

INVITATION FOR TENDER FOR SUPPLY OF EQUIPMENT

Sealed tender offers are invited in two separate sealed covers (Technical and Commercial offers) from eligible manufacturers/suppliers or their direct Indian agents for the supply of the following equipment.

20 KVA UPS

Please send offers, ALONG WITH DESCRIPTIVE CATALOGUE/ BROCHURE. The validity of the bid should be at least four months (120 days) or more from the date of the opening of this tender. Please ensure that your quotation reaches not later than **17.04.2018 at 15:00 Hrs** at the following address:

**Dr. Sujoy Kanti Ghosh,
Assistant Professor, Dept. of Geology & Geophysics,
Indian Institute of Technology Kharagpur – 721 302, West Bengal, India**

Earnest money of **Rs. 10,000/-** is to be deposited in the form of Account payee Demand Draft in favour of IIT Kharagpur, payable at Kharagpur, India. Any bid which is not accompanied with an EMD shall be summarily rejected. Earnest money deposited will be forfeited if the tenderer withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender. No interest will be paid on the earnest money of the unsuccessful bidders.

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| Tender Reference | IIT/SRIC/GG/IAJ/SKG/17-18/UPS, Dated: 27.03.2018 |
| Price of Tender Document | NIL |
| Last Date and Time for submitting the tender document | 17.04.2018 at 15:00 Hrs (Indian time) |
| Time and Date of Opening of Technical Bids | 17.04.2018 at 16:00 Hrs (Indian time) |
| Place of Opening Tender | Dept. of Geology & Geophysics, Indian Institute of Technology Kharagpur – 721 302, West Bengal, India |
| Address of Communication | As stated above |
| Contact Telephone Numbers | +91- 3222 - 28 3364 |
| E-mail | sujoy.ghosh@gg.iitkgp.ernet.in |

DETAILED TECHNICAL SPECIFICATIONS FOR 20 KVA UPS

| SI No. | Parameters | Specification |
|--------|--|---|
| | TECHNOLOGY | Should be DSP controlled double conversion On-line VFI according to IEC62040-3 specification Should be IGBT based rectifier and Inverter design Built-in Isolation Transformer should be provided on the Inverter output (No external Transformer will be accepted) |
| 01. | Input | |
| | Rated voltage | 415 VAC three-phase + N |
| | Voltage Range | ± 20% at full load |
| | Frequency Range | 45 to 65 Hz |
| | Power Factor | ≥ 0.99 |
| | Input current THD | ≤ 3% |
| | Power Walk-in | Progressive in 10 seconds |
| 02. | By Pass (Static & manual) | |
| | Rated Voltage | 400 VAC |
| | Number of Phases | 3 + N |
| | Permitted voltage range | ± 15% (selectable from ± 10% to ± 25% from front panel) |
| | Rated Frequency | 50/60 Hz |
| | Permitted Frequency Range | ± 2% (selectable from ± 1% to ± 5% from front panel) |
| 03. | Batteries with battery cover cabinet (company made) | |
| | Type | Sealed Maintenance Free Lead Acid type 12V |
| | Make | Exide Power Safe / Amara Raja Quanta |
| | Backup Time | Approx. 60 Mins. |
| | Minimum Battery VAH required | 24960 VAH |
| | Battery offered | Bidder should specify the No of batteries and each Battery AH offered |
| | Recharge Time | 4-6 Hrs. |
| | Temperature Control & Battery Charging | The UPS should compensates for any variations in temperature while recharging the batteries. The recharge voltage is temperature depended – the higher the temperature, the lower the recharge voltage should be |
| | Automatic battery test | The UPS should carry out battery tests automatically. The period between and the duration of the test should be configured via the control panel, or the test can be completely deactivated. |
| | Current ripple | In normal operating condition and with the battery charged, the current ripple should be nearly zero. |
| 04. | Output | |
| | Active Power | 20 KVA / 18 KW |
| | Number of Phases | 3 + N |
| | Rated Voltage | 380 – 400 – 415 V AC Selectable |
| | Power Factor | 0.9 |
| | Voltage setting | via Control Panel |
| | VTHD | <2% for Linear load & <3% for Non-Linear load |
| | Crest factor (I _{peak} /I _{rms}) | 3 : 1 |
| | Waveform | Sinewave |
| | Frequency | 50/60 Hz selectable |
| | Transient Response | 5V for a step load of 100% |
| | Overload | 110% for 1 Hr., 125% for 10 mins., 150% for 1 min. |
| | Overall efficiency at | ≥ 92% |

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| | full load | |
| 05. | Protection | |
| | Normal Protection | Input, output, rectifier input, battery fuse, bypass fuse, short circuit etc. Thermal on system, rectifier, bypass and inverter. Protection against prolonged battery discharge |
| 06. | Environmental Conditions | |
| | Operating temp. for UPS | 0 – 40° C |
| | Relative humidity | <95% non condensing |
| | Noise | <60dBA at 1 m |
| 07. | Mechanical Data | |
| | Protection Degree of the cabinet | IP 20 |
| | Cable input | Bottom |
| 08. | Display & Indications: | |
| | Minimum List of information to be appeared on the LCD Display | Line input voltage, Frequency Output Voltage, current & frequency Output apparent power, Load output apparent power per phase Total Load Power, Apparent Power, Active Power, Load output Power Factor Load Power Percentage per phase, Total connected load in percentage Bypass voltage, input frequency Inverter voltage, Frequency Battery voltage, DC Bus voltage, charging current, discharging current, Battery max discharge time in battery mode, Battery warn volt, shutdown volt Temperature – Control board, Rectifier SCR, Inverter IGBT System shutdown time, restart time <u>Setting:</u> Clock, Date, Service contact, Battery Test, RS485, MODBUS, ALARM |
| | LED Indication | UPS Start, Standby, Bypass Mode, Line Mode, Battery Mode, Fault, Warning Battery Test, ECO Mode |
| | Buzzer | Beeping sound for Bypass, Standby, Battery Test, Low Battery, Fault, Warning for overload, overload |
| 09. | Other Key features: | |
| | Reliability of the system | The total system (Charger & Inverter section) should be controlled by redundant microprocessor system. If a fault occurred to either of the microprocessors, the power supply to the protected load will not be interrupted |
| | Mimic Display | Mimic diagram should be provided to know the status of the rectifier, inverter, battery and output. |
| | Self Diagnostics | The system should provide “EVENT RECORDING” facility. The system should be able to store the events i.e. input voltage variation or out of tolerance, operating conditions of the system at any time, its include cause of the fault and should be able to display the name of the faulty area in terms of rectifier fault, inverter fault, battery contactor fault etc. through code. All events are readable from front panel LCD/LED of the system and also from PC/Laptop through the RS 232 communication interface port. |
| | Input Phase Reversal | In the event of any phase reversal in the input power source, the system should neither trip nor go to battery discharge mode. It should work on mains but with fault alarm indicating input phase reversal. |
| | Auto restart facility | The UPS should be configured to automatically restart after a mains supply failure or after the batteries have become fully discharged |
| | EPO (Emergency Power Off) | In the event of an emergency the UPS should be completely shutdown by an external command |
| | Standards | Should comply the following safety & EMC Standards: Low Voltage Directive 2006/95/EC : Test Standards CEI EN 62040-1 |

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| | | EMC Directive 2004/108/EC: Test Standards EN62040-2 |
| | Certification | ISO 9001:2015; ISO 14001:2004 & OHSAS 18001:2007 (Copy shall be attached) |
| | Warranty | 3 years for UPS and 2 years for Batteries |

Note:

- 1) Bidder should submit printed technical literature / brochure of the offered model, which should be fully complied with the specification as mentioned above otherwise the bid will be disqualified.
- 2) The competent authority may ask the lowest bidder to test the UPS system with full load condition at site before final installation / commissioning.
- 3) The OEM should be an established UPS Manufacturing company registered under the Companies Act, 1956 having operations in India for the last three years (Certificate of Incorporation) and shall have their registered offices in West Bengal and submit valid documentary proof of:
 - Certificate of incorporation
 - Trade License of West Bengal
- 4) Bidder should have local service support at Kharagpur to attend immediate breakdown calls if any. Detail address and Service Engineer's name and number should be furnished clearly.

GENERAL TERMS & CONDITIONS

PLEASE SPECIFICALLY INDICATE THE FOLLOWING POINTS IN YOUR QUOTATIONS AND COMPLY THE TERMS AS MENTIONED HEREUNDER:-

1. TENDERS ARE INVITED COMPLYING THE REQUIREMENT FOR TENDER AS DETAILED IN THE TENDER SPECIFICATION TO BE SUBMITTED IN THE COMPANY'S / FIRM'S LETTERHEAD NEATLY PRINTED / TYPED DULY SIGNED BY AUTHORIZED PERSON WITH THE SEAL OF THE BIDDERS. ALL ENVELOPS CONTAINING THE TENDER SHOULD BE PROPERLY SEALED. SEPARATE ENVELOPS SHOULD BE USED FOR TECHNICAL AND PRICE BID AND INDICATION TO THEIR EFFECT MAY PLEASE BE SUPERSCRIBED ON THE ENVELOP.

THE FOLLOWING DOCUMENTS ARE REQUIRED FROM THE INDIAN AGENTS OF FOREIGN FIRMS:

1.1 FOREIGN PRINCIPAL'S PROFORMA INVOICE INDICATING THE COMMISSION PAYABLE TO THE INDIAN AGENT AND NATURE OF AFTER SALES SERVICE TO BE RENDERED BY THE INDIAN AGENT.

1.2 COPY OF THE AGENCY AGREEMENT WITH THE FOREIGN PRINCIPAL INDICATING THE NATURE OF AFTER SALES SERVICES, PRECISE RELATIONSHIP BETWEEN THEM AND THEIR MUTUAL INTEREST IN THE BUSINESS.

2. TECHNICAL CATALOGUE/LEAFLET SHOULD BE ENCLOSED WITHOUT FAIL. PROVIDE COMPLIANCE STATEMENT WITH RESPECT TO THE TECHNICAL SPECIFICATIONS MENTIONED ABOVE.
3. PLEASE CONFIRM WHETHER YOU ARE AUTHORISED TO QUOTE ON BEHALF OF YOUR PRINCIPALS AND IF SO, PLEASE ENCLOSE A COPY OF SUCH AUTHORISATION WITH YOUR QUOTATION.
4. **PRICE BIDS FOR FOREIGN FIRMS:** PRICES ARE TO BE QUOTED ON 'EX-WORKS' DULY PACKED OR ON "FCA/FOB" INTERNATIONAL PORT" BASIS AND ALSO INCLUDING AGENCY COMMISSION PAYABLE TO YOUR INDIAN AGENTS, IF ANY SHOWING CLEARLY THE FOLLOWING BREAK UP:-

- I) EX-WORKS PRICE
- II) PACKING & FORWARDING
- III) FREIGHT
- IV) ANY OTHER RELEVANT EXPENSES.
- V) TAXES PAYABLE BY THE INSTITUTE

INSURANCE WILL BE PAID BY OUR INSTITUTE SEPARATELY AND SHOULD NOT FORM PART OF THE QUOTED PRICE.

PRICE BIDS FOR INDIAN FIRMS: PRICES ARE TO BE QUOTED ON F.O.R., IIT KHARAGPUR, ON DOOR DELIVERY BASIS CLEARLY SHOWING THE BREAK UP.

5. **PERIOD OF VALIDITY:** BIDS SHALL REMAIN VALID FOR ACCEPTANCE FOR A PERIOD OF 120 DAYS FROM THE DATE OF OPENING.
6. INDIAN AGENTS ADDRESS AND PERCENTAGE OF AGENCY COMMISSION INCLUDED IN ABOVE F.O.B./EX-WORKS PRICE. (THIS WILL BE PAID TO THE INDIAN AGENTS IN INDIAN RUPEES ONLY AND NOT IN FE). PLEASE ENCLOSE COPY OF AGENCY AGREEMENT ENTERED INTO WITH YOUR PRINCIPALS INDICATING THE NATURE OF AFTER SALES SERVICES OF INDIAN AGENTS, PRECISE RELATIONSHIP & MUTUAL INTEREST IN THE BUSINESS.

7. **MEASUREMENTS/WEIGHT:** NETT/GROSS OF THE CONSIGNMENT. IN CASE OF AN ORDER, YOU SHALL USE AIR WORTHY PACKAGE (AS APPLICABLE) DULY CERTIFIED WITH DOCUMENTS – PLYTO – SANITARY CERTIFICATE (AS PER QUARANTINE ORDER 2003).

8. **SCOPE OF SUPPLY:** SHOULD INCLUDE FREE INSTALLATION AND COMMISSIONING

9. **PAYMENT TERMS FOR FOREIGN FIRMS**

The offer will be made on a single currency and only one PO will be issued for the entire scope of the supply.

A) 90% PAYMENT THROUGH SIGHTDRAFT/FORIGN DEMAND DRAFT/LC (EXCEPTIONAL CASES)/SWIFT TELE TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER AND CONDITION AND 10% AFTER SUCCESSFUL INSTALLATION & COMMISSIONING.

B) BANK CHARGES ON LC/SD (WITHIN INDIA APPLICANT ACCOUNT AND OUTSIDE INDIA TO BENEFICIARY ACCOUNT).

PAYMENT TERMS FOR INDIAN FIRMS

A) 100% PAYMENT THROUGH CROSSED ACCOUNT PAYEE CHEQUE / ELECTRONIC TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER & CONDITION AND SUCCESSFUL INSTALLATION & COMMISSIONING.

B) ENSURE MENTIONING

i) BANK DETAILS OF THE BENEFICIARY, GST NO. AND PAN NUMBER

ii) FULL NAME AND ADDRESS OF THE BENEFICIARY ON WHOM ORDER HAS TO BE PLACED

10. WHETHER ANY EXPORT LICENCE IS REQUIRED FROM YOUR GOVERNMENT, IF SO, PLEASE CONFIRM WITH DETAILS.

11. COUNTRY OF ORIGIN OF THE GOODS IS TO BE MENTIONED.

12. THE INSTITUTE SHALL PROVIDE THE CONCESSIONAL CUSTOMS DUTY AND EXCISE DUTY EXEMPTION CERTIFICATE AS PER GOVT. NOTIFICATION NO. 51/96 CUSTOMS DATED: 23.07.1996 AND CENTRAL EXCISE DUTY EXEMPTION IN TERMS OF GOVT. NOTIFICATION NO. 10/97 – CENTRAL EXCISE DATED: 01.03.1997 AS AMENDED FROM TIME TO TIME.

13. **LIQUIDATED DAMAGES:** THE STORES SHOULD BE DELIVERED / DISPATCHED TO DESTINATION AND READY FOR OPERATION NOT LATER THAN THE DELIVERY DATE SPECIFIED. IF THE SUPPLIER FAILS TO DELIVER ANY OR ALL THE STORES OR PERFORM THE SERVICE BY THE SPECIFIED DATE, LIQUIDATED DAMAGES AT 1% PER MONTH OR PART THEREOF IN RESPECT OF THE VALUE OF STORES WILL BE DEDUCTED FROM THE CONTRACT PRICE SUBJECT TO A MAXIMUM OF 5%. ALTERNATIVELY, THE ORDER WILL BE CANCELLED AND THE UNDELIVERED STORES PURCHASED FROM ELSEWHERE AT THE RISK AND EXPENSE OF SUPPLIER.

14. **PATENT RIGHTS:** THE SUPPLIER SHALL INDEMNIFY THE PURCHASE AGAINST ALL THIRD PARTY CLAIMS OF INFRINGEMENT OF PATENT, TRADEMARK OR INDUSTRIAL DESIGN RIGHTS ARISING FROM USE OF THE GOODS OR ANY PART THEREOF IN INDIA.

15. ONLY THOSE BIDDERS WHO'S BIDS HAVE BEEN TECHNICALLY FOUND ACCEPTABLE WILL ONLY BE INVITED FOR PARTICIPATION IN THE PRICE BID.

16. THOSE BIDDERS WHO DO NOT RECEIVE ANY COMMUNICATION FOR PARTICIPATION IN PRICE BID OPENING MEETING MAY PRESUME THAT THEIR BID HAS NOT BEEN ACCEPTED BY THE INSTITUTE.
17. CONDITIONAL OFFER WILL NOT BE ACCEPTED.

18. LATE TENDERS I.E. TENDER RECEIVED AFTER THE DUE DATE AND TIME OF SUBMISSION AS MENTIONED ABOVE SHALL NOT BE ACCEPTED.

19. BIDDERS TO ENCLOSE THE FOLLOWING DOCUMENTS:-

A) INCOME TAX RETURN (3 YRS) AND LATEST SALES TAX RETURN (GST No.), AND PAN NO.

B) BANKER'S SOLVENCY CERTIFICATE

C) SUMMARY OF AUDITED STATEMENT OF ACCOUNTS FOR THE LAST THREE YEARS TO BE ENCLOSED AND FINANCIAL HIGHLIGHTS AND THE KEY PERFORMANCE DURING THE LAST THREE QUARTERS TO BE ENCLOSED AS PER FORMAT:-

COMPANY'S KEY PERFORMANCE

| DESCRIPTION | JAN. TO MARCH | APRIL TO JUNE | JULY TO SEPT. |
|--------------------|---------------|---------------|---------------|
| GROSS REVENUE | | | |
| PROFIT BEFORE TAX | | | |
| PROFIT AFTER TAX | | | |
| RETURN ON INVESTED | | | |
| CAPITAL (ROIC) | | | |

D) CUSTOMER SATISFACTION CERTIFICATE FROM ONE SUCH ORGANIZATION IS TO BE ATTACHED WITH THE TECHNICAL BID AND PRICE BID.

E) NAME AND ADDRESS OF MINIMUM THREE CLIENTS TO WHOM SUCH EQUIPMENT HAVE BEEN SUPPLIED SHOULD BE MENTIONED.

20. **WARRANTY / GUARANTEE:** THIS COMPREHENSIVE WARRANTY / GUARANTEE SHALL REMAIN VALID FOR **36 MONTHS** AFTER THE GOODS (OR ANY PORTION THEREOF AS THE CASE MAY BE) HAVE BEEN DELIVERED AND COMMISSIONED TO THE FINAL DESTINATION.

21. THE INSTITUTE DOES NOT BIND ITSELF TO OFFER ANY EXPLANATION TO THOSE BIDDERS WHO'S TECHNICAL BID HAS NOT BEEN FOUND ACCEPTABLE BY THE EVALUATION COMMITTEE OF THE INSTITUTE.

22. ALL TENDERS (UNLESS OTHERWISE SPECIFIED) ARE TO BE SUBMITTED / HANDED OVER TO **DR. SUJOY KANTI GHOSH, Dept. of Geology & Geophysics, INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR - 721 302** AND ACKNOWLEDGEMENT TO BE OBTAINED.

IMPORTANT

1. IIT Kharagpur authority may accept or reject any or all the bids in part or in full without assigning any reason and does not bind itself to accept the lowest bid. The Institute at its discretion may change the quantity / upgrade the criteria / drop any item or part thereof at any time before placing the Purchase Order.
2. Promptly make arrangements for repair and / or replacement of any damaged item (s) irrespective of settlement of claim.
3. In case of any dispute, the decision of the Institute authority shall be final and binding on the bidders.
4. For any query pertaining to this bid document correspondence may be addressed to **Dr. Sujoy Kanti Ghosh**, at the address mentioned above.

LAST DATE FOR SUBMISSION OF SEALED BIDS: 17.04.2018

- 1) Please Note that the Institute remains closed during Saturdays & Sundays and all specified government holidays.
 - 2) Fax, e-mail Tender will not be accepted.
 - 3) The General Terms and Conditions as stated above relate to supply of stores / equipment /assets etc. and for specific service other terms and conditions of the Institute will apply.
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