

MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR

No. F5 (2457) ST/MNIT/CEE/2017

Phone : 0141-2713312,2713352

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NOTICE INVITING TENDERS

IMPORTANT INSTRUCTIONS TO BIDDERS

Assistant Registrar (Stores & Purchase), Central Stores, MNIT, JLN Marg, Jaipur invites sealed tenders on behalf of **Registrar, Sponsord Research, MNIT, Jaipur** for the supply of “**Smart Grid Architecture**” in **two bid system (Technical & Financial bids in separate envelop)**, as per schedule given below:

Event	Date & Time
Download of Tender	26.02.2018
Pre-bid meeting	06.03.2018 at 12:00 PM
Amendments (if any)	09.03.2018
Bid submission Last Date	20.03.2018 by 2.00 PM
Technical bid opening	20.03.2018 at 3.00 PM
Financial bid opening	Will be intimated later on
Earnest Money	Rs.50,000/-in the name of the REGISTRAR, MNIT, Jaipur (Kindly attached the RTGS details with cancelled cheque along with the Earnest Money)

1. Tender must be enclosed in a properly sealed envelope containing both Tech. and commercial bid and addressed to the MNIT, Jaipur with kind attention to Assistant Registrar (S&P), MNIT, JLN Marg, Jaipur-302017 by designation and not by name. The quotations must be superscribed “Quotations for the supply of **Smart Grid Architecture**----- as called for in Tender Notice No. ----- - dated _____” DUE ON ----- AT -----AM/PM. The Quotation must reach on or before -----AM/ PM on or before the due date and time mentioned in the tender notice/tender document.

2. **THE DOCUMENTS MUST BE DROPPED IN THE TENDER BOX AVAILABLE IN CENTRAL STORE DURING OFFICE HOURS (09:30AM to 06.00PM) ON ALL WORKING DAYS. BIDS DELIVERED TO ANY OTHER PLACE OR ANY INDIVIDUAL SHALL NOT BE CONSIDERED AS VALID DOCUMENT. QUOTATIONS SENT BY E-MAIL WILL NOT BE CONSIDERED VALID.**
3. **For indigenous items, the rates are to be quoted FOR destination (MNIT Jaipur) only. For imported items, the rates are also to be quoted FOR destination (MNIT, Jaipur) . However, in case the rates are quoted CIF/CIP basis for imported items then it will be the responsibility of the supplier to intimate us well in advance prior to dispatch. Moreover, all the relevant documents are to be sent to us in time which will be required in clearing the consignment from Custom. If, there is any delay in sending the documents and demurrage is imposed by Custom, then it will be in the account of foreign supplier. Kindly note that if any amendment is required in LC, after its establishment, the Bank Charges in this respect will be in the account of beneficiary only.**
4. The rates and units shall not be overwritten. Quotations shall always be both in the figures and words. The words “No quotations” should be written across any or all of the items in the schedule for which a tender does not wish to tender.
5. **Cost of all items should be quoted as a single offer giving the unalterable delivery period. Rates of imported goods must be quoted excluding custom duty as this Institution is exempted from paying of custom duty.**
6. If a private limited company in India or a similar such company elsewhere abroad, in the same name and style as that of the original manufacturer, wishes to act as a direct bidder,(as if the manufacturer is submitting the bid), it must submit the copies of original documents revealing the techno-commercial, financial and legal relationship it bears with the manufacturer; this needs to be accompanied by a declaration from the overseas manufacturer that as its policy it does not receive direct orders from Indian academic institutions/ research organizations. Failure to do so will disqualify the bidder.
7. The purchaser will evaluate and compare the technical bids which have been determined to be substantially responsive. The leaflets catalogue, etc. should be sent invariably so that a proper evaluation of the equipments offered is possible. Under no circumstances a bid shall be considered substantially responsive if it is not accompanied by the above documents.
8. **Clarification of Bids.** During evaluation and comparison of bids, the purchaser may, at his discretion ask the bidder for clarification on its bid. The request for clarification shall be in writing and no change in prices or substance of the bid shall be sought, offered or permitted. No post bid clarification at the initiative of the bidder shall be entertained as all such clarifications would have been obtained prior to the submission of the bid.
9. The bidder should clearly confirm that all the facilities exist in its factory or store for inspection and testing and these will be made available to the purchaser or its representative for inspection as and when required.

10. Any omission in filling the columns of “units” and “rate” shall altogether debar a quotation for being considered.
11. All corrections must be signed by the tenderers.
12. **EMD:** A Demand Draft amounting of **Rs.50,000/-** Only in the name of the **REGISTRAR, MNIT, JAIPUR** may please be sent along with your tender(Tech.Bid) towards Earnest Money. No tender shall be considered,if it is not accompanied with EMD. Cheques are not accepted towards Earnest Money. However,FDR or Bank Guarantee from any of the COMMERCIAL Bank is an acceptable form. No interest is to be paid by MNIT on the amount of earnest money. Since all the recoverable amount like LC amendment charges/demurrage charges etc. will be debited first from EMD, therefore, the EMD will be withheld with this Institute till the completion of the supply. If this amount fall short, the supplier has to pay the remaining due payment to this Institute.
13. **MNIT does not bind himself to accept the lowest tender and reserve to himself the right to reject any or all the tenders without assigning any reasons**
The quotations will be regarded as constituting an offer or offers are open to acceptance in whole only, for reasons of technical compatibility. The bid would be evaluated as a whole.
14. The bidder is expected to examine all instructions, forms, and specifications in the bidding documents. Failure to furnish all information required in the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the Bidder’s risk and may result in rejection of its bid.
15. The intending bidder must read the terms and conditions of Bid document carefully. He should only submit his bid if he considers himself eligible and is in possession of all the documents required. The bid document consisting of the set of terms and conditions and other necessary documents required can be seen and downloaded from our website www.mnit.ac.in.
16. It is stipulated that insurance will have to be provided through any of the Insurance agencies. /Companies approved under Government of India Regulations.
17. The prospective bidders can be those who are the manufacturers of the equipment. For items manufactured outside India, the manufacturer itself can be a bidder or its authorised Indian agent can bid on behalf of its Principal that is the manufacturer.
18. In the event, the country of origin of goods is India, only the manufacturers shall be considered eligible for bidding. Authorised agents of Indian manufacturers may be permitted to submit the bid, provided the concerned manufacturer states that as its policy, it does not bid itself in India and that there is no qualitative difference between manufacturer and its agent as bidder in respect of quality of supplies, cost, and responsibility of maintenance and servicing. The Indian manufacturer must describe the alternatives in clear terms, in the event the bidding agent ceases to continue as agent of the concerned manufacturer within the stipulated warranty period.
19. If any Indian manufacturer requires importing an essential part from a foreign country, the said company may be given to enjoy the benefit of customs duty exemption with the aid of CDEC of MNIT, Jaipur provided the import of the concerned item is done on behalf of MNIT, Jaipur.

20. The Indian/Foreign agencies participating in the tender must have annual turnover not less than the 5(Five) times of the cost of the equipment they are quoting; appropriate document in this regard must be provided, failing which the bid will stand cancelled.
21. At any time prior to the deadline for submission of bids, the purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by amendment.
22. All prospective bidders who have received the bidding documents will be notified the amendment in writing or by email or by fax, and will be binding on them.
23. In order to allow prospective bidders reasonable time in which the amendment is taken into account in preparing their bids, the purchaser, at its discretion, may extend the deadline for the submission of bid.

THERE IS TWO BID SYSTEM:-

(TECHNICAL AND FINANCIAL BID, both bids should be submitted in separate envelopes):

- A) In pre-qualification cum-technical bid. Bidder shall enclose the following document:
 - a) Bidder shall enclose DD/Banker's Cheque or in other acceptable form as specified above towards EMD.
 - b) Bidder must be in the business of similar equipment/items supplying business from last 3 years (enclose Proof).
 - c) Bidder must be a manufacturer/authorized distributor/ Dealers must enclose a certificate of authorization of manufacturer with the bid.
 - d) Bidder must be a supplier of similar set ups (Minimum two out of four components of this tender, viz. Energy Source Emulators, Inverters and Inverter Control, Fuel Cells, Three Phase Electronic Load) to a minimum of two CFTIs over the last 3 years(enclose Proof).
 - e) Two year onsite comprehensive warranty with the statement of availability of spares for at least 5 years from the date of the installation of Goods against any manufacturing defects and also give the warranty declaration that everything to be supplied by us hereunder shall be free from all defects and faults in material, workmanship, transportation hazards, and shall be of the highest quality and material of the type ordered, shall be in full conformity with the specifications. During the warranty period, replacement of any part of equipment's or rectification of defects of works will be free of cost to the purchaser.
 - f) All Indian agents of foreign company must provide valid proof that they are the agent in India on behalf of the manufacturer; any proof without due certification from the manufacturer under its own letter head shall be void ab initio.
 - g) The manufacturers should provide documentary proof i.e. Registration with the Registrar of Industries, National Small Scale Industries Corporation or with penal of MNIT in case of manufacturer. Offers other than the manufacturers should be supported with an authority letter from the manufacturers, authorizing them to quote rates standing guarantee for the satisfactory execution of supply orders failing which offers are liable to be ignored.

B) The bidder must furnish the following

(Failing which the offers/tenders are liable to be ignored)

- a. One declaration by the Manufacturer to the extent that in case of failure of its local agent /office to provide service support to the satisfaction of MNIT Jaipur, it shall make immediate arrangement for required service support.
 - b. **Bidder should enclose technical compliance from the Manufacturer. The specifications of items should be strictly as specified. Deviation, if any may please be mentioned separately. If there is no deviation than it should be mentioned as “No Deviation”.**
 - c. The leaflets catalogue, related to quoted equipment/model etc. should be sent invariably, so that a proper evaluation of the equipment offered is possible.
 - d. Mention must be made of the pre-installation requirements for the equipment quoted viz. ambient temperature, humidity, weather specifications, power specifications, civil works etc. When items are provided full performance satisfaction should be demonstrated.
 - e. All the Annexure enclosed should be duly filled up and signed.
 - f. Please attach proof/certificate of each condition required in the tender document.
24. The purchaser will evaluate and compare the bids which have been determined to be substantially responsive.
25. Notwithstanding anything specified in the tender document, the Purchaser, MNIT Jaipur at its sole discretion, unconditionally and without assigning any reasons to the bidders, reserve the rights:
1. To accept or reject lowest tender or any other tender or all the tenders.
 2. To accept any tender in full or in part.
 3. To reject the tender offer not confirming to the tender terms or faulting to replying to any certification sought during the period of evaluation of bids.
 4. To rank substantially responsive bids in accordance with the technical merits of the quoted item.
26. Losses or damages in transit will be taken into the account of the supplier in case of rates **F.O.R. JAIPUR**. The supplier may, if he so desires, get the goods insured and include such charges in the tendered rate.
27. **Payment Terms: -**
1. Payment will be made through e-transaction (electronically) (RTGS). To facilitate electronic payment, the supplier must give following information: (a) Title of the Account, (b) Bank name and Branch (c) Account number and (d) IFSC code. The supplier must also attach one cancelled cheque along with the Invoice of the firm to facilitate the e-transfer (RTGS) of payment.
 2. Payment will be made through LC/Wire Transfer or FDD as the case may be to foreign suppliers as per Gov. of India rules against the Performa Invoice.
 3. The payment will be made under following two stages:
 - a. Payment on shipment and furnishing of Performance Security: 90 % of the Purchase Order Value.

- b. On satisfactory Installation and commissioning: 10 % of the Purchase Order Value.
4. The defective, substandard and contrary to the specification of instrument supplied have to be replaced by the supplier at their cost and responsibility.
28. All payments shall be made against the Performa invoice raised directly by the manufacturer and in accordance with terms and conditions of the purchase order.
29. **Delivery Period:-** The ordered quantity of stores must be delivered within 6 to 8 weeks in the case of indigenous equipment and 14 to 16 weeks in the case of imported equipment, F.O.R. Destination MNIT, Jaipur at Supplier's Risk within the period specified and got inspected as the delivery of store is required urgently and as such the renderers should quote their earliest delivery period accordingly. The extension of delivery period after placing the PO, if required, will be considered only on genuine reasons and proper justifications only.
30. **Performance Bank guarantee**
Successful Bidder has to furnish Performance security @ 10% of the value of Purchase Order. The PBG should be valid for entire warranty period given in their offer. The PBG may be furnished in the form of an Demand Draft, FDR or Bank Guarantee from a Commercial Bank. The given Warranty will cover repair/replacement of all defective parts, if any, with the same or equivalent make for any part removed. Maintenance will be provided at site. Limited/carry in warranty will not be accepted. The supplier will provide after sale service during the warranty period from nearest place of installation. The supplier will attend the complaint within 24 working hours and not beyond 5 working days. The warranty period shall be applicable from the date of successful installation.
31. **Installation:** - Successful BIDDER shall depute concerned specialist, for supervision of erection & commissioning of the machine to be carried out as and when necessary. The successful BIDDER shall make necessary arrangements at their own expenses for stay, transport and other expenses of their specialist during their stay in Jaipur;
- A. The vendor shall give the wiring diagrams and the panels required for the system installation in advance. User Department/Organization shall make available the necessary wiring panels at installation site.
- B. Full details of the space requirement with dimensions should be given in advance. Successful BIDDER shall depute concerned specialist, for supervision of erection & commissioning of the machine to be carried out as and when necessary. The successful BIDDER shall make necessary arrangements at their own expenses for stay, transport and other expenses of their specialist during their stay in Jaipur which also includes imparting training to MNIT Jaipur personnel.
32. **AMC:-**Annual maintenance contract rate should be quoted separately and should remain valid for 5 years after expiry of warranty period.

33. The quoted rates should be valid at least for **120 days (four months)** from the date of opening of the respective tender.
34. All legal proceedings, if necessity arises to institute may be any of the parties (Institute or Contractor/Supplier) shall have to be lodged in the courts situated at Jaipur and not elsewhere.

35. (a) **The Penalty Clause is as under:-**

If the tender fails to deliver the goods within the period specified in the tender form the Institute may, at its discretion, allow an extension in time subject to recovery from the tender as agreed liquidated damages, and not by way of penalty, a sum equal to the percentage of the value of stores which the tender has failed to supply for period of delay as stated below: -

(i)	Delay up to one month	1%
(ii)	Delay exceeding one month but not exceeding two month	2%
(iii)	Delay exceeding two month but not exceeding three month	5%
(iv)	Delay exceeding three month	5% for each month and part there of subject to maximum 10%

- (b) In case of failure to supply the goods within the prescribed time and in accordance with the specifications given in the Quotations, the institute shall be free to cancel the order and make purchases from the next higher tenderer or from the open market as the case may be. In that case, the losses sustained by the institute shall be recovered from the defaulting supplier. The institute will be at liberty to recover the losses from the earnest money/or any other pending claims of the supplier without prejudice to its general right to effect recovery from the supplier.
36. Equipment list with specifications is enclosed as Annexure-II.
37. **Arbitration Clause: -** In the eventuality of any dispute, the sole Arbitrator shall be Registrar, Sponsored Research, MNIT, Jaipur and his decision shall be binding on all the parties.
38. It is mandatory for all the bidders to mention their **GST Registration** No. positively.

Assistant Registrar
(Stores & Purchase)

AFTER SALE SERVICE CERTIFICATE

From:

To

The Registrar (Sponsored Research)
Malaviya National Institute of Technology (MNIT),
Jaipur

Whereas, we M/s (Bidder Name) are established & reputable manufacturers (Make of items) of [items name] having service offices at Delhi, Jaipur and in the state of Rajasthan. Details are as under:

Sr.No. Address of Service Centre Phone No. Number of Engineers

- 1.
- 2.
- 3.

We do hereby confirm that:

Services including repair/replacement of defective parts will be done by us. Replacement of defective Systems/parts will be done by equivalent or better systems/parts of the same make. We will attend all the complaints/service calls within 24 working hours and not beyond 5 working days. Down time will not exceed beyond 5 working days. In case, down time exceed 5 working days then we will extend the warranty period of that item(s) double of the down time.

(Signature)

Name :
Designation :
(Head or Senior Executive of Firm)
Address :
Phone No :
Fax No:
Mobile No :

TECHNICAL SPECIFICATIONS FOR SMART GRID ARCHITECTURE

1. Energy Source Emulators:

1.1 Wind Turbine Emulator Accessories

S. No.	Component	Specification
1.	DC Drive <ul style="list-style-type: none"> • Input voltage • Input Current • Output Voltage • Output Current • Switching Frequency 	230 V 13 A 200 V 15 A 20 kHz
2.	Buck Converter after generator <ul style="list-style-type: none"> • Input voltage • Output Voltage • Output Current • Switching Frequency 	450 V 150 V 10 A 20 kHz
3.	Bidirectional Converter <ul style="list-style-type: none"> • Input voltage • Output Voltage • Output Current • Switching Frequency 	105 V (Battery Side) 150 V (Inverter Side) 10 A 20 kHz
4.	Autotransformer <ul style="list-style-type: none"> • Topology • Voltage Range • Power 	3-phase 0-420 V 5000 VA
5.	Sensor Board <ul style="list-style-type: none"> • Voltage Sensor • Current Sensor • Type 	LV 20 P (3Nos.) LA 25 P (3 Nos.) Hall Effect Based

1.2 PV Emulator Accessories

Boost Converters for PV Emulator:

1.	Boost Converter <ul style="list-style-type: none"> • Input DC Voltage • O/P DC Voltage • O/P DC Current • Switching Frequency • Type of Cooling • Ambient Temperature 	70V - 90 V 120 V- 150 V 22 Amps. 65 kHz Forced Cooled 45 Deg.
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1.3 Energy Storage Battery System

Battery	96 V, 24 Ah (Li-ion)
Ultra Capacitor	150 V, 50 Farad, 1 KW/kg

2. Inverter and Inverter Control:

1.	Three Phase Inverter <ul style="list-style-type: none"> • 3 Leg inverter • Maximum DC Input Voltage • AC Output Voltage • Maximum Output AC Current • Output Rating • Switching Frequency 	150V 112 V 26 A 5000VA 10kHz
2.	Pull-UP Card for Inverter Gate Firing	8 PWM Signals

3. Fuel Cell

Type of fuel cell	PEM
Number of cells	48
Rated Power	1000W
Performance	28.8V @ 35A
H2 Supply valve voltage	12V
Purging valve voltage	12V
Blower voltage	12V
Reactants	Hydrogen and Air
External temperature	5 to 30°C
Max. stack temperature	65°C
H2 Pressure	0.45-0.55bar
Hydrogen purity	≥ 99.995 % dry H2
Humidification	self-humidified
Cooling	Air (integrated cooling fan)
Stack weight (with fan & casing)	4000 grams(±100grams)
Controller weight	400 grams(±30grams)
Dimension	23.3cm x 26.8cm x 12.3cm
Flow rate at max output*	13 L/min
Start up time	≤ 30S at ambient temperature
Efficiency of stack	40% @ 28.8V
Low voltage shut down	24V
Over current shut down	42A
Over temperature shut down	65°C
External power supply**	13V(±1V),8A

3.1 Boost Converter for Fuel Cell:

S. No.	Component	Specification
1.	Boost Converter <ul style="list-style-type: none"> • Input Voltage • Input Current • Output Voltage • Output Current • Switching Frequency 	28.8 V at Full load 35 Amp. at Full Load 150 V 10A 20 Hz

3.2 Hydrogen Storage

S. no.	Component	Parameter	Value
1	Piping	Diameter	6 mm
		Material	Stainless steel
2	Cylinder	Volume	21 Ltr
		Pressure	140 Bar
		purity	99.99 %
3	Double stage pressure regulator	No. of pressure gauge	2
		Range for inlet pressure gauge	0-250 bar
		Range for outlet pressure gauge	0-4 bar
		Material for connection	Stainless steel
4	Pressure gauge with adaptor	Range	0-4 bar
		Material for connection	Stainless steel
5	Rotameter	Material for connection	Stainless steel
		Pressure capacity	5 bar
		Flow rate range	0-15 LPM
6	H2 Leakage detector	Type	Portable
		Warm up time	2 min
		Response time	2 sec
		Alarming criteria	Leakage at 10 % level

4. Three Phase Electronic Load:

S. No.	Parameters	Range
1	Power Rating	3000 W
2	Voltage Range	50 V- 415 V
3	Current Range	Up to 5A
4	Frequency Range	45 to 440 Hz
5	Crest Factor Range	1.414 to 5.0
6	Working Modes	CC,CV,CP

Assistant Registrar
(Stores & Purchase)