

INDIAN INSTITUTE OF TECHNOLOGY RAJASTHAN
MBM Engineering College Campus, Ratanada, Jodhpur – 342011.

**TENDER FOR SUPPLY OF EQUIPMENTS FOR POWER ELECTRONICS
LABORATORY**

Tender Enquiry No: IITJ/TEN/2010-11/EE/31

DATED: **October 27, 2010**

Due Date of Submission: **4:00 pm on 27th November 2010**

Background:

The Electrical Engineering Department at IIT Rajasthan currently plans to set up 3 labs for its UG and PG programmes. These labs include “Power Electronics Lab”, “Microwaves Lab” and “Basic Electrical Engineering Lab”. Sealed quotations are invited from reputed vendors for supplying various lab equipments as per the details given in the Annexure - I to Annexure – IV.

1. Eligibility Criteria of Bidders:

- a) Bidder should be OEM/Authorized Partner of the OEM and a Letter of Authorization from OEM, specific to the tender should be enclosed.
- b) The Bidder should be Authorized Service Provider for the OEM.
- c) The firm/company should be ISO 9001 certified (Maintenance & System Integration). Please attach a copy of the certificate.
- d) Bidder should be financially sound to execute the order. Certificate to this effect should be issued by any Nationalized/Scheduled bank.
- e) The bidder shall provide the Registration number of the firm along with the LST/ CST/ WCT No. and the PAN Number allotted by the concerned authorities.
- f) The bidder must have experience of executing similar orders. The bidder must enclose documentary evidence of executing minimum 3 orders of a minimum value of Rs. 25 Lakhs each in the last 3 financial years for any Educational Institution/University/Organization.
- g) The bidder should have a Call Centre operating in or around Rajasthan and the telephone number for the same must be provided.
- h) The bidder should have adequate facilities, manpower and staff for installation, testing, commissioning and for providing after sales service. An undertaking from the OEM is required in this regard stating that they would facilitate the bidder on a regular basis with technology/product updates and extend support for the warranty as well.
- i) The bidder must have experience of executing similar orders. Details & proof of Service facilities for Technical Support on Services be attached.
- j) Latest Income Tax Certificate should be enclosed.
- k) The bidder should submit copies of income tax return filed for previous two financial years preceding the current financial year.
- l) The bidder must not be black-listed by any company or organization within India or abroad for whatsoever reason during the last 10 years. A certificate or an undertaking to this effect must be submitted with the bid.

2. Earnest Money Deposit: The tenderer shall deposit Earnest Money of Rs. 1,00,000.00 /- (Rupees One Lakh only) and a separate demand draft of Rs. 1000/- (Rupees One Thousand only) towards non refundable tender fee by way of demand draft drawn in favour of "Director, IIT Rajasthan" payable at Jodhpur. The earnest money deposit will be refunded to the bidders, whose offers are not accepted within 90 days of opening of the tenders. Earnest Money Deposit of the tenderer whose offer is accepted will be kept as interest free security deposit till the successful completion of the contract. In the event of the tenderer backing out before the actual award or execution of the agreement, Institute will have the right to forfeit the earnest money in full.

3.Submission of Proposals:

a)The bidder shall go through the entire document and must comply with all the terms and conditions. A Compliance statement in the form of "Complied" or "Not Complied" shall be given against each item and specification of the tender document (Annexure – II). The compliance statements should be supported by authentic documentation. Please note that any deviation from the laid down requirements / specification shall be brought out separately in deviation sheets to be attached with concerned section of the tender. Failure to comply with this requirement may result in the bid being rejected. Each page of the bid and cuttings / corrections shall be duly signed and stamped by the bidder. Failure to comply with this requirement may result in the bid being rejected.

b)The proposals shall be submitted in two parts and should be super-scribed as "PART – I: COVER FOR TECHNICAL BIDS" and "PART-II: COVER FOR COMMERCIAL BIDS" (**due date 27.11.2010 (up to 4:00 PM)**) and the vendor name/address on all the two envelopes. The envelope cover must carry the NIQ reference and the vendor name and address. All the two sealed envelopes shall be submitted in a larger envelope with the NIQ reference and vendor name and address. This envelope should be duly signed by an authorized signatory and should bear the inscription as under:

"Supply and Installation of Equipments for Power Electronics Laboratory"
Tender Enquiry No.: IITJ/TEN/2010-11/EE/31
Dated: 27 October 2010

c)Part-I shall be a Company Profile covering all the documents specified in the "Eligibility Criteria of Bidders" under clause 2 above, as well as a Technical Offer with full details including description of product so as to enable technical assessment of the proposal and categorical clause wise compliance statement as per Annexure - I to Annexure III.

d)The Technical bid must be submitted in an organized and structured manner. No brochures/leaflets etc. should be submitted in loose form. The Technical Offer should comprise the following:

- i.A letter of authority duly signed by an authorized signatory.
- ii.Two separate demand drafts, one for Earnest Money deposit and the other of Rs. 1000/- as the non-refundable tender fee.
- iii.Complete Information of Commercial bid with Product Name, Specification, and Manufacturer quoted for.
- iv.Columns related to commercials must not be filled up.
- v.Technical Documentation [Product Brochures, leaflets, manuals etc.]

- vi. Delivery and implementation schedule.
- vii. Compliance of terms with any deviation clearly indicated in remarks & brought in separate deviation sheets.
- viii. Warranty and AMC (Comprehensive Annual Maintenance) details.

e) Part – II should contain The Commercial Bids for the entire proposal with breakup of the prices. The bidders are requested to quote

i. Product Name, Specification, Manufacturer with charges for installation, configuration and support for solution in INR.

ii. Prices quoted shall be inclusive of escalation of any description. The rates must be quoted including the following:

A) All costs should be given in Figures and Words.

B) Govt. Levies like Sales Tax, Octroi, Excise Duty, Work Contract Tax (WCT) and Educational cess etc.

4. Bids Acceptance: The Bids must reach the office of the Director, IIT Rajasthan, on or before the due date, i.e., on 27th November 2010, 4 pm. Bids will not be accepted after the due date and time.

5. Validity of bids: Bids should be valid for a minimum period of 120 days after the due date.

6. Rejection of Bids:

a) The Director, IIT Rajasthan reserves the right to accept or reject any bid or cancel the tender proceedings without assigning any reason whatsoever.

b) The Director, IIT Rajasthan at its sole discretion reserves the right to award/reject the contract in one or more parts to one or more bidders. Incomplete quotations are liable to be rejected.

c) Canvassing in any form in connection with the tenders is strictly prohibited and the bids submitted by the bidders who resort to canvassing are liable for rejection.

d) The Director IIT Rajasthan shall not pay any costs incurred towards preparation and submission of the bid or any other expenditure in this regard.

e) Unsigned tenders, unattested corrections and over writings by bidders are also liable for rejection.

f) The Director may relax any technical specification if necessary.

g) Conditional bids will be summarily rejected.

h) The schedule for accepting the tenders shall be strictly followed- late tenders shall not be accepted.

7. Evaluation Process: For the bidders satisfying the Qualifying Criteria and Technical Specifications, the price comparisons shall be made over the total cost of the solution with three years of warranty. The bidder with the lowest price (L1) will normally be selected from the bidders satisfying the Qualifying Criteria & Technical Specifications. However, the Director of IIT Rajasthan or the authorized committee, at its sole discretion, reserves the right to negotiate with other bidders in case, the technical specifications of some or all products are found to be superior.

8. Prices & Payment Terms:

a)The bidders are requested to quote on F.O.R. Destination basis by road inclusive of all Packing, Forwarding, Freight charges, Transit Insurance and any other charges as applicable, as per Annexure - II in INR with 3 year Comprehensive Warranty.

b)IIT Rajasthan is registered with DSIR, Govt. of India and is, therefore, partially exempted from Excise/Custom Duty. Exemption Letter for Excise/Custom Duty, if required, shall be issued by IIT Rajasthan, as and when required/asked for.

c)Bidders must quote the comprehensive price in the following format explicitly.

1)Basic Price

2)Excise Duty/ Custom Duty

3)Sales Tax/ VAT

4)Entry Tax

5)Octroi

6)Other Levies/ Taxes

7)Total price inclusive of all taxes FOR, IIT Rajasthan, Jodhpur

IMPORTANT: Total price should not include AMC. All prices should be quoted explicitly. Do not write "as applicable" or indicate percentage of total cost.

a)Full payment will be made after the complete delivery, installation and commissioning of the products.

9.Clarifications: In case the bidder requires any clarification regarding the tender documents, they are advised to submit their queries in writing to The Coordinator, Lab Development Committee, IIT Rajasthan, Jodhpur on or before **05/11/2010** by 4:00 pm. There will be no pre-bid meeting for this tender.

10.Quantity Variations: The proposed quantities are subject to change depending on IIT Rajasthan's priority vis-à-vis financial constraints, if any.

11.Comprehensive Warranty & Comprehensive Annual Maintenance Contract:

a)Comprehensive Warranty & Comprehensive Annual Maintenance Contract shall include free maintenance of the whole equipment supplied including free replacement of parts. The defects, if any, shall be attended to, on an immediate basis, but in no case any defect should prolong for more than 24 hours.

b)The comprehensive **on-site** warranty shall be for a period of **three year** from the date of installation of the equipment by IIT Rajasthan.

c)The bidders should also quote for Comprehensive Annual Maintenance Contract after warranty for a subsequent period of two years on quarterly post-payment basis.

12.Supply and Installation:

a)This is a time bound and high priority project. The bidder must make the proposal after fully considering all such factors, which may have any bearing on the time schedule. The bidder will be required to supply and install at the said location within **6 weeks** from the date of receiving the purchase order. However, the bids with lesser lead time will be given preference.

b)The Director, IIT Rajasthan will have the right to reject the component/equipments supplied, if it does not comply with the specifications at any point of installation/inspections.

13.Liquidated Damages: If the supplier fails to deliver any or all of the goods or complete the installation within the period specified in the purchase order, IIT Rajasthan shall without prejudice to its other remedies, deduct as liquidated damage 1% of the price of the delayed goods for every week or part thereof subject to a maximum of 10% of the order value. The amount towards Liquidated Damage would be recovered while making the initial payment itself.

14.Penalty Clause: In case of non-supply of goods after the acceptance of purchase order, the supply order shall be placed with the next bidder which has quoted the next lowest rates at the risk and cost of the defaulting bidder and difference, if any, between the total cost of the materials shall be chargeable to the defaulting bidder. In case the defaulting bidder fails to pay the differential cost, the legal action shall be taken against the defaulting bidder.

15.Force Majeure: Any delay due to Force Majeure will not be attributable to the bidder.

16.Arbitration and Laws: Except where otherwise provided for in the contract, all questions and disputes relating to interpretation and application of the provisions of the contract shall be settled mutually within thirty (30 only) days (or such longer period as may be mutually agreed upon) from the date that either party notifies in writing that such dispute or disagreement exists, under the Rules of Indian Arbitration and Conciliation Act, 1996. The venue of Arbitration shall be Jodhpur, Rajasthan, India. The arbitration resolution shall be final and binding upon the parties and judgement may be entered thereon, upon the application of either party, by Jodhpur court having jurisdiction. The Indian laws shall govern this contract.

17.Termination Clause: Either party can terminate the service agreement by giving three months notice in advance to other party.

Place:

(Signature & Seal of Bidder)
Date:

ANNEXURE - I

GENERAL TERMS AND CONDITIONS:

- 1.Prices:** Vendor should quote FOR IIT Rajasthan prices inclusive of all taxes. Note that institute is exempted from excise duty as per Govt. rules.
- 2.Delivery Period:** Within 6 Weeks from date of receipt of Purchase Order.
- 3.Warranty:** Three Years Comprehensive Warranty.
- 4.Taxes:** The rates quoted for must be for FOR IIT Rajasthan and all taxes should be mentioned clearly.
- 5.AMC:** Per year AMC charges. AMC quote should be provided SEPARATELY.
- 6.Consignee or Bill to:** The Director, IIT Rajasthan
- 7.Terms of Payment:** As under 'Prices & Payment Terms' clause 8.
- 8.Institute's Rights:** Director, IIT Rajasthan reserves the right to accept or reject any or all the bids without assigning any reason thereof.
- 9.**Queries related to the tender can be made only through emails/posts on or before **30th October 2010**. There will be no pre-bid meeting.
- 10.Last date of bid submission: 27th November 2010, 4:00 pm.**
- 11.Bid opening :**
 - 1.Technical Bid: 29th November 2010, 10:30 am
 - 2.Financial Bid: 03rd December 2010, 10:30 pm
- 12.** Bidders or their representatives are permitted to attend the tendering procedure. However, they must reach the venue before the scheduled time.

ANNEXURE – II

Power Electronics Lab

S.No	Equipments	Specification	Quantity	Makers/Remarks	
1	Digital storage Oscilloscope	<ul style="list-style-type: none"> -Band width – 1Ghz -Channel – four -Sampling Rate – 5GS/S or Higher (real time sampling for all four channel) -Memory Record -10 M word or higher -Display- color -Facility- to download both data and waveform to host P.C.(with software and hardware) - Built in math module capable of- <ul style="list-style-type: none"> a. Integration, Sum /Difference, Multiplication, Variable window averaging, R.M.S, Peak to peak, FFT, Active Cursors with data read out, Self diagnostic feature, Probes 1:10, 1:100 (optional), Ethernet interface for data transfer b. Full documentation Including , operating and service manual, Authenticated list Certificate 	05 Nos	Tek , Agilent, Yokogawa, Lecroy	
2	Digital storage Oscilloscope	<ul style="list-style-type: none"> - Channel – Two - Band width – 200 MHz - Sampling Rate – 2GS/S or Higher (per channel) - Display- color - Facility- to download both data and waveform to host P.C. (with software and hardware) - Built in math module capable of- <ul style="list-style-type: none"> a. Integration, Sum /Difference, Multiplication, Variable window averaging, R.M.S, Peak to peak, FFT, Active Cursors with data read out, Self diagnostic feature, Probe- 1:10, 1:100 (optional), Ethernet interface for data transfer b. Full documentation Including operating and service manual, Authenticated list Certificate 	12 Nos	Tek, Agilent, Yokogawa, Lecroy	
3	Active differential Probe	<ul style="list-style-type: none"> - Bandwidth – 100 MHz - Voltage – 800 or above 	10 Nos	Tek, Agilent, Scientific	
4	Active differential Probe	<ul style="list-style-type: none"> - Bandwidth – 20 MHz Voltage – 800 or above 	20 Nos		
5	Current Probe	<ul style="list-style-type: none"> - Bandwidth – 100 MHz - Current – 30Amp / 150Amp - Amplifier for above Probe 	10 Nos – 150Amp, 10 Nos – 30 Amp		
6	Digital Multi meter	True Root Mean Square 4 1/2 Digit Dual Display, 11 basic measurements, 6 built-in math functions, 0.012% basic DCV accuracy, Upto 120,000 counts resolution	30 Nos.	Tek, Agilent, Yokogawa, Lecroy	

7	Frequency Response Analyzer	- Bandwidth – 1 MHz - With all accessories	1 Nos	Tek, Agilent, Yokogawa, Lecroy	
8	Three Phase Power Analyzer		02 Nos	Tek, Agilent, Yokogawa, Fluke	
9	10 Amp Isolated output variable Regulated D.C. power supply	Voltage Range : -30v – 0 – +30 v Current – 10 Amp Digital Display and Dual Tracking	15 Nos	Elnova, AE, Aplab, Scientific , Hemaq	
10	3Amp Isolated output variable regulated D.C Power Supply	Voltage Range : -30v – 0 – +30v Current – 3 Amp Digital Display and Dual Tracking	20 Nos		
11	50 Amp Isolated output variable / Step Change D.C Power Supply	Voltage Range : - 400v – 0 – +400v Current – 50 Amp Digital Display	1 Nos		
12	Isolation Transformer	Input 230 V , 100 VA (CRGO Core) with enclosure	15		
13	Three Phase Auto transformer	Type – Portable Enclosed manual operated air cooled mounted on Trolley -No. of Phase- 3 Phase - Input Voltage – 415 Volt - Output Voltage – 0- 470 Volt - Rated Current – 15 Amp - Frequency – 50 Hz - Core material – CRGO Silicon Steel Coil Material – High Grade 99.9% pure Copper	15 Nos		
14	Single Phase Auto Transformer	- Type – Portable - Input Voltage – 230 Volt - Output Voltage – 0-270 volt - Rated Current 15 Amp - Frequency – 50 Hz - Core material – CRGO Silicon Steel Coil Material – High Grade 99.9% pure Copper	15 Nos	AE , Grem Dot	
15	Single Phase full controlled Converter kit	Experimental Board -1	15 Nos		
16	Three Phase full controlled Converter kit	Experimental Board -2	15 Nos		
17	Forward Converter kit	Experimental Board -3	15 Nos		
18	Boost Converter kit	Experimental Board -4	15 Nos		
19	Fly Back Converter kit	Experimental Board -5	15 Nos		
20	Zero Voltage Switching Converter kit	Experimental Board -6	15 Nos		

21	Zero Current Switching Converter kit	Experimental Board -7	15 Nos		
22	DSP controlled 3 Phase inverter driver 3 Phase induction Motor	coupled with DC motor & optical encoder - Experimental set 8	6 Nos		
23	3HP induction Motor Coupled with 3HP DC Generator	Experimental set 9	06 Nos		
24	1.FPGA– Cyclone III FPGA Development Kit Or Spartan- 6 FPGA SP 605 Evaluation Kit		5	Altera, Xilinx	
25	DSP –XDS 510 USB Plus JTAG with emulator	Emulator with 14 Pin Targate adapter cable - CCS studio 3.3 (software for DSP)	5 Nos	Texas Instrument	
26	Semicron Inverter Stack	- 3 Phase Inverter AC – DC – AC topology - 3 Phase line 415 v AC & 3 Phase	10 Nos	Semicron	
27	Rheostat	- 50Ω, 15 Amp - 15 Nos - 100Ω , 10 Amp - 15 Nos	30	Suprem, Toshnivval, Stead, etc	
28	Photo Voltaic panel	- 150 – 185 W/ Panel - Mono Crystalline	15 Nos	BHEL, Sharp, Tata BP, MoserBear	
29	Inductive Loads	30 mH, 75 mH, 125 mH, 256 mH, I _{max} = 2 A Inductive loads (1 mH, 5A saturation Current)	10 Nos 20 Nos		
30	SCR Cards	400V, 25A	10 Nos		
31	IGBT Cards	600V, 30A	10 Nos		
32	Diode cards	600V, 5A, Fast Recovery diodes	10 Nos		

Annexure - III

We (The Bidder) undertake and confirm that:

1. We hereby offer to supply the goods detailed in schedule thereof as you specify in the purchase order at the price quoted and agree to hold this offer open for acceptance for a period of 180 days from the date of opening of bid.
2. Rates quoted are for FOR at site (Indian Institute of Technology Rajasthan (IITJ) located at Jodhpur in Rajasthan.
3. The entire product quoted has three years comprehensive on-site warranty.
4. The Bidder/OEM will maintain sufficient service engineers in Jodhpur, Rajasthan. The services shall be provided at IIT Rajasthan.
5. The product names for the total solution are mentioned and also enclosed the datasheets for the same.
6. The warranty in respect of the product ordered shall remain valid for three year from the mutually agreed date.
7. Any delay by the supplier in the performance or delivery of items shall render the supplier liable to cancellation of the purchase order for default. Further, the Bidder would ensure installation/commissioning of the Desktop computers with in time frame.
8. The bid/quotation is submitted for the complete Solution and strictly as per the tender specifications.
9. During warranty services will be provided directly on site.
10. Every page of the submitted bid has been numbered and signed.

It is hereby confirmed that we have understood the terms and conditions of the tender and have thoroughly examined specifications and are thoroughly aware of the nature of goods required and our offer is to supply goods strictly in accordance with the requirement and terms and conditions of the tender. We agree to abide by the terms and conditions of the tender if the contract is awarded to us.

“Bid Form” as specified in Annexure - IV has been included.

Place:

(Signature and seal of Bidder)

Date:

Annexure – IV

BID FORM

To
The Director,
IIT Rajasthan.

Dear Sir,

1.Having examined the terms & conditions of the document and specifications, the receipt of which is hereby duly acknowledged, we, undersigned, offer to supply and deliver the goods, in conformity with the said drawing, conditions of contract and specifications and services as per the terms & conditions of the contract, for the sums shown in the schedules of price attached herewith and made part of this bid.

2.We undertake, if our Bid is accepted, to execute the work within 03 weeks from the date of issue of your purchase order.

3.We agree to abide by this Bid for a period of 90 days from the date fixed for Bid opening and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

4.Until a formal Purchase Order of Contract is prepared and executed this Bid together with you written acceptance thereof in your notification of award shall constitute a binding contract between us.

5.Bid submitted by us is properly wax sealed and prepared so as to prevent any subsequent alteration and replacement.

We understand that IIT Rajasthan is not bound to accept the lowest or any bid that it may receive.

Dated this _____ day of _____

Signature of

In capacity of

Duly authorized to sign the bid for and on behalf of _____

Witness _____

Address _____

Signature & Seal