



# राष्ट्रीय विज्ञान शिक्षा एवं अनुसंधान संस्थान, भुवनेश्वर

(परमाणु उर्जा विभाग, भारत सरकार का एक स्वयं शासित संस्थान)

**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHUBANESWAR**

(AN AUTONOMOUS INSTITUTE UNDER DEPT. OF ATOMIC ENERGY, GOVT. OF INDIA)

Name of Work: -“Providing Power supply to Data Center in SMS building from LCS-1 inside NISER campus Jatni.”

NIT No. & Date:-NISER/IWD-ELECT /2017-18 /085

Dtd: 19.02.2018

Estimated cost of tender: - Rs 38, 05,976.00

Earnest Money : Rs. 76,120.00

Completion time: - 90 (Ninety) days

Last date of submission of E- tender: **13.03.2018 up to 11.30 AM**

**Opening of Technical Bids: 13.03.2018 at 3.00 P.M**

This tender documents contains 12 (Including front page) pages.



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**TENDER DOCUMENTS**

File No. NISER/IWD-ELECT /2017-18/085

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**I N D E X**

Sl. No.	Particulars	Page No.	Remarks
1.	Notice Inviting Tender	1- 03	
2.	Standard E-Tender terms and condition	04	
3.	Detail Tender notice	05	
4.	General terms and conditions	06-09	
5.	Technical specification	10	
6.	C.P.W.D. Specifications 2016 of Electrical work	Available in the office of the SO-D (Electrical) of NISER, Jatni. (If required, the same can be made available on written request addressed to the SO-D (Elect.) NISER	
7	Schedule of Quantities	11-12	

## NOTICE INVITING TENDER

Nit No. NISER/IWD-ELECT /2017-18/085

Date: 19.02.2018

Director, NISER invites E- tender on two bid system (Technical Bid and Financial Bid) for the following work:-

Name of the work: “Providing Power supply to Data Center in SMS building from LCS-1 inside NISER campus Jatni”.

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Earnest Money	:	Rs. 76,120.00
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Tender can be downloaded and bided from website address: [www.tenderwizard.com/NISER](http://www.tenderwizard.com/NISER).

Tender documents for viewing only is also available in NISER web-site address: [www.niser.ac.in](http://www.niser.ac.in).

**REGISTRAR  
NISER**

## **Standard eTender Terms & Conditions**

1. The details of tender notification can be downloaded from [www.tenderwizard.com/NISER](http://www.tenderwizard.com/NISER) under "**Tender Free View**" link.
2. Vendors should obtain the USER ID and PASSWORD from [www.tenderwizard.com/NISER](http://www.tenderwizard.com/NISER) by clicking on "**REGISTER ME**" link in the homepage.
3. The Vendor registration fees has to be paid to ITI Ltd for Rs. 1180/- including GST. Using the e-payment link provided at the time of registration, and the mode of payments are Credit Card, Debit Card and Internet Banking. Vendor Registration is Valid for 1year.
4. For further details on e-Tender participation, please contact ITI Help desk on
  - Telephone: 080-49352000/9686115318
  - Email: [harishkumar.kb@etenderwizard.com](mailto:harishkumar.kb@etenderwizard.com), [ambasa@etenderwizard.com](mailto:ambasa@etenderwizard.com).
5. Tenders should be submitted only through e-Tender portal and obtain the Tender Acknowledgement copy as a proof of successful submission.



**राष्ट्रीय विज्ञान शिक्षा एवं अनुसंधान संस्थान, भुवनेश्वर**  
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**Tender Notice**

Director of NISER hereby invites E- tender on two bid system (Technical Bid and Financial Bid) for the following work from **registered electrical contractors** of CPWD, MES, Railways and State PWDs and/or those who have worked for DAE or its Organizations or Govt. /Semi Government organizations and **having a valid ELBO License** and have successfully carried out a minimum of one/two/three similar works (Supply erection and commissioning of electrical equipment) of 80%/60%/40% respectively of the estimated cost or above, as indicated in the prescribed format of the E-Tender portal in last seven years. The eligible contractors may submit their bid along with supporting documents of fulfilling the above conditions otherwise the bids bear the risk of not being considered.

Name of Work	Estimated Cost ₹	Earnest Money ₹	Duration of work
<b>Name of the work:</b> -“Providing Power supply to Data Center in SMS building from LCS-1 inside NISER campus Jatni”. NISER/IWD-ELECT /2017-18/085 Dt. 19-02-2018	Rs 38, 05,976.00	Rs.76,120.00	90 (Ninety) days

The Bidders are requested to give detailed tender in E-Tender portal in the prescribed forms in two Bids i.e. Part - I Technical Bid. Part - II Financial Bid.

**Tender process & award of contract.**

The technical bids will be evaluated to shortlist the eligible bidders. The financial bids of only the short listed bidders shall be considered for further processing. Bidders whose technical offer is found acceptable and meeting the eligibility requirements as specified in this tender will be informed about the date and time of the opening of the financial bid.

NISER will open financial bids of only the technically qualified bidders. The Date and Time of opening the financial Bid will be intimated only to technically acceptable Bidders for the work at a later date.

**The earnest money deposit and the cost of tender (Non Refundable) as indicated against the work should be send by post or by hand to “SO(D)-ELECTRICAL,INSTITUTE WORKS DEPARTMENT , NISER,Jatni Campus, PO-Bhimpur-Padanpur,Via-Jatni,District- Khurda, PIN- 752050” so that it reaches on or before the opening of the technical bid for e-tender system in the form of Account Payee Bank Draft payable on any branch of Nationalised/Schedule Bank at Bhubaneswar/ Jatni in favour of “Director, National Institute of Science Education & Research, Jatni”, in a sealed envelope. All tenders submitted without requisite amount of earnest money and tender cost shall be rejected and their technical and financial bids shall not be opened. No interest is payable on EMD.**

Director of NISER, reserves the right to accept/reject any/all tenders without assigning any reason whatsoever. Part or incomplete tenders will be summarily rejected. No further correspondences whatsoever shall be entertained in this regard. Canvassing in any manner shall result in rejection of the tender.

Any dispute arising out of this shall subject to Bhubaneswar jurisdiction only.



## General Terms and Conditions:

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In support of fulfilling all the essential conditions mentioned in the previous Para the contractor shall submit the details through E-Tender in the prescribed format the past details, mentioning the name of work, estimated cost, , date of commencement as per agreement & actual date of completion as per agreement along with schedule of quantities executed and any penalty levied due to delay in executing the work from an officer not below the rank of Executive Engineer (Electrical).

2. The estimated cost of the work is **₹ 38, 05,976/- (Rupees Thirty Eight Lakhs Five Thousand Nine hundred and seventy six only.)**
3. Period for completion of the work will be **90 (Ninety Days)**. and the date of commencement shall be reckoned from the tenth day of issue of award letter.
4. **The earnest money deposit as indicated against the work should be send by post or by hand to “SO(D)-ELECTRICAL,INSTITUTE WORKS DEPARTMENT , NISER,Jatni Campus, PO-Bhimpur-Padanpur,Via-Jatni,District- Khurda, PIN- 752050” so that it reaches on or before the opening of the technical bid for e-tender system in the form of Account Payee Bank Draft payable on any branch of Nationalised/Schedule Bank at Bhubaneswar/ Jatni in favour of “Director, National Institute of ScienceEducation&Research,Jatni”,ina sealed envelope. All tenders submitted without requisite amount of earnest money and tender cost shall be rejected and their technical and financial bids shall not be opened. No interest is payable on EMD.**

The EMD will be returned to the bidders(s)/Agents whose offer is not accepted by NISER within one month from the date of the placing of the final order(s) on the selected bidder(s). In case of the bidder(s) whose offer is accepted the EMD will be returned on submission of Performance Bank Guarantee (if applicable). However, if the return of EMD is delayed for any reason, no interest /penalty shall be payable to the bidders

5. .The details of tender notification can be download from [www.tenderwizard.com/NISER](http://www.tenderwizard.com/NISER) under "**Tender Free View**" link. Vendors should obtain the USER ID and PASSWORD from [www.tenderwizard.com/NISER](http://www.tenderwizard.com/NISER) by clicking on "**REGISTER ME**" link in the homepage.The Vendor registration fees has to be paid to ITI Ltd for Rs. 1180/-. Using the epayment link provided at the time of registration, and the mode of payments are Credit Card, Debit Card and Internet Banking. Vendor Registration is Valid for 1year.Tenders should be submitted only through e-Tender portal and obtain the Tender Acknowledgement copy as a proof of successful submission.

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i.e. Part - I Technical Bid.  
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**8. Tender process & award of contract.**

The technical bids will be evaluated to shortlist the eligible bidders. The financial bids of only the short listed bidders shall be considered for further processing. Bidders whose technical offer is found acceptable and meeting the eligibility requirements as specified in this tender will be informed about the date and time of the opening of the financial bid.

NISER will open financial bids of only the technically qualified bidders. The Date and Time of opening the financial Bid will be intimated only to technically acceptable Bidders for the work at a later date.

Please note, that bids submitted without tender cost and EMD are summarily being rejected.

9. Director of NISER does not bind himself to accept the lowest or any tender and reserves the right to accept the tender either in whole or in part. The decision of the Director shall be final in this regard.
10. Canvassing in any manner or form will lead to rejection of the Bid.
11. The tenderer shall not be permitted to bid for works in any unit of DAE where any of his/her relatives are employed. He shall also intimate the names of any such persons who are working with him in any capacity or subsequently employed by him and whose relatives are working in DAE or its units.
12. **Contact for Technical information:** (Only E-mail enquiries will be entertained)

**Mr. Amit Kumar Panigrahi**  
SA\_C (Electrical),  
Institute Works Department, NISER.  
E-Mail – amit.panigrahi@niser.ac.in

**NOTE :**

A person shall be deemed to be a relative of another if, (a) they are members of a Hindu undivided family; or (b) they are husband and wife; or (c) the one is related to the other in the following manner : Father, Mother (including step mother), Son (including step son), Son's wife, Daughter (including step daughter), Father's father, Son's son, Son's wife, Son's daughter, Son's daughter's husband, Daughter's husband, Daughter's son, Daughter's son's wife, Daughter's daughter, Daughter's husband, Brother (including step brother), Brother's wife, Sister (including step sister), Sister's husband.

13. The Bid shall remain valid for a minimum period of 90 days from the date of opening of the tender for the purpose of acceptance and award of work. Validity beyond 90 days from the date of opening shall be by mutual consent.



14. The tenderer should see and obtain the drawings. In case of any queries, necessary clarifications may please be sought from the office of the Scientific Officer-D (Electrical). No claim whatsoever will be entertained in this regard for any alleged ignorance, thereof.
15. Before tendering, the tenderer shall inspect the site to fully acquaint himself about the condition in regard to accessibility to site, nature and extent of ground, working condition of site and locality including stacking of materials, conditions affecting accommodations and movement of labour, etc., which are required for satisfactory execution of the work. No ignorance of the same, whatsoever shall be entertained under any circumstances.
16. EMD is liable to be forfeited if the contractor fails to commence the work as per award letter.
17. Some of the provisions of the contract are given below.
  - a). **DEFECT LIABILITY PERIOD** - Twelve months from the date of completion as certified by the authorized engineer.
  - b). **MINIMUM VALUE OF WORK FOR THE INTERMEDIATE CERTIFICATE**  
Intermediate certificate for a lesser amount can be admitted for payment at the discretion of the Institute.
  - c). **SECURITY DEPOSIT** - A sum @ 5% of the gross amount of the bill shall be deducted from each running bill of the contractor, till the sum along with the sum already deposited as earnest money, will amount to security deposit of 5% of the tendered value of the work. In addition, the contractor shall be required to deposit an amount equal to 5% of the tendered value of the contract as **Performance Security** within the period prescribed for commencement of work in the letter of award issued to him.
  - d). **COMPENSATION** – In the event of any delay in completion of the work beyond the scheduled period, the contractor shall pay an amount equal to one per cent of the total cost of work or such smaller amount as decided by Director of NISER (whose decision shall be final) as compensation to the institute, for every week that the work remains un-commenced or unfinished. Compensation to be paid shall not exceed ten per cent of the estimated cost of the total work as per award letter.
18. Stores to be issued: - No material shall be issued by the Institute. The responsibility for arranging all materials from approved manufacturer as per award letter lies with the contractor.
19. There will be deduction of TAX from every RA bill and also from the final bill of the contractor at the rate prescribed by govt. of India from time to time.
20. The successful bidder will be required to submit the names, qualifications and experiences of the supervising staff to be deployed for execution of the work. In case of any changes occurring during the course of execution of the said work, the same shall also be intimated by the bidder to the institute.

21. The tenderer should also submit the detail list of tools and plants/ machineries/ equipment, etc. that he proposes to place at the site of work.
22. The Contractor shall have to make his own arrangements for storage of materials required for execution of the work and NISER in any manner shall be held responsible for the storage and safe custody of the said materials at work site.
23. Electricity will be supplied to the site of work at one point only if required and Contractor can do onward distribution with metering arrangement as per the requirement. Electricity charges; if any will be recovered from the Contractor's bill based on meter readings towards its consumption.
24. Before commencement of the work, the contractor has to submit the list of tools and plants brought to the site of work. No items other than the list submitted will be allowed to be taken out from the work site.
25. All the mandatory testing charges will be borne by the contractor.
26. Cost escalation in any manner whatsoever, will not be accepted for the said work, where in the stipulated period of completion of work is 18 (eighteen) months or less.
27. The work will be executed as per CPWD guidelines and DAE works procedure under the supervision of Engineer-In-charge of NISER.

## **Technical Specifications**

1. **Work should be carried out as per CPWD electrical specification.**
2. **Circuit wiring:** - Phase, Neutral & Earth wire shall be connected up to Switch Box.
3. In wiring, no joints in wiring will be permitted anywhere, except in switch box or point outlets, where jointing of wires will be allowed with use of suitable connector.
4. **2.5** sq mm for **points & circuit** wiring, **4** sq. mm for **power plug point** wiring, **6** sq mm & **above size** for **Sub-main** wiring, i.e. Panel to DB etc. as per site plan/project requirement as directed by Engineer-in-charge.
5. Drawing of PVC insulated copper conductor cable should not be excess from maximum capacity of conduit, as per clause [4.2.1 (ii)]
6. MCB DBs pre-wired type & brand name/make as specified in the tender only.
7. Only quality materials of reputed make as specified in the tender will be used in work.
8. The contractor shall engage suitably **skilled/licensed workmen** of various categories for execution of work & **supervised by supervisors / Engineer of appropriate qualification** & experience to ensure proper execution of work. They will carry out instructions of Engineer-in-charge & other senior officers of the Institute during progress of work.

## **MEASUREMENT AND RA/ FINAL BILL**

1. The contractor shall submit his running and final bills with detail measurement for the purpose of payment & bills shall be processed by the various offices for payment, as per existing procedure. He has to sign the MB Book as an acceptance to the measurements carried out by the engineer in charge of NISER, based on which the RA/Final Bill shall be generated for payment.
2. The contractor shall extend all possible co-operations for checking the measurement. Decision of the engineer in charge (electrical) of NISER shall prevail. In case of any dispute, the final decision lies with the Director of NISER, which shall be binding on both the parties.

## **OTHERS**

If, the contractor has to remove/dismantle any old, damaged wiring & fixtures etc. for the purpose of execution of the said work, the same shall be deposited with NISER Stock Yard along with the list of materials under intimate to the concerned Engineer in- Charge. No extra payment will be made by the institute for this purpose.

## SHEDULE OF QUANTITIES

Sl No.	Systems	Unit	Qty.
1	Laying of one number 300Sqmm PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size direct in ground including excavation, sand cushioning, protective covering with brick and refilling the trench etc. as required.	Meter	<b>800</b>
2	Laying and fixing of one number of (300 SQMM) (clamped with 40x3mm MS flat clamp) PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size on cable tray as required.	Meter	<b>400</b>
3	Supplying and making end termination with brass compression gland and tinned copper lugs for 3½ X 300 sq. mm size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 kV grade as required.	Nos.	<b>36</b>
4	Supply, installation, testing , comissioning & retrofitting of 1250A MCCB with all protection and busbar, insulator of appropriate size in the exixting panel with 80X10 copper busbar	Nos.	<b>2</b>
5	Providing and fixing 50 mm X 6 mm tinned copper strip on surface or in recess for connections etc. as required	Meter	<b>6</b>
6	Supply of 3.5C X 300 sq.mm. Al.stranded cable of 1.1 KV grade aluminium stranded circular/ sector shape core conductor with XLPE insulation, extruded PVC inner sheathed, G.I wire/flat strip armoured, extruded FRLS grade PVC outer sheathed cable conforming to IS :1554 Part I / IS 7098 Part-I with latest amedments.	Meter	<b>1200</b>
7	<p>Supply, installation,testing &amp; commissioning of floor mounting front operated front access extensible type cubicle panel totally enclosed,dust and vermin proof with IP-42 protection with hinged and lockable doors. Switchboardsfabricated from 2 mm thick CRCA sheets including interconnections, tinned coppercrimping lugs, bonding to earth and painting suitable for use at 415 V, 3 phase 4 wire 50 Hzsystem, and to withstand a fault level of 35KAsymmetrical for 1 sec at 415 V complete</p> <p>MULTIFUNCTIONMETER,ammeter,voltmeter,CT-1200/5 R Y B INDICATOR CONTROL MCB as per Details</p> <p><b>INCOMER</b></p> <p>2 nos. 1250 A, 415 volt 35 kA for 1 sec. 3Pole</p> <p>EDO ACB with separate tinned Cu neutral link,each complete with :</p> <p>1 no numerical protection relay similar to M/S Areva make Micom P123 or equivalent. 240 V AC spring charging motor and closing coil</p> <p>&amp; Shunt trip coil 110 V DC Safety shutter &amp; 6 NO+ 6 NC contacts.</p> <p>Dual ratio 1 no.Cast Rasin CT 1250/1A,15 VA,class-1.0 for metering - 3 nos &amp; CT 1250/1,15 VA,5P20 for protection - 3 nos.</p> <p>96 sqmm 0-1000-2000 A ammeter with 3-way &amp;OFF selector switch</p>	Set	<b>1</b>

96 sqmm 0-500 V voltmeter with 3-way & OFF 96 sqmm 0-500 V voltmeter with 3-way & OFF selector switch 1 set of three R Y B indicating lamps. Red / green / amber / white / ON / OFF / Trip /trip circuit healthy indicating IAs. Spring charge indication lamps Breaker control switch Static master trip relay Terminal to receive 2000A sandwich type Copper bus duct. All Tinned Copper neutral links shall be isolable.

**Note:**

1. All inter connection for incoming & outgoing should be with copper busbar.
2. Vertical bus rating shall be based on outgoing feeders.
3. All MCCBs shall be fixed type 415 V, 35KA (for 1 sec
4. Suitable interlock shall be provided between two(2) incomer & one (1) bus-coupler breakers so that 2 out of 3 breakers can be closed at a time.
5. Cubicle illumination lamp & space heater in the cable alley shall be provided

**Bus bar**

1250 A TPN tinned copper bus bar having maximum current density of 800 A/sq.inch to withstand symmetrical fault level of 35 KA for 1 sec at 415 V. The neutral bus bar shall have

100% capacity

**Busbar Coupler:**

1250A , 4P, 35 kA , EDO ACB without release : 1 SET

**Outgoings :-**

2 nos. 1000 A, 415 volt 35kA for 1 sec. 3Pole EDO ACB with microprocessor based O/L & E/F release and separate tinned Cu neutral link

1 nos. 800 A, 415 volt 35kA for 1 sec. 3Pole EDO ACB with microprocessor based O/L & E/F release and separate tinned Cu neutral link

1 Nos. 400 A 4P MCCB complete with thermal magnetic release having over current, short circuit & earth fault protection.

1 Nos. 250 A 4P MCCB complete with thermal magnetic release having over current, short circuit & earth fault protection.

1 Nos. 63 A 4P MCCB complete with thermal magnetic release having over current, short circuit & earth fault protection.

1 Nos. 32 A 4P MCCB complete with thermal magnetic release having over current, short circuit & earth fault protection.