

	<p style="text-align: center;"> <b>भारतीय प्रौद्योगिकीसंस्थानमद्रासचेन्नै 600 036</b>  <b>INDIAN INSTITUTE OF TECHNOLOGY MADRAS Chennai 600 036</b>  <b>भंडार एवं क्रय अनुभाग</b>  <b>STORES &amp; PURCHASE SECTION</b>  <b>Email: adstores@iitm.ac.in</b>  दूरभाष: (044) 2257 8285 / 8287 / 8288 / 8290 फ़ैक्स: (044) 2257 8082  Telephone : (044) 2257 8285/8287/8288/8290 FAX: (044) 2257 8082  GSTIN: 33AAAAI3615G1Z6 </p>	
---	--	---

**P K SHEBA SABARI**

**Assistant Registrar (Stores & Purchase)**

Tender No. IITM/SPS/200KVA UPS/024/2022-23

Date: 20.02.2023

Dear Sir/Madam,

On behalf of the Indian Institute of Technology Madras, Tenders are invited in two bid system from Class-I local suppliers and Class II local suppliers, for

**SUPPLY OF 2 Nos. 200KVA UPS ON BUYBACK BASIS**

conforming to the specifications enclosed.

**No manual bids will be accepted.** All tender documents including Technical and Financial bids should be submitted in **Government e-Market Place (GeM) portal through Custom Catalogue Based Bid**

<p><b>Pre-bid meeting</b></p>	<p>The Pre-bid Meeting will be conducted via Google Meet on <b>27.02.2023 @ 03:00 p.m.</b> Please see the below link to join the meeting  <a href="https://meet.google.com/jkz-iwvt-jhq">https://meet.google.com/jkz-iwvt-jhq</a>  Prospective bidders are requested to register their participation by sending an email to adstores@iitm.ac.in, with name/designation of the representative who will attend the meeting along with queries <b>on or before 26.02.2023.</b></p>
-------------------------------	---

**GUIDELINES FOR TENDER SUBMISSION IN GOVERNMENT E-MARKET PLACE (GEM) PORTAL THROUGH CUSTOM CATALOGUE BASED BID**

Bidders are requested to go through the GeM Handbook for instructions, preparation of bids and submission of bid.

**General instructions to the Bidders:**

The tenders will be received online in GeM portal through Custom Catalogue Based Bid. In the Technical Bids, the bidders are required to upload all the documents in single pdf file.

**Assistance to Bidders:**

Any queries relating to the process of Custom Catalogue Based Bid submission or queries related to GeM Portal, contact the portal by email **helpdesk-gem@gov.in** or toll free nos. **1800-419-3436 / 1800-102-3436.**

**निविदा के निबंधन व शर्तें / TERMS AND CONDITIONS OF TENDER**

2	बयाना जमा (ईएमडी) / Earnest Money Deposit (EMD)	<p>i. <b>EMD of INR 1,20,000 (Rupees one lakh and twenty thousand only) should be transferred through NEFT/RTGS to the following bank account on or before due date 13.03.2023 before 2:00 p.m.</b></p> <p align="center"><b>Name : Registrar IIT Madras</b></p> <p align="center"><b>Bank : State Bank of India</b></p> <p align="center"><b>Account No. : 10620824305</b></p> <p align="center"><b>Branch : IIT MADRAS</b></p> <p align="center"><b>IFSC CODE : SBIN0001055</b></p> <p>ii. As per O.M. No.F.1/2/2022-PPD Dated 01.04.2022, the EMD will be returned to the unsuccessful Bidder(s), within 30 days after declaration of result of first stage i.e. technical evaluation etc. The EMD shall be forfeited if any Bidder withdraws the offer before finalization of the tender.</p> <p>iii. The EMD amount <b>should not be sent through DD.</b></p> <p>iv. <b>Non-submission of EMD details on or before the due date and time will result in rejection of the e-bid.</b></p> <p>v. As per Rule 170 of GFR 2017, exemption of EMD will be given subject to submission of undertaking by the firm seeking such exemption. Copies of relevant orders/ documents regarding such exemption should be submitted along with the tender document</p> <p>The successful bidder shall submit a Performance Guarantee of 3% of the purchase order value by way of DD/Bank Guarantee/FDR/ Insurance surety bonds in favour of "The Registrar, IIT Madras" to be obtained from any commercial bank, within 15 (Fifteen) days from the date of issue of order by IIT Madras, which would be released 60 days after the successful completion of the warranty period after the adjustment dues if any without interest.</p> <p>In case of successful bidder, the EMD will be adjusted towards the Performance Guarantee on request.</p> <p>vi. The amount of EMD is liable to be forfeited if the bidder withdraws the offers after submission of the tender or after the occupation of the offer and fails to remit the Performance Guarantee.</p>
3	तकनीकी बोली पर मार्किंग /Marking on Technical Bid	<p>i. The pre-qualification criteria, technical specification of the item for this tender is given in <b>Annexure A</b>. The Bidders shall go through the pre-qualification criteria, technical specification and submit the technical bid in the proforma given in <b>Annexure B</b> in the tender document along with the supporting documents.</p> <p>ii. The Technical bid should be submitted <b>in pdf format only through online (e-tender). No manual submission of bid will be entertained.</b></p> <p>iii. The technical bid should have the page-wise <b>heading as "Technical Bid" and page no.</b> in all pages with seal and signature of authorized signatory. The total no. of pages should be mentioned at the last page of the documents.</p> <p>iv. The technical bid should consist of</p> <ol style="list-style-type: none"> <li>Document proof for EMD payment</li> <li>Technical Compliance sheet as per proforma given in Annexure-B</li> <li>Document proof for pre-qualification criteria, technical details along with catalogue / brochure and other technical, commercial terms and conditions.</li> </ol>
4	वित्तीय बोली पर मार्किंग / Marking on Financial Bid	<p>Financial bid should be submitted in the prescribed proforma format given in <b>Annexure- C</b> through GeM portal. <b>No manual or other form of submission of Financial Bid will be entertained.</b></p>

5	<p><b>निविदा की तैयारी / Preparation of Tender:</b></p> <ul style="list-style-type: none"> <li>• The bids should be submitted through online only in two bid system i.e. Technical Bid and Financial Bid separately.</li> <li>• The bidder has to submit the tender document duly signed on all pages by an authorized person and his / her full name and status shall be indicated below the signature along with official seal/stamp of the firm. Submission of wrong / forged information / document will be liable to legal action, and rejection of the bid submitted by the firm.</li> <li>• The bids of the agency/firm/company not in possession of valid statutory license / registrations are liable for rejection.</li> <li>• If any relative of the bidder is an employee of the IIT Madras, the name, designation and relationship of such employee shall be intimated to the Registrar, IIT Madras in writing while submitting the bid.</li> <li>• No bidder will be allowed to withdraw / alter / modify the bid during the bid validity period.</li> </ul>
6	<p><b>निविदा पर हस्ताक्षर / Signing of Tender:</b></p> <p>The bid is liable to be rejected if complete information is not given therein or if the particulars and date (if any) asked for in the schedule to the tender are not fully filled in or not duly signed/authenticated. Specific attention is drawn to the delivery dates and terms and conditions enclosed herewith. <b>Each page of the bids shall be duly signed with the official seal of the Bidders.</b></p> <p>If the bid is submitted by a firm in partnership, it shall be signed (with seal) by all the partners of the firm above their full typewritten names and current addresses. Alternatively it shall be signed by a partner holding power of attorney for the firm in which case a certified copy of the power of attorney shall accompany the bid. A certified copy of the partnership deed along with current addresses of all the partners of the firm shall also accompany the bid.</p> <p>If a limited company or a corporation makes the application, it shall be signed by a duly authorized person holding power of attorney for signing the bid, in which case a certified copy of the power of attorney shall accompany the bid. Such limited company or corporation may be required to furnish satisfactory evidence of its existence. The bidder shall also furnish a copy of the Memorandum of Articles of association duly attested by a Notary Public.</p>
7	<p><b>वह अवधि जिसके लिए ऑफर खुला रहेगा / Period for which the offer will remain open:</b></p> <p>The Tender shall remain open for acceptance/validity till: <b>120 days from the date of opening of the tender.</b> However, the day up to which the offer is to remain open being declared closed holiday for the Indian Institute of Technology Madras, the offer shall remain open for acceptance till the next working day.</p>
8	<p><b>कीमत / Prices:</b></p> <ul style="list-style-type: none"> <li>• The prices quoted should be net considering all terms &amp; conditions and as per the technical specification mentioned in <b>Annexure A. The prices quoted by the bidders should be inclusive of GST and other charges.</b></li> <li>• All conditional tenders will be summarily rejected.</li> <li>• Quote should be in <b>INR only.</b></li> </ul>
9	<p>आपूर्ति के लिए कोई अग्रिम भुगतान नहीं किया जाएगा / <b>No Advance Payment will be made.</b> Payment will be made only after supply and satisfactory installation</p>
10	<p><b>निबंधन व शर्तें / Terms and Conditions:</b></p> <p>Failure to comply with any of the instructions stated in this document or offering unsatisfactory explanations for non-compliance will lead to rejection of offers.</p>

11	<p><b>सुपुर्दगी / Delivery:</b> Items should be delivered and installed within <b>60 days</b> from the date of Purchase Order. No further extension of time will be allowed. Non delivery of items will lead to cancellation of Purchase Order without any notice.</p>
12	<p><b>स्वीकृति का अधिकार / Right of Acceptance:</b> IIT Madras reserves the right to reject the whole or any part of the Tender without assigning any reason or to accept them in part or full.</p>
13	<p><b>स्वीकृति की सूचना / Communication of Acceptance:</b> Letter of Intimation and acceptance will be communicated by email to the successful bidder to the address indicated in the bid.</p>
14	<p><b>बोलीदाता को इस निविदा के साथ जमा करना होगा / Bidder shall submit along with this Tender:</b> Name and full address of the Banker &amp; their swift code, PAN No. and GSTIN number.</p>
15	<p><b>क्षेत्राधिकार / Jurisdiction:</b> All questions, disputes, or differences arising under, out of or in connection with the contract, if concluded, shall be subject to the exclusive jurisdiction at the place from which the acceptance of tender is issued.</p>
16	<p><b>जुर्माना &amp; परिसमापन क्षति / Penalty &amp; Liquidated Damages / Force Majeure:</b> If the selected Bidder fails to complete the due performance of the contract in accordance with the terms and conditions, Institute reserves the right either to cancel the contract or to accept performance already made by the selected Bidder after imposing Penalty on Selected Bidder. A penalty will be calculated on a per week basis and on the same Rate as applicable to Liquidated Damages (LD). In case of termination of the contract, Institute reserves the right to recover an amount equal to 5% of the Contract value as Liquidated Damages for non-performance.</p> <p>Both Penalty and Liquidated Damages are independent of each other and are applied separately and concurrently. Penalty and LD are not applicable for reasons attributable to the Institute and Force Majeure. However, it is the responsibility of the selected Bidder to prove that the delay is attributable to the Institute and Force Majeure. The selected Bidder shall submit the proof authenticated by the Bidder and Institute's official that the delay is attributed to the Institute and/or Force Majeure along with the bills requesting payment.</p>
17	<p>The bidder shall certify that the tender document submitted by him / her are of the same replica of the tender document as published by IIT Madras and no corrections, additions and alterations made to the same. If any deviation is found in the same at any stage and date, the bid / contract will be rejected / terminated and actions will be initiated as per the terms and conditions of the contract / tender.</p>
18	<p>The bidder should study the technical bid in detail as given in <b>Annexure B</b> before submitting the bid.</p>
19	<p><b>Pre-Qualification Criteria:</b></p> <p><b>Eligibility Criteria I</b></p> <ol style="list-style-type: none"> <li>1. The bidder shall not be from a country sharing land border with India and if the bidder is from a country sharing land border with India the bidder should have been registered with the competent authority as per orders of DIPP OM No. F. No. 6/18/2019-PPD dated 23rd July 2020, and MoCI Order No. P-45021/112/2020-PP (BE II) (E-43780) dated 24th August 2020. A declaration as per format given in <b>Annexure – D</b> shall be submitted with the bid.</li> <li>2. Only 'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P45021/2/2017-PP (BE II) dated 16th September 2020 and other subsequent orders issued therein, shall be eligible to bid in this tender. Declaration for Class-I / Class-II local suppliers should be submitted in the prescribed proforma format as per <b>Annexure – E</b>.</li> </ol> <p><b>Eligibility Criteria II</b></p> <ol style="list-style-type: none"> <li>1. Neither the tender participating firm nor any of its partners has been blacklisted / debarred /involved / convicted in any criminal case / economic offence nor any criminal case / economic offence is <b>pending</b> against firm or any partner of the Firm before any Court of Law / Police. A self-declaration format given in <b>Annexure – F</b>.</li> <li>2. The bidders should be an OEM or authorized supplier of OEM. Necessary OEM certificate/OEM authorization letter for this particular tender should be submitted by the bidder as given in <b>Annexure-G</b>.</li> <li>3. Annual turnover should be at least Rs.100 Lakhs aggregate in the past three financial years i.e. 2019-2020, 2020-2021 and 2021-2022 (Financial statements / certificates issued by Chartered Accountant should be submitted as proof).</li> </ol>

	<p>4. The bidder should have experience in supply of similar UPS to Central Government / Central Public Sector Unit / Central Autonomous / Reputed Institutions/ reputed firms in the last three years (2020, 2021 and 2022) as detailed below:</p> <ul style="list-style-type: none"> <li>i) Three (3) supplies each costing not less than Rs.16 Lakhs (Or)</li> <li>ii) Two (2) supplies each costing not less than Rs.24 Lakhs (Or)</li> <li>iii) One (1) supply costing not less than Rs.32 Lakhs</li> </ul> <p><b>Copies of the documents listed below should be submitted as a proof for the above supply:</b></p> <ul style="list-style-type: none"> <li>i) Purchase Order</li> <li>ii) Work Completion Certificates with Performance</li> </ul> <p>5. The bidder should have a service centre in Chennai for service support. Proof of Office in Chennai should be furnished as documentary evidence (such as valid rental agreement / registration certificate / Certificate of Incorporation etc.).</p> <p>6. Price should be quoted separately for buyback of existing 2 Nos. of 160KVA DB Make UPS and 1 No. of 80KVA MGE GALAXY PW UPS with 32 Nos. of 150Ah Batteries (Bidder may visit Computer Centre, IIT Madras to apprise the existing UPS, if required)</p>
20	<p><b>बोलियों की संख्या और उनका प्रस्तुतीकरण / Number of Bids and their Submission:</b> The bidders should submit the bids in two bid system as detailed below:</p> <p><b>Bid I Technical Bid</b> The technical bid should consist of proof of EMD transfer, Pre-Qualification Criteria (Eligibility Criteria I &amp; Eligibility Criteria II) and technical specification compliance sheet (proforma given in <b>Annexure-B</b>) along with all relevant documents proof.</p> <p>The bidder should go through the Pre-Qualification Criteria (Eligibility Criteria I &amp; II) and technical specification given in <b>Annexure-A</b> of the tender document, understand the requirement of IIT Madras and submit their technical bid along with all relevant document proof in the proforma given in <b>Annexure-B</b>.</p> <p><b>Bid II Financial Bid</b> The Quoted price should be inclusive of all i.e. supply, installation and buyback value at Computer Centre, IIT Madras.</p>
21	<p><b>Evaluation of Bids:</b></p> <p>Bid Evaluation will take place in two stages.</p> <p><b>Stage I: Technical Bid evaluation</b></p> <ul style="list-style-type: none"> <li>1. Bidder will be evaluated first for conformity with Eligibility Criteria-I and those bidders who have complied with this criteria will alone be evaluated further.</li> <li>2. The bidders who have qualified in Eligibility Criteria-I will be evaluated for Eligibility Criteria-II and the technical specification compliance. Only those bidders who have fully complied with Eligibility Criteria-I, II and technical specification will be considered for financial bid evaluation.</li> </ul> <p><b>Stage II: Financial Bid Evaluation</b> The financial bid rates will be arrived by deducting the buyback value from the rate quoted for the supply of 2 Nos. 200KVA UPS and AMC for 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> year. Only this rate will be taken up for financial bid comparison.</p> <p>The lowest financial bid among the technical qualified bid will be declared as successful bidder (L1) and the order will be awarded to successful bidder (L1).</p>

22	<p>सफल बोलीदाता का चयन और आदेश प्रदान करना / <b>Selection of successful bidder and Award of Order</b></p> <p>The order will be directly awarded to the technically qualified bidder as per the condition in para 3A of DIPP, MoCI Order No. 45021/2/2017-PP (BE II) dated 16<sup>th</sup> September 2020 and other subsequent orders issued therein</p>
23	<p>Clarification to the queries and doubts raised by the bidders will be issued as a corrigendum/addendum in the Institute Website (tenders.iitm.ac.in) / GeM Portal. For the bidders, submitting bids on downloaded tender document, it is 'bidders' responsibility to check for any amendment/corrigendum on the website of IIT Madras / check for the same GeM Portal before submitting their duly completed bids.</p>
24	<p>The bidders will not be entertained to participate in opening of Bids. Since the tender is online through GeM portal, the opening of the bids may be checked using the respective logins of the bidders.</p>

**Sd/-**  
**Assistant Registrar**  
**Stores & Purchase**

## **ACKNOWLEDGEMENT**

It is hereby acknowledged that I/We have gone through all the points listed under “Pre-qualification criteria, Technical Specification, Guidelines and Special Terms and Conditions” of tender document, the same is abided and agreed to be executed. In case, if the above information is found false, I/We are fully aware that the tender /order will be rejected / cancelled by IIT Madras.

**SIGNATURE OF BIDDER ALONG WITH  
SEAL OF THE COMPANY WITH DATE**

**SCHEDULE OF TENDER**

**SUPPLY OF DESK CUM BENCH FOR SEMINAR ROOM & DCF AT PHYSICS DEPARTMENT, IIT MADRAS  
Tender No IITM/SPS/200KVA UPS/024/2022-23**

Name of Organization	Indian Institute of Technology Madras
Tender Type (Open/Limited/EOI/Auction/Single)	OPEN
Tender Category (Services/Goods/works)	Goods
Type/Form of Contract (Work/Supply/ Auction/ Service/ Buy/ Empanelment/ Sell)	Supply
Source of Fund (Institute/Project)	IIT Madras
Is Multi Currency Allowed	No
Date of Issue/Publishing	20.02.2023
Pre bid through google meet	27.02.2023 @ 3.00 pm.
Earnest Money Transfer (EMD)	Rs.1,20,000/-
No. of Covers (1/2/3/4)	2
Bid Validity days (180/120/90/60/30)	120 Days
Address for Communication	<p><b><u>For General Queries</u></b> The Assistant Registrar Stores &amp; Purchase Section IIT Madras Chennai – 600 036 Phone No. 044 2257 8285/8288/8287 Email: <a href="mailto:adstores@iitm.ac.in">adstores@iitm.ac.in</a></p> <p><b><u>For Technical Related Queries</u></b> <b>Dr. C.R. Jeevandoss</b> Instrumentation Engineer / CEC IIT Madras, Chennai 600 036 Phone No. 044 2257 4946 Email: <a href="mailto:jeevandoss@iitm.ac.in">jeevandoss@iitm.ac.in</a></p>



**SUPPLY OF 2 Nos. 200KVA UPS ON BUYBACK BASIS**  
**Tender No. IITM/SPS/200KVA UPS/024/2022-23**

**TECHNICAL SPECIFICATION**

Sl.No	Description	
	<b>UPS Make</b>	<b>SOCOMEK / VERTIV / SCHNEIDER / LEGRAND</b>
<b>1</b>	<b>UPS CAPACITY</b>	
1.1	UPS Capacity in KVA	200 kVA
1.2	Actual Load on UPS in KVA	200 kVA
1.3	Power in KW	200 kW
1.4	Input/output	3phase / 3 phase
<b>2</b>	<b>TECHNOLOGY</b>	
2.1	Type	Modular UPS system
2.2	Construction	Modular by Construction
2.3	Modular Capacity	>=30KW
2.4	Total Number of Modular	Vendor to specify
2.5	Configuration	Inbuilt Fault tolerance for reduced load.
2.6	Isolation Transformer	Should be provided with 250KVA capacity, F class insulation, and K-13 harmonics class
2.7	Degree of Protection	IP 20
2.8	Battery backup time	Existing Battery Bank to be used (Existing 96 batteries are available, UPS charger should support 200Ah battery)
2.9	Temperature compensated battery sensors	Required
2.10	Remote Monitoring with in-house NOC center of the Manufacture to do advance remote diagnostic and predictive analysis at free of cost for 12 Months.	Required
2.11	Surge withstand ability EN61000-4-5, level3	Required
2.12	ISO Standards - ISO 9001:2015,ISO 14001:2015 and ISO 45001:2018	Required
2.13	IEC - EN 62040-1-2 general & safety requirements; IEC EN62040-2 EMC requirements; IEC EN62040-3 operating requirements	Required
<b>3</b>	<b>General</b>	
3.1	The UPS shall be housed in a freestanding cabinet with casters. Maintenance shall be possible from the front.	Required
3.2	The UPS shall be in a self-contained cabinet as single unit (≥200kVA)	Required
3.3	Output power factor	Unity Power factor
3.4	Backfeed contactor signal	UPS should be capable to provide backfeed contactor signal
3.5	The UPS shall support installation with 4-wire (L1, L2, L3, N, PE).	4 wire

Sl.No	Description	
3.6	The UPS shall contain a static bypass switch and a display. The UPS shall be of the double conversion on-line topology with power factor corrected inputs.	VFI & VI modes
3.7	The UPS shall be using a modular construction with power modules for optimal MTTR without compromising on safety.	Required
<b>4</b>	<b>SYSTEM INPUT</b>	
4.1	Nominal input voltage rating	400V 3-phase +N (adjustable for 380V or 415V 3-phase).
4.2	Input voltage window	340 to 460V, 50Hz, 3-phase
4.3	Earthing principle	Vendor to specify
4.4	Input frequency range	45-55 HZ
4.5	Input power factor	0.99 at load from 50% to 100%
4.6	Total harmonic distortion (I <sub>THD</sub> )	< 5%
4.7	Phase Sequence protection	During phase sequence issues UPS must be work on Battery mode.
<b>5</b>	<b>BATTERY</b>	
5.1	Ripple at full voltage	<2% RMS
5.2	Type of charging	Constant current and constant voltage
5.3	Battery protection	Under voltage protection
5.4	Battery Type	System must compatible with VRLA & LIB
5.5	No. of batteries	Existing Battery Bank to be used (48 number of 200Ah Batteries available)
5.6	End cell voltage ECV	10.2 V
5.7	UPS Battery charging system should support changing 200AH battery	Existing Battery Bank to be used
5.8	Battery Voltage in V	Vendor to specify
5.9	No. of batteries per bank	Vendor to specify
5.10	No. of Bank	Not more than 2 Banks
<b>6</b>	<b>SYSTEM OUTPUT</b>	
6.1	Nominal output voltage rating:	400V 3-phase + N
6.2	Output voltage tolerance:	+/- 1% for symmetrical loads
6.3	Waveform	Sinusoidal
6.4	Dynamic load response	±5% within 20ms
6.5	Output frequency	50 HZ
6.6	Frequency Tolerance	± 0.2%
6.7	Output voltage harmonic distortion	a. <1% at 100% linear load & b. <5% at 100% non-linear load
6.8	Overload capability	110% for 60 min, 125% for 10 min, 150% for 1 min
6.9	Output power factor:	Unity
6.10	Audible noise at full load:	Vendor to specify
6.11	System Efficiency AC/AC @ 25% , 50%, 75% and 100% load	Above 95%
6.12	Parallel Capability	> 5 UPS with 200 kVA
6.13	Sleep Mode to be applicable in When Connected in Parallel Mode	UPS must sense the load on each UPS and enable sleep mode during off season to optimize the load on each UPS, intend improve the system efficiency at partial load. UPS algorithm shall rotate UPS supplying power to the load in order to ensure the same ageing of power components

Sl.No	Description	
<b>7.</b>	<b>Modes of Operation</b>	
7.1	<b>Normal:</b> The critical Industrial, computer & related loads is continuously powered by the UPS output. The UPS shall derive power from the utility AC source and supplies DC powers to the inverters, while simultaneously float charging the battery.	Required
7.2	<b>Emergency:</b> Upon failure of utility AC power, the inverters, which, without any switching, obtain power from the battery plant, power the critical AC load. There shall be no interruption in power to the critical load upon failure or restoration of the utility AC source. In case of Utility failure, the AC source will be in the form of Diesel Generating sets, which shall take over with in a period of 15minutes. The battery shall have the capacity to supply continuous power at the full load capacity until such time the DG takes over. The backup time of the battery however shall be inversely proportional to the active loads at that point in time.	Required
7.3	<b>Recharge:</b> Upon restoration of the utility AC source (either utility or Diesel Generator sets), the UPS shall return to "Normal" operations mode and simultaneously recharge the battery. This shall be an automatic function and shall cause no interruption to the critical AC load in either case.	Required
7.4	<b>Automatic Restart:</b> Upon restoration of utility AC power or Diesel Generator, the UPS will (field selectable) automatically restart, performing the normal UPS start up walk-in.	Required
7.5	<b>Static Bypass:</b> Independent of main UPS source. If the UPS system must be taken out of service for maintenance or repair or for any failure in one of the UPS's where a bank of two or more are involved, the maintenance bypass switch shall transfer the load to the bypass source manually. The transfer process shall cause no interruption in power to the critical AC load, as the operations are very critical in nature.	Required
7.6	<b>Off-Battery:</b> If the battery only is taken out of service for maintenance, it is disconnected from the UPS modules by means of external disconnect breakers. The UPS shall continue to function and meet all of the specified steady-state performance criteria, except for the power outage back-up time capability.	Required
<b>8</b>	<b>Display, controls, and alarms:</b> The following metered data shall be available on the display: 1. Year, month, day, hour, minute, second of occurring events 2. Input voltage 3. Input current 4. Input frequency 5. Output voltage 6. Output current 7. Output frequency 8. Battery voltage 9. Battery current 10. Battery temperature 11. Alarm (critical alarm, warning alarm and no alarm condition)	Required
<b>9</b>	<b>Construction:</b>	
9.1	Sheet Metal thickness	2 mm For Load Bearing Parts & 1.6 mm For Non Load Bearing Parts
9.2	Cable Entry (input and output)	Bottom

Sl.No	Description	
<b>10</b>	<b>TESTING, TRAINING AND SERVICE</b>	
10.1	Unit Start Up and Site Testing: The manufacturer's field service personnel shall provide site testing document as follows: <ul style="list-style-type: none"> <li>• Site acceptance testing shall consist of all UPS functional test of the UPS system like power test in normal operation focusing on PFC, inverter and bypass, charger power test focusing on battery booster and mains and battery booster etc.</li> <li>• A full 100% load, 24-hour burn in test can be conducted preferably with smart option or external load bank as part of the standard start-up procedure. This shall be accomplished without disturbing user protected load and completed prior to operation of the site critical load from the UPS output.</li> <li>• The test results shall be documented, signed, and dated for future reference.</li> </ul>	Required
<b>11</b>	<b>UPS Maintenance Training</b>	
11.1	Maintenance training shall be provided for a minimum of 8 hours for maintenance staff. This training will be in addition to the basic operator training conducted as part of the system start-up.	Required
11.2	Vendor must perform a preventive maintenance with full capacity current flow through important components and converters during entire life cycle of UPS systems. The supplier must isolate the UPS from the critical load bus to perform the preventive maintenance and hot insert post preventive maintenance. Supplier shall not use the critical load for testing (In house).	Required
11.3	Vendor must perform a preventive maintenance with full capacity current flow through important components and converters during entire life cycle of UPS systems. The supplier must isolate the UPS from the critical load bus to perform the preventive maintenance and hot insert post preventive maintenance. Supplier shall not use the critical load for testing (In house).	Required
<b>12</b>	<b>Manufacturers Field Service</b>	
12.1	The manufacturer shall provide a fully automated national dispatch center to coordinate field service personnel schedules. One toll-free number shall reach a qualified support person 24 hours/day, 7 days/week, and 365 days/year. Emergency telephone service response time shall be 20 minutes or less, and onsite service response time within 4 hours.	Required
12.2	Parts must be available for guaranteed delivery within 48 hours.	Required
<b>13</b>	<b>Accessories</b>	
13.1	Remote UPS monitoring: SNMP, Modbus and PFC	Should be provided
13.2	630A Battery circuit barker	Should be provided
<b>14</b>	<b>Additional Requirements</b>	
14.1	3 years Guarantee/ Warranty from the date of Installation	
14.2	Operating and service manual should be provided in hard and soft copy	
14.3	Operational Training should be provided.	
14.4	Installation / Commissioning shall done with free of cost	
14.5	The supplier should quote AMC Charges separately for the period of 4, 5 and 6 years after completion the warranty of the UPS.	
<b>15</b>	<b>Terms and condition of an AMC</b>	
15.1	Engineer should visit the Computer Center, IIT Madras at every quarter for preventive maintenance of UPS	
15.2	Engineer visit will required after the report of failure of the shaker within 24 hours	
15.3	Preventive maintenance report should be submitted	
15.4	Half yearly payment will be done for the AMC after submission of test report	

**PROFORMA FOR TECHNICAL BID**  
**SUPPLY OF 2 Nos. 200KVA UPS ON BUYBACK BASIS**  
**Tender No. IITM/SPS/200KVA UPS/024/2022-23**

**A. PRE QUALIFICATION CRITERIA**

S. No.	Description	Compliance (Yes / No)	Reference Page No.
<b>I</b>	<b>Eligibility Criteria - I</b>		
1	The bidder shall not be from a country sharing land border with India and if the bidder is from a country sharing land border with India the bidder should have been registered with the competent authority as per orders of DIPP OM No. F. No. 6/18/2019-PPD dated 23rd July 2020, and MoCI Order No. P-45021/112/2020-PP (BE II) (E-43780) dated 24th August 2020. A declaration as per format given in <b>Annexure – D</b> shall be submitted with the bid.		
2	Only 'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P45021/2/2017-PP (BE II) dated 16th September 2020 and other subsequent orders issued therein, shall be eligible to bid in this tender. Declaration for Class-I / Class-II local suppliers should be submitted in the prescribed proforma format as per <b>Annexure – E</b> .		
<b>II</b>	<b>Eligibility Criteria - II</b>		
1	Neither the tender participating firm nor any of its partners has been blacklisted / debarred /involved / convicted in any criminal case / economic offence nor any criminal case / economic offence is <b>pending</b> against firm or any partner of the Firm before any Court of Law / Police. A self-declaration format given in <b>Annexure – F</b> .		
2	The bidders should be an OEM or authorized supplier of OEM. Necessary OEM certificate/OEM authorization letter for this particular tender should be submitted by the bidder as given in <b>Annexure-G</b> .		
3	Annual turnover should be at least Rs.100 Lakhs aggregate in the past three financial years i.e. 2019-2020, 2020-2021 and 2021-2022 (Financial statements / certificates issued by Chartered Accountant should be submitted as proof).		
4	The bidder should have experience in supply of similar UPS to Central Government / Central Public Sector Unit / Central Autonomous / Reputed Institutions/ reputed firms in the last three years (2020, 2021 and 2022) as detailed below: <ul style="list-style-type: none"> <li>i) Three (3) supplies each costing not less than Rs.16 Lakhs (Or)</li> <li>ii) Two (2) supplies each costing not less than Rs.24 Lakhs (Or)</li> <li>iii) One (1) supply costing not less than Rs.32 Lakhs</li> </ul> <b>Copies of the documents listed below should be submitted as a proof for the above supply:</b> <ul style="list-style-type: none"> <li>i) Purchase Order</li> <li>ii) Work Completion Certificates with Performance</li> </ul>		

S. No.	Description	Compliance (Yes / No)	Reference Page No.
5	The bidder should have a service centre in Chennai for service support. Proof of Office in Chennai should be furnished as documentary evidence (such as valid rental agreement / registration certificate / Certificate of Incorporation etc.).		
6	Price should be quoted separately for buyback of existing 2 Nos. of 160KVA DB Make UPS and 1 No. of 80KVA MGE GALAXY PW UPS with 32 Nos. of 150Ah Batteries (Bidder may visit Computer Centre, IIT Madras to apprise the existing UPS, if required)		

## B. TECHNICAL SPECIFICATION

S. No.	Technical Specification	Compliance (Yes / No)	Reference Page No.
	<b>UPS Make</b>	<b>SOCOMEK / VERTIV / SCHNEIDER / LEGRAND</b>	
	<b>UPS Model</b>	<b>Specify:</b>	
<b>1</b>	<b>UPS CAPACITY</b>		
1.1	UPS Capacity in KVA	200 kVA	
1.2	Actual Load on UPS in KVA	200 kVA	
1.3	Power in KW	200 kW	
1.4	Input/output	3phase / 3 phase	
<b>2</b>	<b>TECHNOLOGY</b>		
2.1	Type	Modular UPS system	
2.2	Construction	Modular by Construction	
2.3	Modular Capacity	>=30KW	
2.4	Total Number of Modular	Vendor to specify	
2.5	Configuration	Inbuilt Fault tolerance for reduced load.	
2.6	Isolation Transformer	Should be provided with 250kVA capacity, F class insulation, and K-13 harmonics class	
2.7	Degree of Protection	IP 20	
2.8	Battery backup time	Existing Battery Bank to be used (Existing 96 batteries are available, UPS charger should support 200Ah battery)	
2.9	Temperature compensated battery sensors	Required	
2.10	Remote Monitoring with in-house NOC center of the Manufacture to do advance remote diagnostic and predictive analysis at free of cost for 12 Months.	Required	

S. No.	Technical Specification	Compliance (Yes / No)	Reference Page No.
2.11	Surge withstand ability EN61000-4-5, level3	Required	
2.12	ISO Standards - ISO 9001:2015,ISO 14001:2015 and ISO 45001:2018	Required	
2.13	IEC - EN 62040-1-2 general & safety requirements; IEC EN62040-2 EMC requirements; IEC EN62040-3 operating requirements	Required	
<b>3</b>	<b>General</b>		
3.1	The UPS shall be housed in a freestanding cabinet with casters. Maintenance shall be possible from the front.	Required	
3.2	The UPS shall be in a self-contained cabinet as single unit ( $\geq 200\text{kVA}$ )	Required	
3.3	Output power factor	Unity Power factor	
3.4	Backfeed contactor signal	UPS should be capable to provide backfeed contactor signal	
3.5	The UPS shall support installation with 4-wire (L1, L2, L3, N, PE).	4 wire	
3.6	The UPS shall contain a static bypass switch and a display. The UPS shall be of the double conversion on-line topology with power factor corrected inputs.	VFI & VI modes	
3.7	The UPS shall be using a modular construction with power modules for optimal MTTR without compromising on safety.	Required	
<b>4</b>	<b>SYSTEM INPUT</b>		
4.1	Nominal input voltage rating	400V 3-phase +N (adjustable for 380V or 415V 3-phase).	
4.2	Input voltage window	340 to 460V, 50Hz, 3-phase	
4.3	Earthing principle	Vendor to specify	
4.4	Input frequency range	45-55 HZ	
4.5	Input power factor	0.99 at load from 50% to 100%	
4.6	Total harmonic distortion ( $I_{THD}$ )	< 5%	
4.7	Phase Sequence protection	During phase sequence issues UPS must be work on Battery mode.	
<b>5</b>	<b>BATTERY</b>		
5.1	Ripple at full voltage	<2% RMS	
5.2	Type of charging	Constant current and constant voltage	
5.3	Battery protection	Under voltage protection	
5.4	Battery Type	System must compatible with VRLA & LIB	

S. No.	Technical Specification		Compliance (Yes / No)	Reference Page No.
5.5	No. of batteries	Existing Battery Bank to be used (96 number of 200Ah Batteries available)		
5.6	End cell voltage ECV	10.2 V		
5.7	UPS Battery charging system should support changing 200AH battery	Existing Battery Bank to be used		
5.8	Battery Voltage in V	Vendor to specify		
5.9	No. of batteries per bank	Vendor to specify		
5.10	No. of Bank	Not more than 2 Banks		
<b>6</b>	<b>SYSTEM OUTPUT</b>			
6.1	Nominal output voltage rating:	400V 3-phase + N		
6.2	Output voltage tolerance:	+/- 1% for symmetrical loads		
6.3	Waveform	Sinusoidal		
6.4	Dynamic load response	±5% within 20ms		
6.5	Output frequency	50 HZ		
6.6	Frequency Tolerance	± 0.2%		
6.7	Output voltage harmonic distortion	a. <1% at 100% linear load & b. <5% at 100% non-linear load		
6.8	Overload capability	110% for 60 min, 125% for 10 min, 150% for 1 min		
6.9	Output power factor:	Unity		
6.10	Audible noise at full load:	Vendor to specify		
6.11	System Efficiency AC/AC @ 25% , 50%, 75% and 100% load	Above 95%		
6.12	Parallel Capability	> 5 UPS with 200 kVA		
6.13	Sleep Mode to be applicable in When Connected in Parallel Mode	UPS must sense the load on each UPS and enable sleep mode during off season to optimize the load on each UPS, intend improve the system efficiency at partial load. UPS algorithm shall rotate UPS supplying power to the load in order to ensure the same ageing of power components		



S. No.	Description	Compliance (Yes / No)	Reference Page No.
<b>7.</b>	<b>Modes of Operation</b>		
7.1	<b>Normal:</b> The critical Industrial, computer & related loads is continuously powered by the UPS output. The UPS shall derive power from the utility AC source and supplies DC powers to the inverters, while simultaneously float charging the battery.	Required	
7.2	<b>Emergency:</b> Upon failure of utility AC power, the inverters, which, without any switching, obtain power from the battery plant, power the critical AC load. There shall be no interruption in power to the critical load upon failure or restoration of the utility AC source. In case of Utility failure, the AC source will be in the form of Diesel Generating sets, which shall take over with in a period of 15minutes. The battery shall have the capacity to supply continuous power at the full load capacity until such time the DG takes over. The backup time of the battery however shall be inversely proportional to the active loads at that point in time.	Required	
7.3	<b>Recharge:</b> Upon restoration of the utility AC source (either utility or Diesel Generator sets), the UPS shall return to "Normal" operations mode and simultaneously recharge the battery. This shall be an automatic function and shall cause no interruption to the critical AC load in either case.	Required	
7.4	<b>Automatic Restart:</b> Upon restoration of utility AC power or Diesel Generator, the UPS will (field selectable) automatically restart, performing the normal UPS start up walk-in.	Required	
7.5	<b>Static Bypass:</b> Independent of main UPS source. If the UPS system must be taken out of service for maintenance or repair or for any failure in one of the UPS's where a bank of two or more are involved, the maintenance bypass switch shall transfer the load to the bypass source manually. The transfer process shall cause no interruption in power to the critical AC load, as the operations are very critical in nature.	Required	
7.6	<b>Off-Battery:</b> If the battery only is taken out of service for maintenance, it is disconnected from the UPS modules by means of external disconnect breakers. The UPS shall continue to function and meet all of the specified steady-state performance criteria, except for the power outage back-up time capability.	Required	
<b>8</b>	<b>Display, controls, and alarms:</b> The following metered data shall be available on the display: 12. Year, month, day, hour, minute, second of occurring events 13. Input voltage 14. Input current 15. Input frequency 16. Output voltage 17. Output current 18. Output frequency 19. Battery voltage 20. Battery current 21. Battery temperature 22. Alarm (critical alarm, warning alarm and no alarm condition)	Required	

S. No.	Technical Specification	Compliance (Yes / No)	Reference Page No.
9	<b>Construction:</b>		
9.1	Sheet Metal thickness	2 mm For Load Bearing Parts & 1.6 mm For Non Load Bearing Parts	
9.2	Cable Entry (input and output)	Bottom	
10	<b>TESTING, TRAINING AND SERVICE</b>		
10.1	<p>Unit Start Up and Site Testing: The manufacturer's field service personnel shall provide site testing document as follows:</p> <ul style="list-style-type: none"> <li>Site acceptance testing shall consist of all UPS functional test of the UPS system like power test in normal operation focusing on PFC, inverter and bypass, charger power test focusing on battery booster and mains and battery booster etc.</li> <li>A full 100% load, 24-hour burn in test can be conducted preferably with smart option or external load bank as part of the standard start-up procedure. This shall be accomplished without disturbing user protected load and completed prior to operation of the site critical load from the UPS output.</li> <li>The test results shall be documented, signed, and dated for future reference.</li> </ul>	Required	
11	<b>UPS Maintenance Training</b>		
11.1	Maintenance training shall be provided for a minimum of 8 hours for maintenance staff. This training will be in addition to the basic operator training conducted as part of the system start-up.	Required	
11.2	Vendor must perform a preventive maintenance with full capacity current flow through important components and converters during entire life cycle of UPS systems. The supplier must isolate the UPS from the critical load bus to perform the preventive maintenance and hot insert post preventive maintenance. Supplier shall not use the critical load for testing (In house).	Required	
11.3	Vendor must perform a preventive maintenance with full capacity current flow through important components and converters during entire life cycle of UPS systems. The supplier must isolate the UPS from the critical load bus to perform the preventive maintenance and hot insert post preventive maintenance. Supplier shall not use the critical load for testing (In house).	Required	

S. No.	Technical Specification		Compliance (Yes / No)	Reference Page No.
<b>12</b>	<b>Manufacturers Field Service</b>			
12.1	The manufacturer shall provide a fully automated national dispatch center to coordinate field service personnel schedules. One toll-free number shall reach a qualified support person 24 hours/day, 7 days/week, and 365 days/year. Emergency telephone service response time shall be 20 minutes or less, and onsite service response time within 4 hours.	Required		
12.2	Parts must be available for guaranteed delivery within 48 hours.	Required		
<b>13</b>	<b>Accessories</b>			
13.1	Remote UPS monitoring: SNMP, Modbus and PFC	Should be provided		
13.2	630A Battery circuit barker	Should be provided		
<b>14</b>	<b>Additional Requirements</b>			
14.1	3 years Guarantee/ Warranty from the date of Installation			
14.2	Operating and service manual should be provided in hard and soft copy			
14.3	Operational Training should be provided.			
14.4	Installation / Commissioning shall done with free of cost			
14.5	The supplier should quote AMC Charges separately for the period of 4, 5 and 6 years after completion the warranty of the UPS.			
<b>15</b>	<b>Terms and condition of an AMC</b>			
15.1	Engineer should visit the Computer Center, IIT Madras at every quarter for preventive maintenance of UPS			
15.2	Engineer visit will required after the report of failure of the shaker within 24 hours			
15.3	Preventive maintenance report should be submitted			
15.4	Half yearly payment will be done for the AMC after submission of test report			

**SIGNATURE OF BIDDER ALONG WITH  
SEAL OF THE COMPANY WITH DATE**

**PROFORMA FOR FINANCIAL BID (BOQ)****SUPPLY OF 2 Nos. 200KVA UPS ON BUYBACK BASIS  
Tender No. IITM/SPS/200KVA UPS/024/2022-23**

S.No	Description	Qty.	Rate per unit (without GST)	GST (in %)	Total Cost (with GST incl. of all)
1	<b>Supply of 200KVA UPS</b> as per technical specification mentioned in Annexure-A	2 Nos.			
2	<b>Cost of AMC for the 4<sup>th</sup> year (after warranty)</b>	1 year			
3	<b>Cost of AMC for the 5<sup>th</sup> year (after warranty)</b>	1 year			
4	<b>Cost of AMC for the 6<sup>th</sup> year (after warranty)</b>	1 year			
	<b>TOTAL</b>				
5	<b>LESS: Buyback value for the existing UPS</b> 2 Nos. of 160KVA DB Make UPS and 1 No. of 80KVA MGE GALAXY PW UPS with 32 Nos. of 150Ah Batteries	1 set			
<b>TOTAL COST after deducting buyback value</b>					

Place:

Date:

**SIGNATURE OF BIDDER ALONG WITH  
SEAL OF THE COMPANY WITH DATE**

(To be given on the letter head of the bidder)

---

Tender No. **IITM/SPS/200KVA UPS/024/2022-23**

Dated: \_\_\_\_\_

**CERTIFICATE**

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and hereby certify that I am not from such a country.

**(OR)**

***(Bidders from Country which shares a land border with India)***

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and hereby certify that I am from \_\_\_\_\_ (Name of Country) and have registered with the Competent Authority. I also certify that I fulfil all the requirements in this regard and am eligible to be considered. *(Copy/ evidence of valid registration by the Competent Authority is to be attached)*

Place:

Date:

**SIGNATURE OF BIDDER ALONG WITH  
SEAL OF THE COMPANY WITH DATE**

**FORMAT FOR AFFIDAVIT OF SELF-CERTIFICATION UNDER PUBLIC PROCUREMENT POLICY  
(PREFERENCE TO MAKE IN INDIA) 2017**

**Tender Reference Number: IITM/SPS/200KVA UPS/024/2022-23**

**Name of the item / Service: Supply of 2 Nos. 200KVA UPS on buyback basis**

Date: \_\_\_\_\_

I/We \_\_\_\_\_ S/o, D/o, W/o, \_\_\_\_\_

Resident of \_\_\_\_\_

hereby solemnly affirm and declare as under:

That I will agree to abide by the terms and conditions of the Public Procurement (Preference to Make in India) Policy vide GoI Order no. P-45021/2/2017-PP (B.E.-II) dated 15.06.2017 (subsequently revised vide orders dated 28.05.2018, 29.05.2019 and 04.06.2020) MOCI order No. 45021/2/2017-PP (BE II) Dt.16th September 2020 & P- 45021/102/2019-BE-II-Part(1) (E-50310) Dt.4th March 2021 and any subsequent modifications/Amendments, if any and

That the local content for all inputs which constitute the said item/service/work has been verified by me and I am responsible for the correctness of the claims made therein.

<b>Tick (✓) and Fill the Appropriate Category</b>	
<input type="checkbox"/>	I/We _____ [name of the supplier] hereby confirm in respect of quoted items that Local Content is equal to or more than 50% and come under <b>“Class-I Local Supplier”</b> category.
<input type="checkbox"/>	I/We _____ [name of the supplier] hereby confirm in respect of quoted items that Local Content is equal to or more than 20% but less than 50% and come under <b>“Class-II Local Supplier”</b> category.

The details of the location (s) at which the local value addition is made and the proportionate value of local content in percentage

Percentage of Local content : \_\_\_\_\_ %\*\*

Location at which value addition done : \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

For and on behalf of .....(Name of firm/entity)

Authorized signatory (To be duly authorized by the Board of Directors)

<Insert Name, Designation and Contact No.>

[Note: In case of procurement for a value in excess of Rs. 10 Crores, the bidders shall provide this certificate from statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.]

**This letter should be on the letterhead of the quoting firm and should be signed by a competent authority.**

**\*\* Services such as transportation, insurance, installation, commissioning, and training and after sales service support like AMC/CMC cannot be claimed as local value addition**

(To be given on the letter head of the bidder)

---

**Self-Declaration that the Service Provider has not been Black listed**

I ..... S/o .....  
R/o ..... police station ..... District ..... Director  
/ partner/ sole proprietor (Strike out whichever is not applicable) of .....  
..... (Firm or Company) do hereby declare and solemnly affirm:

- I. That the Firm ..... has not been Blacklisted or declared insolvent by any of the Union or State Government / Organization.
- II. That none of the individual / firm / Company Blacklisted or any partners or shareholder thereof has any connection directly or indirectly with or has any subsistence interest in the deponent business / firm company.
- III. That neither the Firm nor any of its partner has been involved / convicted in any criminal case / economic offence nor any criminal case / economic offence is pending against firm or any partner of the Firm before any Court of Law / Police.

Place:

Date:

**SIGNATURE OF BIDDER ALONG WITH  
SEAL OF THE COMPANY WITH DATE**

**OEM CERTIFICATION FORM**

**(in Original Letter Head of OEM)**

Tender No: ..... Dated: .....

We are Original Equipment Manufacturers (OEM) of..... (Name of the company)

Ms..... (Name of the vendor) is one of our Distributors/Dealers/Resellers/Partners (tick one) for the ..... and is participating in the above mentioned tender by offering our product model.....(Name of the product with model number).

..... is authorized to bid, sell and provide service support warranty for our product as mentioned above.

Name and Signature of the authorized  
signatory of OEM along with  
seal of the company with Date