refundable) & Earnest Money Deposit	To be paid by demand draft in favour of "IIT Kharagpur" on any nationalized Bank of India payable at Kharagpur Branch in two separate envelopes. Earnest Money will be converted to Security Deposit of successful tenderer.
The bidders must submit the bid in 3 (Three) nos. separate envelopes each containing a) Technical Bid, b) Price Bid & c) Earnest Money Deposit & Tender Paper cost. The Technical bid must have a forwarding application along with all relevant documents as required in the Technical Bid.	

B. Eligibility criteria :

Contractors who fulfill the following requirement shall be eligible to apply :

Three works each costing not less than 40% of estimated cost or two works each costing not less than 60% of estimated cost or one work costing not less than 80% of estimated cost executed under Central /State Government/Central Autonomous Body/PSUs.

C. Make list of the major items /equipment to be mentioned, if required..

FINANCIAL BID : Financial Bid must accompany the Price bid duly filled.

(S. Ghosh)
Sr. Executive Engineer (Electrical)

Copy to :

1. Registrar, IIT Kharagpur
2. Prof.-In-Charge (Electrical Works)
3. Prof.-In-Charge, IIC--- with a request to upload the tender notice in the Institute Website
4. Superintending Engineer (Civil)
5. Dy. Registrar (F&A)
6. Notice Board, EPDS
7. Notice Board, Estate (E&M) Head Office

Tender Document

For

Name of the Work : **Supply, erection, testing and commissioning of single panel 11 kV Vacuum Circuit Breaker (VCB) unit for S/Stm No. 5,7,14 and (HVAC) NCRC Substation at IIT Kharagpur**

1. The site for the work is available/or the site for the work shall be made available in the parts as specified below.
2. The time allowed for carrying out the work will be 2 (Two) Months from the day after the date of written orders to commence the work.
3. The contractor should quote the figures as well as in words the rate and amount tendered by them. The amount for each item should be worked out and the requisite totals given.
4. When a contractor signs a tender in an Indian Language the total amount tendered should also be written in the same language.
5. Earnest Money, amounting to Rs. 50,534.00 (Rupees Fifty Thousand Five Hundred Thirty Four only) in Demand Draft in favour of " IIT Kharagpur" on SBI, Kharagpur must accompany each tender and each tender is to be in a sealed cover superscribed with , **"Supply, erection, testing and commissioning of single panel 11 kV Vacuum Circuit Breaker (VCB) unit for S/Stm No. 5,7,14 and (HVAC) NCRC Substation at IIT Kharagpur."**
6. Earnest Money of the successful bidder is to be converted into security deposit, further sum amounting 10% or as applicable will be deducted from your running bill(s)/final bill.
7. The acceptance of a tender, will rest with the authority who does not bind himself to accept the lowest tender, and reserves to himself the authority to reject any or all the tenders received without the assignment of a reason. All tenders in which any of the prescribed conditions are not fulfilled or are incomplete in any respect are liable to be rejected.
8. Canvassing in connections with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
9. All rates shall be quoted on the proper form of the tender alone.
10. On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Engineer-in-Charge shall be communicated to the Engineer-in-Charge.
11. Special care should be taken to write the rates in figures as well as in words, and the amount in figures only, in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures, the word "Rs." should be written before the figure of rupees and words "P" after the decimal figures, "e.g., Rs.2.15P" and in case of words "Rupees" should precede and the word "Paise" should be written at the end. Unless the rate is in whole rupees and followed by the words "only" it should invariably be upto two decimal places. While quoting the rate in schedule of quantities, the word "only" should be written closely following the amount and it should not be written in the next line.

12. The Institute does not bind himself to accept the lowest or any tender and reserve to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.
13. GST, labour cess insurance or any other tax on materials, machinery and T&P, labour or any other item/service in respect of this contract shall be payable by the contractor and Institute will not entertain any claim whatsoever in respect of the same.
14. The contractor shall not be permitted to tender for works in the Institute in which his near relative is posted as Divisional Accountant or as an Officer in any capacity between the grades of Superintending Engineer and Engineer (Both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any Officer in the Institute. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Institute.
15. The contractor shall give a list of Institute employees related to him.
16. No Engineer of Officer rank or other employees employed in Engineering or Administrative duties in an Engineering Department of the Govt. of India Institute is allowed to work as a contractor for a period of two years of the retirement from Govt. service Institute, without the previous permission of the Govt. of India Institute. This contractor is liable to be cancelled if either the contractor or any of this employees is found at any time to be such a person who had not obtained the permission of the Govt. of India Institute as aforesaid before submission of the tender or engagement in the contractor' service.
17. The tender for the work shall remain open for acceptance for period of 120 days from the date of opening of the tender. If any tenderer withdraws his tender before the said period or makes any modifications in terms & conditions which are not acceptable to the Engineer-in-charge then Institute shall without prejudice to day other right or remedy be a liberty to forfeit the said earnest money.
18. The contractors exempted from payment of earnest money/security deposit in individual cases should attach with the tender an attested copy of the Institute's letter exempting them from the payment of earnest money and security deposit and should produce the original whenever called upon to do so.
19. The tender for the work shall not be witnessed by a contractor or contractors who himself/themselves has/have tendered or who may and has/have tendered for the same work. Failure to observe this condition would render tenders of the contractors tendering as well as witnessing the tender liable to summary rejection.
20. The Contractor shall submit list of works which are in hand (Progress) in the following form :

Name of Work	Name and particulars of Division where work is being executed.	Amount of work	Position of works in progress	Remarks
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21. Rates quoted by the contractors in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures, and in word. However, if a discrepancy is found the rates which correspond with the amount worked out by the contractor shall be taken as correct.

22. If the amount of an item is not worked out by the contractor or it does not correspond with the rate written either in figures or in words that the rate quote by the contractor in words should be taken as correct.

23. Where the rate quoted by the contractor in figures and in words tally but the amount is not worked out correctly, the rate quoted by the contractor will be taken as correct, not the amount.

INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR
Office of the Sr. Executive Engineer (Electrical)
Electric Power Distribution Section

Name of the work

Supply, erection, testing and commissioning of 11kV Vacuum Circuit Breaker (VCB) for SS-5, SS-7, SS-14 and HVAC Sub-Station at Nalanda Classroom Complex(NCRC) for segregating 11 kV HT power supply and also to facilitate HT ring Main between SS14 and NCRC Sub-Station for reliable HT power source to NCRC

SI.No	Description	Unit	Qty.	Rate	Amt.	Remarks
1.	<p>Supply, erection, testing and commissioning of single panel vacuum switchgear unit (VCB). The panel unit should have 11kV, 3 Pole, 50 Hz, 400Amps, 250MVA, 13.1 KA symmetrical breaking capacity, single phase motor operated & manual spring charging system with power pack and intelligent quasar metering with RS 485 communication facilities as per IS: 2516 with power pack 110 volts DC unit and horizontal Draw out type PT, 11 kV/110 volt,3 phase,3 wire,50 HZ, busbar connected resin cast PT for each VCB unit.</p> <p>(For details please see ANX 1 attached herewith)</p> <p>Make: Crompton / Areva / Kirloskar</p> <p>At S/S-5,S/S-7,S/S-14 & Nalanda Sub-station and as directed by site in-charge.</p>	Set	04			
2.	<p style="text-align: center;">HT Cable</p> <p>Supply of 11 KV, 3 core, UE, stranded 95 sq mm aluminium conductor XLPE insulated, A2XFY, PVC bedded, galvanized flat steel/strip armoured and overall PVC sheathed screened cable conforming to IS:7098 part II with latest amendments.</p> <p>Make: Havells, Gloster, Nicco</p>	Mtr	500			
3.	<p>Laying of one no HT 3core, 11kV grade, XLPE insulated cable in ground below 1000 mm from ground level 460 mm wide including transportation of cable to site excavation, protection with bricks @ 16 bricks per metre in a box form, refilling with sand between bricks and cables and then back filling the trench with shifted soil, levelling up and restoring surface duly rammed.</p> <p>(a) Upto 120 sq mm, 3 core</p> <p>Note: Bricks should be minimum 2nd class quality.</p>	RM	450			
SI.No	Description	Unit	Qty.	Rate	Amt.	Remarks
4.	<p>Laying of one no 11 kV(UE), HT 3core up to 120 sq mm, XLPE insulated cable in existing covered masonry trench including taking out RC covers ,setting them in order, mending good the damages, inclusive of all hardware as required.</p>	RM	50			

5.	Providing and making indoor type end termination to 11kv (UE), 3core 95 sq mm aluminium conductor XLPE (UE), insulated cable with supply and using of RAYCHEM make heat shrinkable type end termination kits, dowel's solder less sockets, 11kv insulation tape. Terminal connection earthing, identification tags and making connection to switchgears, transformer, bus bars etc inclusive all hardware as required for the following cables (a) Upto 120sq mm, 3core	Each	08			
6.	Supplying and making straight through cable jointing with Raychem make heat shrinkable type cable jointing kit complete with all accessories including ferrules suitable for following size of 3core, XLPE aluminium conductor cable of 11kV(UE) grade as required. (a) Upto 120sq mm, 3core	Each	01			
7.	Earthing with medium gauge GI earth pipe 4.5 meter long, 40mm dia including all accessories and providing masonry MS enclosure with cover plate having locking arrangement and GI watering pipe etc. with charcoal/coke and salt as required. Make of GI pipe : Bansal (Medium)	Set	02			
8.	Supply and laying 25mm x 5mm GI strip at 0.50 meter below ground as striped earth electrode, including connection terminating with GI nut, bolts spring washer etc. as required. (Jointing shall be done by welding only after 4 inch overlapping of the strips).	RM	30			
9.	Design, Fabrication, Supply and fixing of MS box with powder coated painting to be fixed on VCB panel side face to facilitate the HT cable termination from main bus of the VCB panel. (Size of MS box : 600mm x 450mm x 300mm depth and made out of 2mm thick MS sheet as instructed by site in-charge.)	No	04			
10.	Supplying & fixing of HT cable route marker with 10cm x 10cm x 5mm thick GI plate with inscription (HT Cable) there on, bolted/welded. to 35mm x 35mm x 6mm angle iron, 60cm long and fixing the same in ground as required.	Each	20			

Total Rs.

ANX-1

VACUUM CIRCUIT BREAKER

Supply, erection testing and commissioning of **single panel Vacuum switchgear unit** of 11kV, 3 core, 50 Hz, 400 amp, 250 MVA symmetrical breaking capacity, dust and vermin proof, totally enclosed in sheet steel housing fully interlocked, horizontal draw out type, vertical isolation indoor, floor mounted truck type with single phase motor operated spring charging and manual spring charging mechanism with shunt trip and anti pumping relay arrangement with ON /OFF /spring charge /Trip circuit healthy etc indicators, earthing terminals, automatic safety shutters with locking facility complete with required no. of auxiliary contact and **testing terminals** at front.

Resin cast CTs of suitable ratio **150/5/5** and accuracy class 1.0 and 5P 10 of burden 15VA and symmetrically fault current with standing capacity of 13.1 kA / Sec. The VCB is required to be **coupled** with aluminium bus-bars with the existing VCB common bus with supply of all materials and hardware as required as per site condition.

Power Pack rectifier units and intelligent metering with L&T make **QUASAR** meter of 3 phases, 3 wires, 5 amps CL1 FM IPM 110 Volts (L-L) is to be provided with each VCB units.

Bus bar compartment shall have suitable capacity, non-hygroscopic and high di-electric strength SMC/FRP bus bar supports with electrolytic aluminium /copper bus bar with suitable insulating sleeves. IDMT relays with 2 elements over load and 1 element earth fault with Master Trip relay. The control ckt. is to be operated with 110V A.C from P.T or 110 V DC through rectifier unit.

PT should be with HT/LT fuses conforming to IS-3156 (with latest amendment) with cast resin insulated (Dry Type)

P.T burden: 100VA/ Phase, Accuracy class: 1.0

Highest system voltage: 12 kV, INSL: 28 kV

Lightning Impulse Voltage: 75 kV, Connection: Y/Y IS: 3156. **Make: CT, PT:** Crompton, Eastern switchgear, IS specified.

Make of VCB: Compton, Areva, ABB, Kirloskar

Test, trip push button, T-N-C breaker control switch, local, remote operation and electrical closing mechanism, indicating lamps, cable entry box including interconnection providing fire / heat resistance coating for metering, and breaker truck enclosure and painting as per IS: 2516 & IS: 34527.

Warranty: Two years from the date of successful commissioning at site.

Factory Inspection: Factory inspection and testing are to be arranged by the contractor for IIT officials with conveyance, fooding and lodging.

Erection: The contractors are liable to perform all the arrangement for erecting the **Unit panel VCB** unit on MS channels, including **any civil work as may be required during execution of the job**, including supply of iron channels of approx size 150 x 75 x 75 mm as approved by the Engineer and fixing them on cable trench with foundation bolts including supply of all hardware for complete execution of the job.

Note: The contractor is required to submit the **electrical G.A and SLD** for approval by the Department before placing order for fabrication.

GENERAL SPECIFICATION AND CONDITIONS

1. The work shall be carried out as per National Code or P.W.D. specifications for works at West Bengal or other wise as specified in the Schedule of Quantities for the works.
2. The rates on percentage quoted by the contractors shall be for all leads, lifts, depth etc. unless otherwise specified in the schedule of quantities attached to agreement.
3. The work will be carried out as per instructions given by the Engineer-in-Charge and as per layout plan and the contractor shall be bound to carry out the work in accordance with the revised instruction and /OR modified drawing.
4. The brick shall be second class and / or first class bricks or a specified in the schedule of quantities and shall be of local best available size. To use first class brick only for construction of feeder pillar foundation.
5. All the materials such as stone chips. Sand pipes and other materials to be used in the work shall have to be approved by the Engineer-in-Charge not below the rank of Assistant Engineer.
6. No pipe line shall be covered until the same has been approved by the Engineer-in-Charge.
7. All charges for the Municipal fees and other taxes that may be payable as per local Municipal rules be paid by the contractors and his rates for such items shall be inclusive of all such charges. Nothing extra will be paid on this account by the department.
8. The contractor shall construct suitable go-down at the site of work for storing the materials safe against damage by Sun, Rain, dampness, fire, theft, etc. at his own cost. He shall also employ necessary watch and ward establishment for tools and plant and other materials issued to him at his own cost. No extra payment shall be made on this account.
9. After laying of cable in underground the trench must be strictly mended and duly rammed with a rammer or rolled with a roller.
10. The fences damaged while digging the trench in individual quarters must be mended using barbed wire and bamboo or concrete pillars.
11. All G.I. items mentioned in the entire tender should be or hot dipped galvanization.
12. All light brackets are to be made first as specified in the tender and then hot dipped galvanizations are to perform. No cracks are acceptable on brackets.
13. Empty cable drums are to be deposited to the Section or Store as desired by Site-in-Charge.
14. Any item used while execution of the work, should be duly approved by the department.
15. Prior to commencement of the work Registration from labour enforcement office has to be taken. Also it may be noted that minimum wages as per minimum wages Act must be paid to the contract labours. Currently the minimum wage as per G.O.I norms is Rs.283/- which must be followed.
16. The Site Supervisors should possess supervisory competency certificate and the Electricians should have proper work permits.
17. Safety of materials issued by the Department to the Contractor is the contractors' responsibility.

- 18.** Safety of engaged manpower of Contractor is the Contractor's responsibility. The successful tenderer shall at all times indemnify the Institute, consequent on this work contract. The successful Tenderer shall be liable, in accordance with Indian law & Regulations for any accident occurring due to any cause and the Institute shall not be responsible for any accident and damage incurred or claims arising there from during the period of erection, construction and putting into operation the equipment under the supervision of the successful bidder in so far as the latter is responsible. The successful Tenderer shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the successful Tenderer due to above.