

### भारतीय प्रौद्योगिकी संस्थान (भारतीय खनि विद्यापीठ), धनबाद

धनबाद, झारखण्ड, भारत, पिन-826004

(मानव संसाधन विकास मंत्रालय, भारत सरकार के अधीन राष्ट्रीय महत्त्व का एक संस्थान)

### INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES), DHANBAD DHANBAD, JHARKHAND, INDIA, PIN-826004

(An Institute of National Importance under Ministry of H.R.D., Govt. of India)

STORES & PURCHASE SECTION Phone: (0326) 2235678 || Email : purchase@iitism.ac.in || Website : www.iitism.ac.in

File No. TEQIP/500494/17-18

Date:16th April, 2018

#### **Notice Inviting Quotation**

#### Subject: Supply & Installation of Grid Tied Solar Inverter

The Indian Institute of Technology (Indian School of Mines), Dhanbad is interested for the purchase of the materials/ equipment listed below:

S No	Description of item(s)	Quantity	Remarks	
1	Supply & Installation of Grid Tied Solar Inverter	01 No.	At the earliest/ Ex-	
	(Detail specification in Annexure I)		stock	

#### Tender Schedule:

Particulars	Date & Time		
Last date and time for submission of tenders	15.05.2018 at 1:00 P.M.		
Date and time of opening of tenders	15.05.2018 at 4:00 P.M.		

#### **INSTRUCTIONS:**

- 1) Please attach relevant technical literature of the item.
- 2) Please mention warranty/guarantee period in your offer.
- 3) Please mention after sales service information in your offer.
- 4) Price should be in F.O.R. IIT(ISM), Dhanbad basis only.
- 5) Please attach a certificate that the quoted price is not more than that of any other Govt. organization/institution in India. This has to be mentioned in the offer letter clearly.
- 6) The rates should be quoted for each item separately.
- 7) Quotation,
  - a. The contract shall be for the full quantity as described above.
  - b. Corrections, if any, shall be made by crossing out, initialing, dating and re writing.
  - c. All duties and other levies payable by the supplier under the contract shall be included in the unit price.
  - d. Applicable taxes shall be quoted separately for all items.
  - e. The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
  - f. The Prices should be quoted in Indian Rupees only.
- 8) Each bidder shall submit only one quotation.
- 9) Rates quoted will be taken as inclusive of all taxes unless given separately. IIT (ISM) does not issue any Form 'C' or 'D' towards sales tax concessional rate. Hence, full rate of sales tax/ VAT, GST applicable should be quoted.
- 10) The items/ materials shall be required to be delivered at **Department of Electrical Engineering**, **IIT(ISM)**, **Dhanbad** at the risk and cost of the tenderer.
- 11) Your tender must be valid for minimum 55 days from the date of opening of tender.
- 12) The stores are required to be delivered within 84 days, late delivery may not be accepted.



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- 13) Full details of stores offered should be given in the tender along with supporting & relevant literatures/ Technical Literature.
- 14) Sales Tax/ VAT Registration Number, GSTIN should be clearly mentioned in your offer, failing which your offer may not be considered.
- 15) The items offered should be of good quality confirming to BIS standards, wherever applicable.
- 16) Evaluation of Quotations,
  - The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which
  - a. are properly signed; and
  - b. confirm to the terms and conditions, and specifications
- 17) The Quotations would be evaluated for all items together.
- 18) All supplied items are under warranty of 12 months from the date of successful acceptance of items
- 18. Award of contract:
  - The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.
  - a. Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.
  - b. The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.
- 19) Advance payment is not admissible. Payment shall normally be made within 3-4 weeks subject to receipt and acceptance & installation (as per Purchase Order Terms) of the ordered materials/items.
- 20) In the event of the supplier failed to supply the materials or install the same as contractual condition, IIT (ISM) shall have the right to deploy suitable agency/ third party to get the job completed at the risk and cost of the supplier.
- 21) Tender must be submitted in sealed cover only superscribed with Enquiry No. TEQIP-500494-2017-18 and due date as is 15.05.2018 to The Deputy Registrar (P&S), Indian Institute of Technology (Indian School of Mines), Dhanbad -826004.
- 22) Your bid should reach our office preferably latest by 15.05.2018.
- 23) IIT (ISM) reserves the right to accept and/or to reject any/all tenders without assigning any reason.

Deputy Registrar



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#### Annexure I

#### Specification: Grid Tied Solar Inverter

1.	Solar Panel	2KWp solar panel, polycrystalline: 8 numbers of 250Wp
2.	Grid Tied Solar MPPT Inverter	<ul> <li>Single-phase, IGBT based two level inverter of 2 kW power rating.</li> <li>Sinusoidal PWM based digital control for IGBT switching.</li> <li>Isolated suitable gate drivers for the IGBTs.</li> <li>Inverter voltage waveform synchronization to the grid.</li> <li>Grid isolation through power transformer.</li> <li>Accessibility of all power terminals to observe their nature using DSO.</li> <li>Accessibility of all feedback signals (currents and voltages) so that they can be sampled by external controller for the purpose of developing independent control other than the existing controller.</li> <li>Mode of operation: MPPT mode (auto mode), Non-MPPT mode (manual variation of power) using push button.</li> </ul>
3.	Control	<ul> <li>Development of complete control system using advanced TMS320F280xx</li> <li>Sampling of analog signals using 12 bit ADC: solar voltage, solar current, output voltage, output current, heatsink temperature at very high speed.</li> <li>Provision of bypassing PWM signals produced by the existing processor and flexibility of providing external PWM signals</li> </ul>
4.	LCD Display	<ul> <li>4 line, 20 character LCD display.</li> <li>Display parameters: solar voltage, solar current, output voltage, output current, heatsink temperature, STATE, fault if any.</li> </ul>
5.	Protection	Output short circuit, over voltage, over load and islanding.
6.	Installation	Complete Installation and demonstration.

\*



Contact No:

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(In letterhead of the supplier with						Date:		
To	:							
SI. No.	Description of goods (with full Specifications)	Qty. Unit	Unit	nit Quoted Unit rate in Rs. (Including Ex Factory price,	Total Price	Sales tax and other taxes payable		
			excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	(A)	In %	In figures (B)		
		101	al Cost					
Rs.	agree to supply the	(Amou	int in fi	accordance with the technical gures) (Rupees	specificat	(A+B): Ri ions for a int in wor	total contract price	
	confirm that the no			ial warranty/ guarantee of — ree with terms and conditions a				
		so comm						