



# NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA – 769 008, ODISHA

## ADVERTISED TENDER ENQUIRY

**Department: Electrical Engineering**

**Tender Notice No: NITR/PW-SR/EE/2020/58**

**Date: 18/05/2020**

**To**

Bidding  
through  
e-Procurement Portal of  
Ministry of HRD, Govt. of India  
(e-Wizard)

### Important Dates

Event	Date	Time
Pre-bid Conference	NA	NA
Last Date of submission of bid	09/06/2020	03:00 PM
Date of opening of techno-commercial Bid	10/06/2020	03:00 PM

Dear Sir,

We intend to purchase the commodities specified below and invite quotations in accordance with the terms and conditions detailed in the bid document. If you are interested, kindly send your offer with prices and complete terms within the time mentioned above.

For any query, you may contact

**Attention:-**

**Prof. Susovon Samanta**

Dept. of Electrical Engineering  
NATIONAL INSTITUTE OF TECHNOLOGY  
ROURKELA – 769 008, ODISHA  
Phone : (0661) – 246-2420  
E-mail: [samantas@nitrkl.ac.in/](mailto:samantas@nitrkl.ac.in/)

Yours sincerely,

**Sd/-**

**Prof. Susovon Samanta**  
Dept. of Electrical Engineering

**Encl:**

- (1) Schedule of requirement, specifications, dates etc.**
- (2) Bid document containing detail terms and conditions.**

## 1. Schedule of requirements

Sl. No.	Description of Goods/Service	Quantity
01.	High Power(20 KW) Interleaved bi-directional half bridge converter-2 Units (as per detail Annexure-I)	Annexure-I

## 2. Specifications and allied Technical Details

<b>As per Annexure – I</b>
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## 3. Format of Quotation

It is a **two-part** bid with separate techno-commercial and price bids.

4. The bid should be submitted through <https://mhrd.euniwizarde.com/HomePage/ebidSites?siteName=mhrd>

5. Quotations should be valid for a period of **90** days from the date of opening of techno-commercial bid.

## 6. Some important dates:

- |      |   |                         |                       |
|------|---|-------------------------|-----------------------|
| i.   | <b>Pre-bid Conference</b>               | <b>Date: NA</b>         | <b>Time: NA</b>       |
| ii.  | <b>Last date for submission of bid</b>  | <b>Date: 09/06/2020</b> | <b>Time: 03:00 PM</b> |
| iii. | <b>Opening of Techno-commercial bid</b> | <b>Date: 10/06/2020</b> | <b>Time: 03:00 AM</b> |

7. **Warranty:** 2 years comprehensive warranty from OEM.

8. **Technical Evaluation Criteria:** As per the detailed equipment technical specifications given in Annexure –I. The bidders will be asked to give a technical presentation before opening of the financial bid (to provide clarification and to ascertain the technical specifications of the bid).

## 9. Other Qualification criteria:

### Eligibility of Bidders:

- i. Bidders must submit a declaration on their letter head that they are not black listed in any Govt. body, undertaking, and PSU or Autonomous bodies. If found the declaration is false, their offer will be out rightly rejected and their EMD amount will be forfeited.
- ii. The Vendor shall provide the following information with the bid to provide background information on vendor to Tender Committee.
  - a. **The list of clients** (contact details of a person phone/ mob. no. with e-mail ids should be attached) where the bidder/OEM had supplied the similar type of materials (as mentioned in schedule of requirements) with successful installation in last three years.
  - b. **Delivery period** from the date of placement of the Purchase Order.
  - c. Possible quicker **availability** of the vendor when problem occurs.
  - d. **Validity period** of cost of equipment.
  - e. **Necessary documents** as mentioned in **Annexure -I**
  - f. Any other points may have deemed fit by the committee at time of technical evaluation of bid documents.
  - g. Details of Hardware included in offer.
  - h. Details of Technical Specification and other specifications so as to enable technical assessment of the proposal. Unpriced bid document exactly same as the price bid with full break up without the costs mentioned.

- 10. Financial Bid Evaluation Criteria:** The comparison will be made for the award of contract on the overall price basis.
- 11.** (a) All prices to be quoted on FOR basis (NIT Rourkela) in INR.  
(b) GST: GST should be charged at applicable rates against DSIR certificate.
- 12. Bid Security (EMD) and Tender Cost: EMD (Earnest Money Deposit)** need to be submitted through online portal only for **INR 24,000/- (Rupees Twenty Four Thousand only)** and Tender cost (Non-refundable) through online mode for **INR 1,000/- (Rupees One Thousand only)**. The EMD (Earnest Money Deposit) of unsuccessful bidders should be returned to them at the earliest and latest on or before the 30<sup>th</sup> days after the award of the contract. EMD shall bear no interest. Any bid without accompanying with EMD & Tender Cost is liable to be treated as non-responsive and rejected.
- 13. Performance Security: 5% of contract value** in shape of Bank Guarantee/Demand Draft (DD) in favor of "Director, NIT Rourkela" payable at Rourkela from any Scheduled Commercial Bank except Co-operative and Gramin bank. Performance security should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the supplier including warranty obligation. Performance Security should be submitted within 15 days from the date of receipt of Order. And EMD (Earnest Money deposit) amount of successful bidder will be returned after the receipt of performance security in case of award of contract to successful bidder.
- 14.** Please send your quotations through e-Procurement Portal of Ministry of HRD Portal <https://mhrd.euniwizarde.com/>
- 15.** For technical details, you may contact

<p><b>Prof. Susovon Samanta</b> Department of Electrical Engineering National Institute of Technology, Rourkela – 769 008. Phone : (0661) – 246-2420 E-mail : <a href="mailto:samantas@nitrkl.ac.in">samantas@nitrkl.ac.in</a></p>
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NB: ***Please furnish your Dealership Certificate (must) and Proprietary Nature Certificate (If applicable)***



# NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA – 769 008, ODISHA

## BID DOCUMENT

### 1. Instructions to the bidders

- 1.1 Bids are invited on behalf of the Director, National Institute of Technology (NIT), Rourkela – 769008, Odisha, from the intending bidders for supply of the goods/stores/ equipments for the Institute as detailed in the enquiry letter.
- 1.2 The bidders should quote their offer/rates in **BOQ** in clear terms without ambiguity.
- 1.3 In case of any discrepancy between the rates in figures and that in words, the rate in words will be accepted as correct.
- 1.4 The last date for receipt of the bid is marked in the enquiry.
- 1.5 The Bid should be uploaded in MHRD Portal <https://mhrd.euniwizarde.com/>. Please follow the guideline of the site.
- 1.6 If a prospective bidder requires any clarification in regard to the bidding documents, he may make a request the concerned officer or faculty member at least 15 days before the deadline for receipt of bids.
- 1.7 Bids received after the deadline of receipt indicated in Para 1.4 above shall not be taken into consideration.
- 1.8 Each bidder shall submit only one bid. A bidder, who submits more than one bid, shall be disqualified and considered nonresponsive.
- 1.9 (In respect of high value plant, machinery etc. of a complex and technical nature). The bids may be submitted in two parts, viz., techno-commercial bid and financial bid.
- 1.10 The bidder has to sign in full at all pages of the scanned part of the bidding document. No over-writing in those pages are acceptable.
- 1.11 Bidders registered with any of the following agencies/ bodies as per Public procurement policy for Micro & Small Enterprises (MSE) order 2012 are exempted categories from payment of EMD provided that the registration Certificate issued by any one of these below mentioned agencies must be valid as on close date of tender. Micro small or medium enterprises who have applied for registration or renewal of registration with any of these agencies/bodies but have not obtained the valid Certificate as on close date of tender are not eligible for exemption.
  - i) Khadi and Village Industries Commission (KVIC)
  - ii) National Small Industries Corporation (NSIC)
  - iii) Any other body specified by Ministry of MSME/GOI

### 2. INSTRUCTIONS FOR ONLINE BID SUBMISSION

The bidders are required to submit soft copies of their bid electronically on the e-Wizard Portal (<https://mhrd.euniwizarde.com>) using valid Digital Signature Certificates. Below mentioned instructions are meant to guide the bidders for registration on the e-Wizard Portal, prepare their bids in accordance with the requirements and submitting their bids online on the e-Wizard Portal. For more information, bidders may visit the e-Wizard Portal <https://mhrd.euniwizarde.com>

## **2.1 REGISTRATION PROCESS ON ONLINE PORTAL**

1. Bidders to enroll on the e-Procurement module of the portal <https://mhrd.euniwizarde.com> by clicking on the link "Bidder Enrollment". Enrolment on the e-wizard Portal.
2. The bidders to choose a unique username and assign a password for their accounts. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the e-Wizard Portal. Bidders to register upon enrolment their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India with their profile.
3. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse. Foreign bidders are advised to refer "DSC details for Foreign Bidders" for Digital Signature requirements on the portal.
4. Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / eToken.
5. Bidders must ensure that they have the latest version of Java installed in their local system.
6. The scanned copies of all original documents should be uploaded in pdf format on portal <https://mhrd.euniwizarde.com>
7. After completion of registration payment, you need to send your acknowledgement copy on our help desk mail id [ewizardhelpdesk@gmail.com](mailto:ewizardhelpdesk@gmail.com) for activation of your account.

## **2.2 TENDER DOCUMENTS SEARCH**

1. Various built in options are available in the e-Wizard Portal to facilitate bidders to search active tenders by several parameters. These parameters include Tender ID, organization, location, date, value, etc.
2. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the Online Portal.
3. Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the Online Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
4. The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

## **2.3 BID PREPARATION**

1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid.

3. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
4. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / PNG etc. formats. Bid documents may be scanned with 100 dpi with black and white option.

## **2.4 BID SUBMISSION**

1. Bidder to log into the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
2. The bidder to digitally sign and upload the required bid documents one by one as indicated in the tender document.
3. Bidder to select the payment option as Online" to pay the tender fee/ EMD wherever applicable and enter details of the instrument.
4. A standard BoQ format has been provided with the tender document to be filled by all the bidders. Bidders to note that they should necessarily submit their financial bids in the prescribed format and no other format is acceptable. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the unprotected cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.
5. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
6. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data, which cannot be viewed by unauthorized persons until the time of bid opening.
7. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
8. Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
9. Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.

## **2.5 AMENDMENT OF BID DOCUMENT**

At any time prior to the deadline for submission of proposals, the institutions reserve the right to add/modify/delete any portion of this document by issuance of a Corrigendum, which would be published on the website and will also be made available to the all the Bidder who have been issued the tender document. The Corrigendum shall be binding on all bidders and will form part of the bid documents.

## 2.6 ASSISTANCE TO BIDDERS

1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
2. e-Procurement support any queries relating to the process of online bid submission or queries relating to e-Wizard Portal in general may be directed to the **24x7 e-Wizard Helpdesk. The contact number for the helpdesk is 011-49606060, 23710092, 23710091, Er Sanjeet Kumar Jha (+91-8882495599), 9355030626. Amit Kumar Jha 9355030627, 9205898226**

### Email Support:

For any eProcurement Application Service Requests and Technical issues related to Document Uploads, Tender Publishing, Issue of Corrigendum, Encryption/Decryption Key issues, Bid Evaluation, Bidder Login issues, New Registration issues, Key Uploads, DSC Key installation, Bid Submission, system users may please mail to Sanjeet Kumar Jha [ewizardsanjeet.kumar@gmail.com](mailto:ewizardsanjeet.kumar@gmail.com)

## 3. Conditions of the bid:

- 3.1 The rates quoted should preferably be net, inclusive of all taxes and duties, packing, forwarding, freight, Insurance and all other incidental charges. In case these charges are quoted extra in addition to the quoted rates, the amount thereof or Ad Valorem rate must be specified. Packing, forwarding, freight etc., when quotes separately are reimbursable at actuals. If external agencies are employed, their receipts must be enclosed with the invoice.
- 3.2 Duties and Taxes are to be quoted separately. Ad Valorem rates thereof should be clearly indicated with reference to the relevant Acts and Rules.

**It may be noted that the Institute is availing custom duty exemption in terms of Notification No. 51/96 – Customs dt. 23.07.1996, Notification No. - 47/2017- Integrated Tax (Rate) dt. 14.11.2017 and Notification No- 45/2017 – Integrated tax (Rate) dt. 14/11/2017 & Notification No. - 45/2017- Central tax (Rate) dt. 14.11.2017, Notification No. - 45/2017- Union Territory Tax (Rate) dt. 14/11/2017 [Vide DSIR, Ministry of Science and Technology, Government of India, Registration No.: TU/V/RG- CDE (227)/2016, dated: 13.11.2018]**

- 3.3 The goods are required to be delivered at the indenting Department of NIT, Rourkela, and must be reached within **60 days** from the date of placement of the supply of order under the risk and arrangement of the bidder and offers with delivery beyond the above period shall be treated as unresponsive. In case the delivery time is higher, the same must be mentioned clearly in the quotation.
- 3.4 The bid should remain valid for a period of **90 days** from the date of opening. In case your offer has a different validity period that should be clearly mentioned in the quotation.
- 3.5 Conditional discount, if any, offered by the bidder shall not be considered at the time of evaluation.
- 3.6 The goods offered should strictly conform to the specification and technical details mentioned in Annexure-I.
- 3.7 The Institute may like to conduct pre-dispatch inspection of goods, where applicable.

- 3.8 Period of guarantee/warranty, where applicable, should be specified in the bid.
- 3.9 If the successful bidder, on receipt of the supply order, fails to execute the order within the stipulated period, in full or part, it will be open to the Director, NIT Rourkela to recover liquidated damage from the firm at the rate of 1 percent of the value of undelivered goods per month or part thereof, subject to a maximum of 5 percent of the value of undelivered goods. Alternatively, it will also be opened to the Director, to arrange procurement of the required goods from any other source at the risk and expenses of the bidder.
- 3.10 The successful bidder may be required to execute a contract, where applicable.
- 3.11 The bidder has to furnish up to date Income Tax Clearance Certificate along with the bid.
- 3.12 Payment (100 percent) will be made by Account Payee Cheque/Bank Draft, within 30 days from the date of receipt of the goods in good condition or receipt of the bill, commissioning of the equipment, where applicable, whichever is later/latest.
- 3.13 In case of Advance payment, the payment will be made on either in Foreign Demand Draft or Wire Transfer only. The proforma invoice copy need to be sent for advance payment.
- 3.14 In the event of any dispute arising out of the bid or from the resultant contract, the decision of the Director, NIT, Rourkela shall be final.
- 3.15 The bid document/resultant contract will be interpreted under Indian Laws.



**DETAILED TECHNICAL SPECIFICATION**

**Purchase of “High Power (20 KW) Interleaved bi-directional half bridge converter (2 UNITS)”**

Sealed tender bids are invited from authorized vendors of “**High Power Interleaved bi-directional half bridge converter (2 UNITS)**” *with all required accessories.*

**TECHNICAL SPECIFICATION**

**I. High Power Interleaved bi-directional half bridge converter (2 UNITS)**

1. Power Rating 20KW
2. Input side voltage: 200V, Output side voltage: 400V
3. Suitable gate driver for IGBT
4. Proper heatsink and fan cooling for switching devices
5. Switching frequency: 20 kHz
6. Internal SMPS for powering all sensors and gate drivers
7. High speed voltage and current sensors
8. Provision for external PWM and access to feedback signals  
Required Access signals for
  - i) Load current
  - ii) Output Voltage
  - iii) Phase inductor current all phases
  - iv) Gate Pulses
9. LCD display showing parameters: HV, LV side voltage and current.
10. Key-pad for parameter setting flexibility.
11. Protection: against high voltage, low voltage, high current, high temp etc.
12. Advanced Micro-controller based digital PWM control.
13. Logistic support to develop code development environment and code loading to Micro-controller.
14. Firmware modification and code compilation flexibility.
15. Limited source code for PWM pulse generation for bi-directional power flow operation in boost and buck mode.

**Note:**

- a) The IPR related to the design of this order will be solely owned by NIT Rourkela and the developer cannot use it for any other purposes further.
- b) The design and the component cost will be separate.
- c) All the design material with the corresponding schematic, Gerber, and BOM has to be transferred in the name of Dept. of Electrical Engineering NIT Rourkela.
- d) The full design documents should be provided to NIT Rourkela.

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