भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान मोहाली

मानव संसाधन विकास मंत्रालय, भारत सरकार द्वारा स्थापित

सैक्टर-81,नॉलेज सिटी,प॰ ओ॰ मनोली, एस॰ ए॰ एस॰ नगर,मोहाली, पंजाब 140306

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH MOHALI

(Established by Ministry of Human Resource Development, Govt. of India)

Sector-81, Knowledge city, PO-Manauli, SAS Nagar Mohali-140306, Punjab

PAN No. - AAAAI1781K GSTIN No:- 03AAAAI1781K2ZS

• **Phone : +91-172-2240086 & 2240121** • **Fax : +91-172-2240124, 2240266** • **http://www.iisermohali.ac.in** • **Email:** stores@iisermohali.ac.in

CPPP/Institute Website

IISERM (1295)19/20Pur Dated: 08th January 2020

NOTICE INVITING E-TENDER

Online tenders are invited on behalf of Director, IISER Mohali in **TWO BID SYSTEM** for the **Supply and installation of 20 KVA UPS System with Inbuilt Isolation Transformer** a**s** per technical specification and details given below and BOQ list from the original manufacturer/supplier at CPPP i. e. **https://eprocure.gov.in/eprocure/app**. Tender documents may please be downloaded from the E-procurement portal website **https://eprocure.gov.in/eprocure/app**& Institute website **www.iisermohali.ac.in.**

-sd-
(Mukesh Kumar)
Assistant Registrar (P&S)

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E-TENDER NOTICE

Tender Ref.- IISERM(1295)19/20Pur	Dated :- 08th January 2020

Critical Date Sections

Sr.	Description	Date	Time
1.	Tender Publishing Date and time	08th January 2020	6:00pm
2.	Tender Document download start Date & Time	08th January 2020	6:00pm
3.	Bid Submission start Date &Time	08th January 2020	6:00pm
4.	Bid Submission End date and Time	28th January 2020	Upto 11:00am
5.	Tender opening Date and Time	29th January 2020	At 11:30am

Online tenders are invited on behalf of Director, IISER Mohali in **TWO BID SYSTEM** {Technical and commercial separately} for the following item(s) from the original manufacturer/supplier at CPPP i.e. **https://eprocure.gov.in/eprocure/app**. Tender documents may please be downloaded from the E-procurement portal website **https://eprocure.gov.in/eprocure/app**& Institute website **www.iisermohali.ac.in.**Tender fee in shape of DD/Banker Cheque of Rs 590/- (Non-refundable) and EMD of Rs.8,000/- should be submitted by DD /Banker Cheque/FDR/ Bank Guarantee in favour of the Registrar, IISER Mohali payable at Mohali. However, scanned copy of the both tender fee and EMD should be upload on website along with technical bid part. The hard copy of the same in original to be send to the address mentioned below duly superscribing the supply/work name and reference/ tender ID on the envelope and same must reach before opening the bid and if not received within due date the bid will be rejected summerly.

The Original EMD and Tender Fee should be sent to:

Assistant Registrar (P&S)
Indian Institute of Science Education and Research Mohali
Sector-81, Knowledge City, SAS Nagar, Mohali, Punjab,
India, Pin: 140306

Non-receipt of original EMD and Tender Fee will lead to rejection of tender.

Item Details: -

Sr.	Description	Qty. (in units)
1.	**Supply and installation of 20 KVA UPS System with Inbuilt Isolation Transformer** **Technical Specifications: As per ANNEXURE-A**	**1**

NB:-

I. **The Online bids should be submitted directly by the original manufacturer/supplier, If quotation is submitted/filled by any representative/agent/dealer then they must upload a authority certificate from the principal company.**

II. **Kindly do not quote end of life model.**

SUBMISSION OF TENDER

I. All bid/ tender documents are to be uploaded online at Central Public Procurement portal i.e. **https://eprocure.gov.in/eprocure/app** only and in the designated cover/ part on the website against tender ID. Tenders/ bids shall be accepted only through online mode and no manual submission of the same shall be entertained except tender fee and EMD. Late tenders will not be accepted.

II. The online bids shall be opened at the office of the Assistant Registrar (P&S), IISER Mohali, on above given date and time. If the tender opening date happens to be on a holiday or non-working day due to any other valid reason, the tender opening process will be attended on the next working day at same time and place. IISER Mohali will not be responsible for any error like missing of schedule data while downloading by the Bidder.

III. The bidder shall upload the tender documents duly filled in and stamped by the authorized signatory on each and every page. Tender not submitted/uploaded in the prescribed form and as per the tender terms and conditions shall be liable for rejection.

IV. The bidder shall upload scanned copy of the PAN Card, GST number duly signed and stamped. **Also bidders applying against 'MSME/NSIC Certificate" issued by appropriate Authority, should ensure that the certificate attached is relevant to the area of service/supply. For example, If the tender is for "supply & installation of Desktop"** ***the certificate should be issued for activity/area of "Computer supply and services activities etc" otherwise bid will be REJECTED without notice.***

V. E-procurement system ensures locking on the scheduled date and time. The system will not accept any bid after the scheduled date and time of submission of bid.

INSTRUCTIONS

1. The Online bids should be submitted directly by the original manufacturer/supplier, If quotation is submitted/filled by any representative/agent/dealer then they must upload a authority certificate from the principal company for quoting the price otherwise such quotation will be rejected.

2. The quantity mentioned in this inquiry is and shall be deemed to be only approximate and will not in any manner be binding on the Institute. Before the deadline for submission of the online bid, IISER Mohali reserves the right to modify the tender document terms and conditions. Such amendment/modification will be notified on website against said tender ID.

3. The rates offered should be FOR Chandigarh/Mohali in case of firms situated outside

Chandigarh/Mohali, and free delivery at the Institute premises in case of local firms. Supplier from outside India should mention the Ex-works/FOB/FCA/CIF/CIP price clearly. Conditional tenders will be summarily rejected.

4. In case of Ex-godown terms the amount of packaging forwarding freight etc. should clearly be indicated by percentage or lump sum amount. Institute has policy not to make any advance payments towards any purchase, Letter of credit can be opened if required.

5. THE INSTITUTE IS EXEMPTED FROM CUSTOM DUTY under notification no- TU/V/RG/-CDE(1062)/201 CUSTOM DT.30.08.2016.

6. Tax: This Institute is not exempted from the payment of GST. The current rate (i.e. percentage of GST should be clearly indicated included or excluded) wherever chargeable. Please also provide/upload the copy of PAN card, GST number duly self-attested.

7. Concessional GST is applicable for all the items purchased for Research labs vide Ministry of Finance, notification no. 45/22017 dated 14.11.2017 and 47/2017 dated 14.11.2017.

8. Bidder/s quoting in currency other than **Indian Rupee (INR**) should explicitly mention the currency in which tender quoted wherever applicable in Technical Bid along the tender documents.

9. The delivery period should be specifically stated. Earlier delivery will be preferred.

10. The firms are requested to provide/upload detailed description and specifications together with the detailed drawings, printed leaflets and literature of the article quoted. The name of the manufactures and country of manufacture should also invariably be stated. In the absence of these particulars, the quotation is liable for rejection.

11. Validity of offer: 90 days. The warranty period after satisfactory installation should be mentioned and firm should replace all manufacturing defect parts/ whole item under warranty without any extra cost including clearance, freight, taxes. Security deposit/ Bank Performance Guarantee @ 10 % of the value of supply order as per norms may be sought from the firms.

12. The right to reject all or any of the quotation and to split up the requirements or relax any or all the above conditions without assigning any reason is reserved by the IISER Mohali. For any corrigendum and addendum please be checked the website https://eprocure.gov.in/eprocure/app and http:/www.iisermohali.ac.in

13. Disputes, if any, shall be subject to jurisdiction in the court of Mohali only.

–sd-
(Mukesh Kumar)
Assistant Registrar (P&S)

ANNEXURE-A

General Technical Specifications for 20kVA UPS System with inbuilt isolation transformer.		
Sr. No.	**Specifications**	**Requirement**
1	**Capacity (in kVA / kW)**	**20 kVA/ 20 kW 3-Phase Input / 3-Phase Output**
2	**Technology and Capability**	a) True **Online** configuration with **double conversion** UPS b) **DSP** based technology with reduction in electronic components. c) Fully rated power **(kVA=kW)** for maximum power availability. d) Possibility of enhancing UPS capacity / redundancy by operating UPS in N+**X Parallel Redundant Configuration(PRS).** e) Capability of **Independent or Common** battery bank operation of the UPS when operated in PRS. f) UPS should be designed at **Rated PF of 1 i.e. 20kVA /20kW** UPS rating. g) UPS shold have IGBT topology for both PFC (power factor correction) and inverter. h) Should have **Dual Aux power** design.
3	**Model Name & Number**	
3.1	20 kVA / 20 kW	**Make / Model / Part No** to be specified by the vendor
4	**Input**	
4.1	Input facility -Phases / Wires	3-Phase / 4-Wire & Gnd (3Phase & Neutral + Ground)
4.2	Input Voltage Range	220/380V, 230/400V, 240/415V (3Φ4W) Range (Full Load) 173~276 / 300~477VAC Range (Derating to 70% Load) 132~173 / 228~300VAC
4.3	Nominal Input Frequency	50/60Hz **(Auto-Selectable)**
4.4	Input Frequency Range	45 to 65 Hz
4.5	Input Power Factor	> 0.99 (Full Load)
4.6	Current Harmonic Distortion(ITHD)	< 3%
4.7	Generator Compatibility	Compatibility to genset supply required
4.8	Input Protection (Thru In-built 1P MCB)	Should be provided at the input of the UPS suitable for the full rated capacity of the UPS
5	**Output**	
5.1	Nominal Output voltage	220/380V,230/400V,240/415V (3Φ4W)
5.2	Output Voltage Regulation	± 1 %
5.3	Nominal Output Frequency	50/60 Hz
5.4	Output Frequency Regulation	± 0.05Hz
5.5	Output Frequency Slew Rate	＜1Hz/sec
5.6	Output Wave Form	Pure sine wave
5.7	Output Voltage Distortion (THDu)	< 1.5 % (linear load)
5.8	Crest Factor	3:1
5.9	Output Short circuit Protection	Electronic Protection
5.1	Isolation Transformer	With Inbuilt isolation transformer
6	**Transient Response / Recovery**	
6.1	Transient Response: Dynamic Regulation for 10% to 90% step linear load	±7%
6.2	Transient Recovery to steady state condition after 10% to 90% step linear load	< 1 cycle
7	**Transfer Time**	
7.1	Transfer Time (Mode of operation)	Zero ms from Mains mode to Battery Mode Zero ms from Battery Mode to Mains mode

7.2	Transfer Time (Inverter to Bypass / Bypass to Inverter)	<1ms (Synchronized Mode)
7.3	**Automatic & Bi-directional static by-pass (In-built)**	Bypass To Inverter ±10 % (Rated Voltage) Inverter To Bypass ±7 % (Rated Voltage)
7.4	**Maintenance Bypass**	1.UPS should have option for manual maintenance bypass 2. Maintance bypass cover removal sensing. 3.The maintenance bypass should provide for Hot-swap of the faulty UPS PWB for repairs / service.
8	**Efficiency (At Nominal Voltage & Resistive Load up to kW rating of UPS)**	
8.1	Overall Efficiency (AC to AC) - Online (Double Conversion)	Upto 96%
8.2	Overall Efficiency (AC to AC) - ECO Mode (Bypass feeding the load under normal conditions)	Upto 99%
9	**Overload**	
9.1	Inverter Overload capacity	≤105 %: continuous,106% ~ ≤125%: 10 minutes; 126% ~ ≤150%: 1 minute; >150%: 1 second
10	**Display Panel (In-build LC Display & LED)**	
10.1	**Measurements** (On LCD)	Input: Voltage / Frequency,Bypass: Voltage / Frequency,Output: Voltage / frequency,Battery: Remaining time / Battery Level Indicator,Load**:** Percentage / Load Level Indicator,Battery Voltage Capacity/Status/Test Result,System Date/Time Setting,Current Time,PFC Fuse Open,Battery Temperature Too High,Battery Over Charge,Battery Out of Date,INV Short Circuit,Output Breaker Off,kVA,kW,output current,Battery current.
10.2	**Fault Indication** (On LCD)	Main Input Sequence Fault,Power Module General Fault,Battery Ground Fault,Bypass Static Switch Fault,Parallel Fault,System General Fault,Provide Bypass O/P Even If UPS Fault.
10.3	**Indications** (LED)	Normal-Green/Battery-Orange/Bypass-Green/Fault-Red
11	**Alarms**	
11.1	Audible Alarms	Battery Low beep / DC Fault beep/ UPS Overload beep/ o/p short ckt fault beep/ Shutdown beep
12	**Battery Backup / Battery Bank & Charger**	
12.1	Backup Required	1 Hr On full load
12.2	Battery Bank Voltage	Flexible 384 VDC to 600VDC
12.3	Battery Bank VAh	Minimum 12000 Vah
12.4	Batteries Type	Sealed Maintenance Free (SMF) - 12V Cells
12.5	Battery Makes	Amara Raja / Exide / Rocket.
12.6	Number of Battery Banks	Maximum Two Banks in parallel
12.7	Minimum Charger Rating (Including internal / external)	The charger should be able to deliver charging current equivilanet to 10% of Battery Ah rating offered.(In case of external chergers, suitable monitoring of the chargers should be provided in the UPS. Also all external chargers taking AC input must have PFC - Power factor correction)
12.8	Charger type / Charging Method & Charging Voltages	**Constant Voltage Constant Current** Solid state **SMPS** charger Float Charge 270V±(2V) Boost Charge 280V±(2%V)
12.9	Battery recharge time (After complete discharge) to 90% capacity	10-12 hours
12.10	Battery Housing (Vendor to provide the GA drawings of the offered Battery Rack)	Should be compact and space saving **MS steel open racks** complete with interconnectors
12.11	Battery End Cell Voltage	1.75 V/cell
13	**Interfaces**	
13.1	Serial Communication RS232 Port (Option of USB Port	RS2323 Port should be provided as standard in the UPS. However there should be provision for USB port also in the UPS.

	should be available)	
13.2	REPO(Remote Emergency Power OFF) / ROO(Remote ON - OFF) Port	Provide both onsite & remote EPO to shutdown UPS when emergency situation happens. REPO Port with a user-supplied switch
13.3	Interface to NMS (Network Management System) - To be quoted as option	SNMP (IPV6) Card for connecting the UPS to LAN thru Ethernet port & monitoring thru NMS should be available (The cost of SNMP Card / NMS software to be quoted separately)
13.4	Interface to BMS (Building Management System) - To be quoted as option	ModBus Card for connecting to UPS to BMS thru RS485 & monitoring thru BMS
13.5	Interface to DCS (Distributed Control System) - To be quoted as option	Relay I/O Card or PFC (Potential free contacts) for connecting to UPS to DCS / PLC / SCADA system for communicating UPS operating status
13.6	UPS status information presented as 3 contact closures	UPS should have configurable input signal as shutdown UPS or battery test dry contact.
14	**Restart / Testing Capability**	
14.1	Cold Start	UPS should start up On AC Supply (Mains) without DC Supply (Batteries) On DC Supply (Batteries) without AC Supply (Mains)
14.2	Automatic Restart	UPS should start up automatically on mains resumption after battery low shutdown
14.3	Self Diagnosis	UPS should be capable to carry out self test of Rectifier / Charger /Battery & Inverter module during start-up
15	**Physical**	
15.1	Operating Temperature	0℃ ~ 40℃
15.2	Storage Temperature	－20℃ ~ 40℃
15.3	Operating Humidity	＜ 95%
15.4	Operating Altitude	0 to 3000m(0 To 10000ft)
15.5	Type of Cooling	Forced Air
15.6	Noise Level	＜ 55dBA at 1 Meter
15.7	Air Filters	UPS should have internal anticorrosion air filters for dust filtration **(Optional)**
15.8	Dimension (w x d x h) in mm	To be furnished by the vendor
15.9	Weight - in kg	To be furnished by the vendor
15.10	Reliability	MTBF greater than 100000 hours
15.11	Packaging Material / Vibration Withstand & Drop Test	Recyclable (No CFC) & 1. Vibration testing as per ISTA -1G Non-operational with Packing
15.12	Standard Package of UPS to include the following minimum accessories	1.SMART Slot 2.MINI Slot 3.Parallel Port 4.RS232 Port 5.REPO Port 6.Charger Detection Port 7.Input Dry Contact 8.Output Dry Contact 9.USB Port
15.13	Parallel Configuration	UPS should have capabilty for parallel 4 units.
15.14	DC bus Capacitor	UPS DC bus capacitor have minimum life of 5 years@40°ambient.
16	**Certifications**	
16.1	Manufacturer	**QMS:** As per ISO 9001: 2008 **EMS:** As per ISO 14001: 2004 **OSHAS:** As per ISO 18001: 2007

16.2	Product Safety Certifications (Mandatory)	**ESD:IEC61000-4-2: level4** **RS : IEC61000-4-3: level3** **EFT: IEC61000-4-4:level4** **SURGE: IEC61000-4-5:level4** **CS: IEC61000-4-6: level3** **IEC 61000-2-2** **EN 62040-2** **EN 61000-3-2**
16.3	ROHS compliance	UPS should be ROHS compliance
17	**Make**	Vertiv, Emerson Network, Delta Electronics, APC, Scheinder.