



Chemistry Department
Indian Institute of Technology Kharagpur
Kharagpur – 721 302

No. IIT/AC/PLAN/EQ-UPS/2017 - 18/01

Date : 2nd January, 2018

TENDER NOTICE

Subject : Procurement of Online UPS.

Indian Institute of Technology Kharagpur, an Institute of National importance, invites sealed two part bids from the Original Equipment Manufacturer (OEM) or their authorized Distributor/Dealer(s) or reputed Vendors for **supply and installation of 30 KVA Online UPS** in the Chemistry Department at IIT Kharagpur.

The Technical Specification as per Annexure – I, Eligibility Criteria as per Annexure – II, Technical bid Document as per Annexure – III, Signed & Stamped declaration as per Annexure – IV, General Terms & Conditions as per Annexure – V under a Two-Bid System and Price Bid format as per Annexure – VI are enclosed.

Interested Vendors are requested to submit two sealed envelopes containing Tender Fee of Rs.500/- (Rupees five hundred only) & EMD amount of Rs.10,000/- (Rupees ten thousand only) [**Envelope – I**], Technical Bid [**Envelope – II**] and Commercial Bid [**Envelope – III**] placed in a larger sealed envelope super – scribing with reference number (Tender Notice No. IIT/AC/PLAN/EQ-UPS/2017 - 18/01 Dated .01.2018) to the office of the Head of the Department, Chemistry Department, Indian Institute of Technology Kharagpur, Po – Kharagpur Technology, PIN – 721 302, Dist – Paschim Medinipore, West Bengal, India on or before 29th January, 2018 at 3.00 pm.

The technical bid submitted by the Vendors will be evaluated first by a technical committee and the price bids (as per Annexure – VI) submitted by the technically qualified vendors will be opened for price comparison.

The Technical Bids will be opened on 29th January, 2018 at 4.00 pm in the office of the Head of the Department, Chemistry Department.

M. Bhattacharya 2/1/18

Head of the Department
Chemistry Department
IIT Kharagpur

To :

1. Institute Website
2. CPP Portal
3. Internal Notice Board

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TECHNICAL SPECIFICATION OF 30 KVA UPS

Sl 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 or equivalent
	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	
	Type	Sealed Maintenance Free Lead Acid type 12V
	Make	Any branded product that can support the UPS
	Backup Time	60 Mins.
	Minimum Battery VAH required	46080 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	30 KVA / 27 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 full load	≥ 92%
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 shut down by an external command
Standards	Should comply the following safety & EMC Standards: Low Voltage Directive 2006/95/EC : Test Standards CEI EN 62040-1 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

MINIMUM ELIGIBILITY CRITERIA:

- a) Bidder shall have a minimum 3 (three) years of experience in supplying and commissioning of the similar work in any Educational Institute/Government/Semi Government/Autonomous Institute as on tender submission deadline. Name, address/contact details of the present and past satisfactory clients to be provided.
- b) At least 2 (two) [preferably 3 (three)] similar installation work done in last 2 (two) years as on tender submission deadline.
- c) Proof of Registration of the bidder under relevant law, such as Companies Act, and / or Shops & Establishment Act or Trade License from appropriate authority etc.
- d) All bidders should submit the copy of the PAN Card, GST Registration Certificates.
- e) The Bidder MUST submit copies of acknowledgement of Income Tax return for the last 3 (three) years.
- f) MUST have necessary ISI Certificate in case of Manufacturer and the valid dealership certificate in case of Authorized Dealer.
- g) Filled in declaration as per the ANNEXURE – IV.

Important Note : Bidders **MUST** submit the documentary proof in support of meeting the minimum eligibility criteria. Simply an undertaking by the bidder for any item of the criteria shall not suffice the purpose. All the documentary proof **MUST** be listed on the letter head, to be submitted with the tender document signed and stamped.

TECHNICAL BID DOCUMENT

FORMAT TO BE FILLED BY THE OEM OR AUTHORISED VENDORS FOR SUBMITTING TENDER FOR SUPPLY AND INSTALLATION OF 30 KVA UPS IN THE CHEMISTRY DEPARTMENT, IIT KHARAGPUR.

1	Name of the Tenderer (copy of Registration Certificate/Trade Licence)	
2	Status of the Tenderer (attach documents, if registered company/partnership/propriety shop etc.)	
3	Whether OEM / Authorised Dealer (attach copy of certificate/authorization)	
4	Details of key top official/authorized official with tele links for contact persons (attach details)	
5	Details of supply/services (attaché details)	
6	Copies of PAN Card, GST Registration certificate, IT Return for last 3 financial years	
7	Copy of product literature, technical leaflet for which prices have been quoted	
8	Signed copy of the tender document with company seal	
9	Details of Tender Fee	DD No. Date : Bank Details:
10	Details of EMD	DD No. Date : Bank Details:
11	Compliance statement for each component along with Make & Model	

Certified that all above information are correct to the best of my/our knowledge and belief.

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Dated Signature & seal of the OEM/Vendor

NOTE : This MUST be submitted with the technical bid.

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DECLARATION :

I, _____ son/daughter of Shri _____ Proprietor/ Partner/
CEO/MD/Director/Authorised Signatory of M/s. _____ am competent
to sign this declaration and execute this tender document.

I have carefully read and understood all the terms and conditions of the tender and hereby convey my
acceptance of the same.

The information/documents furnished along with the above application are true and authentic to the
best of my knowledge and belief.

I/We am are well aware of the fact that furnishing of any false information/fabricated document would
lead to rejection of my tender at any stage besides liabilities towards prosecution under appropriate
law.

Each page of the tender document and papers submitted by my Company is authenticated sealed and
signed and I take full responsibility for the entire documents submitted.

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Signature of the Authorised Person

Date : _____

Full Name :

Place : _____

Company Seal :

