

**EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE**

Emp No	HYD/EMP/2024-25/013
Date:	01.05.2024



**Local Head Office, Premises & Estate Department,  
Bank Street, Koti, Hyderabad-500 001. Ph: 040-23466340/19**

**Invites applications for**

**EMPANELMENT OF UPS OEMS (ORIGINAL EQUIPEMENT MANUFACTURERS)  
FOR SBI OF HYDERABAD CIRCLE**

**The Assistant General Manager (P&E),  
STATE BANK OF INDIA,  
Premises and Estate Department,  
Local Head Office, Bank Street, Koti,  
HYDERABAD – 500 001.  
040-23466340/19  
[agmpre.lhohyd@sbi.co.in](mailto:agmpre.lhohyd@sbi.co.in);  
[agmcivil.lhohyd@sbi.co.in](mailto:agmcivil.lhohyd@sbi.co.in);**

**EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE**

**EMPANELMENT NOTICE**

State Bank of India, Hyderabad circle invites applications for EMPANELMENT OF UPS OEMS (ORIGINAL EQUIPEMENT MANUFACTURERS) FOR SBI OF HYDERABAD CIRCLE and having service facilities at various cities of Telangana State.

1)	Empanelment application form available for download from the websites:	1) <a href="https://www.sbi.co.in">https://www.sbi.co.in</a> under “SBI in the News” link “Empanelment of vendors” 2) “ <a href="https://etender.sbi">https://etender.sbi</a> ”															
2)	Availability for download from the above website	<b>From 01.05.2024 to 21.05.2024</b>															
3)	Last date and time for submission of online applications in e-tender portal	<b>21.05.2024 by 3.00 P.M.</b>															
4)	Date and Time of opening of online applications:	<b>21.05.2024 at 3.10 P.M.</b>															
5)	For any queries or support in connection with the online Submission of applications, please contact our E-procurement solutions agency	e-Procurement technologies Limited, Ahmedabad:  <b><u>For e-Tender Support for Bidders</u></b> <table border="1"><tr><td>Fahad Khan</td><td><a href="mailto:fahad@eptl.in">fahad@eptl.in</a></td><td>6352631766</td></tr><tr><td>Utkarsh Pal</td><td><a href="mailto:utkarsh@eptl.in">utkarsh@eptl.in</a></td><td>6352632098</td></tr><tr><td>Manish Pathak</td><td><a href="mailto:manish.p@eptl.in">manish.p@eptl.in</a></td><td>9265562819</td></tr><tr><td>Mubassera Mansuri</td><td><a href="mailto:mubassera@eptl.in">mubassera@eptl.in</a></td><td>7859800621</td></tr><tr><td>Hiral Purohit</td><td><a href="mailto:hiral.purohit@eptl.in">hiral.purohit@eptl.in</a></td><td>6352631968</td></tr></table> <p>Email: <a href="mailto:etender.support@sbi.co.in">etender.support@sbi.co.in</a> <b><u>For Registration / DSC Verification / Profile Approval:</u></b> For Profile activation, Digital Signature Certificate verification please send mail to <a href="mailto:harsh.dalwadi@abcprocure.com">harsh.dalwadi@abcprocure.com</a> or call to 079 68136866, +91 6353217080 For any Guidance/ Assistance of event submission, Please contact on above numbers or download the manuals from website homepage <a href="https://etender.sbi/SBI">https://etender.sbi/SBI</a> to know the Minimum system requirement, DSC settings, submission process.</p>	Fahad Khan	<a href="mailto:fahad@eptl.in">fahad@eptl.in</a>	6352631766	Utkarsh Pal	<a href="mailto:utkarsh@eptl.in">utkarsh@eptl.in</a>	6352632098	Manish Pathak	<a href="mailto:manish.p@eptl.in">manish.p@eptl.in</a>	9265562819	Mubassera Mansuri	<a href="mailto:mubassera@eptl.in">mubassera@eptl.in</a>	7859800621	Hiral Purohit	<a href="mailto:hiral.purohit@eptl.in">hiral.purohit@eptl.in</a>	6352631968
Fahad Khan	<a href="mailto:fahad@eptl.in">fahad@eptl.in</a>	6352631766															
Utkarsh Pal	<a href="mailto:utkarsh@eptl.in">utkarsh@eptl.in</a>	6352632098															
Manish Pathak	<a href="mailto:manish.p@eptl.in">manish.p@eptl.in</a>	9265562819															
Mubassera Mansuri	<a href="mailto:mubassera@eptl.in">mubassera@eptl.in</a>	7859800621															
Hiral Purohit	<a href="mailto:hiral.purohit@eptl.in">hiral.purohit@eptl.in</a>	6352631968															
6)	SBI reserves the right to accept or reject any or all bids without assigning any reasons Thereof.																
7)	For Clarifications Please Contact: <b>040-23466340/19</b> <a href="mailto:agmpre.lhohyd@sbi.co.in">agmpre.lhohyd@sbi.co.in</a> ; <a href="mailto:agmcivil.lhohyd@sbi.co.in">agmcivil.lhohyd@sbi.co.in</a> ;																

**The Asst. General Manager (P&E)  
State Bank of India**

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## EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE

### EMPANELMENT

State Bank of India invites applications from Original Equipment Manufactures with offices and having service facilities in Telangana state for the empanelment of UPS vendors for supply, installation, testing and commissioning of various capacities of ON-LINE UPSs to our Branches and Offices in various cities across the Telangana state.

#### Scope of the work:

Supply, Installation, testing and commissioning of ON-LINE UPS systems along with batteries for ratings up to 60KVA to Branches/ Offices spread all over Telangana State. Providing technical support during breakdowns under warranty period and through comprehensive Annual Maintenance contract for both UPS and batteries.

#### MINIMUM ELIGIBILITY CRITERIA

The following are the **Mandatory** eligible conditions:

1. Only Original Equipment Manufacturer will be considered. The applicant should have sufficient number of technical and administrative employees. The applicant should submit a list of employees with contact details.
2. The applicant should be registered with other organizations like PSU/ Govt. Dept. /Semi Govt. Dept. / Nationalized Banks.
3. The firm should be minimum 5 years old as on **30<sup>th</sup> April 2024** and the copy of company's **certificate of registration** should be enclosed.
4. The applicant must have valid **PAN** and **GST No.**
5. The applicant should have supplied similar rated capacity in PSU/ Nationalized Bank's/ State and Central Govt Organizations/ Insurance companies. The work order must be in the name of the applicant (OEM) and not through the dealers. The applicant must submit the completion certificate/ order copies from clients.
6. Minimum average annual turnover of last 3 years ending as on **31.03.2023** must not be less than Rs.**5.00** crores and enclose the a proof of the following documents need to be submitted: Form No:3CB/3CB/ST-3/ Sales Tax returns/Traces form No:26AS.
7. The firm must have valid ISO certification.
8. The applicant must have a full fledged office in **Telangana state**.
9. The applicant must have a valid digital certificate.
10. All requisite testing equipments and facilities should be available at the **factory** to carry out the testing of the equipments thereat.

Interested and eligible firms may submit the online applications dully filled with self attested copies of all the necessary certificates and documents as per the enclosed

## EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE

checklist. The Bank reserves the right to accept or reject any or all applications without assigning any reason thereof.

### 2. General Conditions:

- a. Those who are earlier empanelled by the Hyderabad Circle of the Bank need to apply afresh.
- b. The Bank's officials or their authorized representatives will visit your manufacturing unit(s)/factory to inspect about the facilities available for manufacturing and testing of the equipments before finalizing for empanelment. The applicant shall agree and authorize the Bank to obtain the confidential report from the clients to verify the work executed by them.
- c. This empanelment shall be valid for the entire Telangana Circle of SBI for a period of **three years** from the date of empanelment. The Bank may review/ update the panel during its validity period at any time(s) and may exclude/ de-list any firm from the empanelled list depending upon the instances warranting such exclusion at the sole discretion of the Bank.
- d. Any OEM de-listed earlier by the Bank are in-eligible and they need not apply.
- e. Bank conducts tendering in two bid form through e-tendering from the short listed empanelled vendors and no separate notification will be published in the news paper. Technically qualified vendors from e-tendering through Bank's website 'www.sbi.co.in' are only allowed to participate in e-reverse auction for the realization of rates for ON-LINE UPS systems of various ratings through Bank's Empanelled agency.
- f. Bank is not responsible for the late receipt due to postal delay, strikes or any other reasons. The incomplete application is liable to be rejected summarily.
- g. In case discrepancies are found in the information submitted, the application shall be considered unsatisfactory and the tenderer will not be eligible to bid. The State Bank of India will not enter into any correspondence with tenderer except seek clarification when necessary. The decision of the State Bank of India to accept or reject any application for pre-qualification will be final.
- h. The service centers with contact details if any in Hyderabad, Secunderabad, Nizamabad, Warangal and Nalgonda cities with sufficient spare parts and technically qualified service technicians to provide prompt services and regular preventive maintenance.

**Brief Technical systems specifications for on-line UPS of 1KVA to 5KVA**

1.	Technology	<p>True online UPS system with pulse width modulation (PWM) technology with double conversion using IGBTs in the Inverter and converter having pure sine wave output with load power factor to be maintained from <b>0.95 to unity</b>. Adaptive pulse width modulation or sine weighted pulse width modulation with high switching frequency (&gt;12 KHZ for IGBTs). The UPS must have the feature of cold start with static switch (bi directional) 100% load transfer facility without break, build in IGBT based solid state float-cum-boost charger with CVCC charger with current limiting features. The charger characteristics will be such as to match the offered with each UPS. The UPS system should have necessary RS-232/port, USB port. The facility for remote manageability and SNMP shall be provided upon request. The UPS must process the following protections</p> <ol style="list-style-type: none"> <li>Isolation-Separate/ In-built isolation transformer shall be provided for fully isolation from mains and surge/ Spike suppressors to be incorporated.</li> <li>Current limiting protection (fuse less Electronic). Built in overload/ Short circuit protection with snubber circuits for current to be incorporated.</li> <li>Soft start on Inverter and charger arrangement.</li> <li>Over voltage/ Under voltage protection.</li> <li>Short circuit protection through HRC fuses.</li> <li>Short circuit/ Overload protection through MCB/MCCB.</li> <li>All other protection systems required for safety of UPS system, such as over temperature protection etc.,.</li> </ol> <p>The overload capacity, Overall efficiency, Total harmonic distortion, crest factor, Battery re-charge time, Noise level, Transient response and voltage recovery time for step load, Operating temperature, relative humidity must be as per the Bank's specifications.</p>
2.	Input Voltage range	<ol style="list-style-type: none"> <li>Single phase 240Volts+15% and -30%. There should be input to output isolation through a in-built isolation transformer.</li> <li>Three phase systems, 415 Volts±15% depending upon the requirement of the Bank.</li> </ol>
3.	Input frequency	45Hz to 55Hz and it should be compatible with D.G set.
4.	Output voltage	220/230 V.A.C ±1%.
5.	Output frequency	50Hz ±1% (free running).
6.	Power factor	The UPS shall be provided with auto input P.F correction system to obtain P.F <b>0.95 to unity</b> when the connected load P.F varies from 0.6 to unity.
7.	Indications	LED/LCD display to be provided mains on Battery on charge, Battery low, Inverter on, % load, on bye pass, over temperature, mains high, mains low, Inveter over voltage,

**EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE**

		Inverter under voltage, Battery over charge, Inverter over load/ current etc.,.																							
8.	Alarm (alarm should be reset by manual and auto modes)	<ul style="list-style-type: none"> <li>a. Low battery alarm to be provided.</li> <li>b. % overload.</li> <li>c. Mains failure/ load on battery alarm to be provided, both should be audio visual.</li> <li>d. Over temperature alarm in two stages.</li> <li>e. Overload.</li> </ul>																							
9.	Configuration	<ul style="list-style-type: none"> <li>a. Conventional single module.</li> <li>b. Hot stand by system with SNMP and remote monitoring.</li> <li>c. PR configuration: The UPS systems must share the load equally and must auto transfer the load in case of failure of any of the system. Interconnecting module must be in-built in the UPS module.</li> </ul> <p>The vendor shall be able to supply the above configurations as per the requirement of the Bank.</p>																							
10.	Metering	<p>Digital panel meter or LCD display system to indicate the following:</p> <ul style="list-style-type: none"> <li>a. A.C voltage: Input/output.</li> <li>b. A.C Current: Input/output or % load.</li> <li>c. D.C battery voltage.</li> <li>d. D.C Charging/discharging current.</li> <li>e. Frequency – Input/Output.</li> </ul>																							
11.	Battery set A. SMF Batteries (To be installed in ventilated/cooled rooms only)	<ul style="list-style-type: none"> <li>a. Complete with self standing cubicle or cabinet.</li> <li>b. Make like: Exide/ Panasonic/ Amara Raja/Rocket/ HBL.</li> </ul> <p>Note: Only valve regulated lead Acid (VRLA) type SMF batteries of 20HR rated capacity electrolyte in paste form are acceptable.</p> <p>Any other type including calcium batteries are not acceptable and year of manufacturing of batteries have to be specified along with Sr. Nos.</p>																							
12.	Testing	The supplier shall have facilities to carry out all the testing at factory up to our satisfaction before acceptance. A list of tests prescribed are enclosed.																							
13.	Installation	The OEM must draw the inter connecting cable/ wires between battery and UPS through PVC pipes and shall not be laid haphazardly on the floor with proper clamping on to the wall.																							
14.	VAH	<p>The minimum VAH required for the above UPS system is as under.</p> <p>Those giving higher VAH shall not be given any weightage.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">UPS capacity (KVA)</th> <th colspan="3">Minimum VAH and backup period required</th> </tr> <tr> <th>30Minutes</th> <th>60Minutes</th> <th>120Minutes</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1176</td> <td>1980</td> <td>3324</td> </tr> <tr> <td>2</td> <td>2364</td> <td>3960</td> <td>6648</td> </tr> <tr> <td>3</td> <td>3540</td> <td>5952</td> <td>9960</td> </tr> <tr> <td>5</td> <td>5904</td> <td>9912</td> <td>16608</td> </tr> </tbody> </table>	UPS capacity (KVA)	Minimum VAH and backup period required			30Minutes	60Minutes	120Minutes	1	1176	1980	3324	2	2364	3960	6648	3	3540	5952	9960	5	5904	9912	16608
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## EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE

Minimum VAH required as per details as under:

In the both cases, the UPS vendors to specify, the make of battery they propose to use, they have to submit detailed literature of battery and battery manufacturers capability etc.						
S No.	UPS Rating	DC Voltage	Battery AH	Nos.	Total VAH	Make
1						
2						
3						
4						
a) The back-up time at full load shall be <b>30 Minutes/ 60 Minutes/ 120 Minutes</b> <u>Note</u> (strike out whichever is not applicable). b). Battery set details to be indicated by the supplier: i). D.C. Terminal voltage ii). No. of batteries and each battery voltage iii). Ampere-Hour capacity of each battery c). End cell voltage for cut off shall be considered as 1.75 / cell						

Place:

Applicant's Signature:

Date:

Stamp:

**Brief Technical Specifications for on-line UPS systems**

**from 6 KVA to 25 KVA**

1.	Technology	<p>a) Online interactive UPS systems with pulse width modulation (PWM) technology in True On-line Configuration, with double conversion using IGBTs in the Inverter and converter with pure sine wave output and Static (Auto) by-pass switch (Bi directional) and Manual switch</p> <p>b) Provision for configuring three or more UPS system in parallel load sharing mode(PRS configuration). Maximum six nos UPS system can be connected in parallel configuration in one cluster.</p> <p>c) The requirement is for fully rated capacity of single module in parallel with similar module sharing the load having provision for adding one or two modules of similar units. The UPS system should have necessary RS-232/port, USB port. The facility for remote manageability and SNMP shall be provided upon request. Paralleling of UPS should be achieved by paralleling the output on the power side using control logic signal bus. Each UPS should be capable of individually starting, running and feeding to the load apart from parallel operation.</p> <ul style="list-style-type: none"> <li>• Individual battery back up is necessary.</li> <li>• Inverters should be synchronized with common by pass supply if required</li> <li>• can be connected in parallel for forming N + 1 (Configuration)</li> <li>• The interfacing hardware for PRS UPS must be inbuilt</li> <li>• The overload capacity, Overall efficiency, Total harmonic distortion, Crest factor, Battery re-charge time, Noise level, Transient response and voltage recovery time for step load, Operating temperature Relative humidity must be as per the Bank's specifications.</li> <li>• Built in IGBT based solid state float-cum-boost charger with automatic boost/trickle charge</li> </ul>
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**EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE**

		<p>modes with current limiting features. The charger characteristics shall be such as to match the float/boost charging of the batteries as per battery characteristic, for enhancing the life of batteries. The charger should be designed for 2 hours back up period at rated KVA</p>
2.	Inversion Technique	Adaptive pulse width modulation or sine weighted pulse width modulation with high switching frequency (> 12 KHZ for IGBTs).
3.	Input Voltage Range	<p>Single phase 220 Volts + 15 % and -30 % ( Up to 7.5 KVA)            Three Phase 400 Volts <math>\pm</math> 15% ( for 10 KVA And above)            There should be input to output Isolation through a inbuilt/ separate Isolation transformer.</p>
4.	Input frequency	45 Hz to 55 Hz and it should be compatible with D G Set.
5.	Output voltage	220 / 230 V.A.C. $\pm$ 1% single phase.
6.	Output frequency	<p>50 Hz +/- 4% (Synchronous to mains)            50 Hz +/- 1% (Free running)</p>
7.	Power factor	<b>The UPS shall be provided with Auto input P.F. correction system to obtain P.F. 0.95 to unity when the connected load P.F. varies from 0.6 to unity.</b>
8	Interface facility	<p>The UPS system should have necessary hardware and software with RS-232 port to work on DOS/SCO Unix (open screen) Novell / Network/ Current &amp; advanced window operating system. It should be compatible for connecting to Building Management System.            (B) Remote manageability through SNMP facility. There is a facility to monitor and broad cast to server wherever necessary condition such as :</p> <p>i) Power failure, back up time, low battery warning &amp; auto file closure.            ii) The software should be capable of automatically closing the files (auto closure feature) in the server so that the data / program files on the server are not lost/ corrupted.</p>
9	Remote Indication unit ( It may be asked if required at site)	In system/systems Administrator Room with indications like Mains on, Inverter ON / OFF / Faulty / Trip, Battery Low and static by-pass ON. 25 meters inter connecting cable to be included in price quoted.
10	Protection	<p>a). Isolation – Separate/ In-built isolation transformer shall be provided for isolation transformer for fully isolation from mains and surge / spike suppressors to be incorporated.            b). Current limiting protection (Fuse less Electronic).</p>

**EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE**

		<p>Built in overload / short circuit protection with snubber circuits for current limit.</p> <p>c). Soft start on Inverter and charger arrangement</p> <p>*d). Phase locking mechanism for UPS and mains frequency- for 3 phase output.</p> <p>e). Over voltage / under voltage protection.</p> <p>*f). Short circuit protection through HRC fuses (high speed) for devices such as IGBTs.</p> <p>g). Short circuit / overload protection through MCB / MCCB.</p> <p>h). All other protection systems required for safety of UPS system, such as over temperature protection etc.</p>
12	Indications	<p>a). Mains ON with phase indication for single phase / 3 phase separately for all the phases.</p> <p>b). Inverter ON / OFF / FAULTY / TRIP (Reason)</p> <p>c). Battery Low</p> <p>d). Static by-pass ON</p> <p>e). Over temperature</p> <p>f). Earth Leakage</p>
13	Alarm	<p>i). Low battery alarm to be provided (ii) % load</p> <p>iii) Failure of inverter</p> <p>iv) mains failure / load on battery alarm to be provided. Both should be audio visual.</p> <p>v) Over temperature alarm in two stages</p> <p>1<sup>st</sup> stage : Warning, intermittent audio alarm</p> <p>2<sup>nd</sup> stage : Tripping, continuous audio visual and resettable.</p>
14	Metering	<p>Digital panel Meter or LCD display system to indicate the following</p> <p>i). A.C. voltage : Input/ output</p> <p>ii). A.C. current : Input/output or % load</p> <p>iii). D.C. battery voltage</p> <p>iv). D.C. Charging / discharging current</p> <p>v). Frequency – Input/ Output</p>
15	Battery set A. SMF Batteries	<p>i) Complete with self standing cubicle or cabinet</p> <p>ii) Make like : Exide/ Panasonic/ Amara Raja/ Rocket/ HBL..</p> <p>(iii) <b>Note:</b> Only Valve Regulated Lead Acid (VRLA) type SMF batteries with electrolyte In paste form are acceptable. Any other type including calcium batteries are not acceptable and date and year of manufacturing of batteries have to specify alongwith Sr. Nos..</p>

Minimum VAH required as per details as under:

UPS Capacity (KVA)	VAH required		
	30 Minutes	60 Minutes	120 Minutes
7.5	8868	14868	24912
10	11820	19824	33216
15	17724	29736	49824

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20	23628	39636	66432
25	28920	48504	97020

Minimum VAH required as per details as under:

In the both cases, the UPS vendors to specify, the make of battery they propose to use, they have to submit detailed literature of battery and battery manufacturers capability etc.						
Sr No.	UPS Rating	DC Voltage	Battery AH	Nos.	Total VAH	Make
1						
2						
3						
4						
5						
<p>a) The back-up time at full load shall be <b>30 Minutes/ 60 Minutes/ 120 Minutes</b> Note (strike out whichever is not applicable).</p> <p>b). Battery set details to be indicated by the supplier:</p> <p>i). D.C. Terminal voltage</p> <p>ii). No. of batteries and each battery voltage</p> <p>iii). Ampere-Hour capacity of each battery</p> <p>c). End cell voltage for cut off shall be considered as 1.75 / cell</p>						

## EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE

Testing : i). The supplier shall have facilities to carry out all the tests at factory center, and tests will have to be satisfactorily carried out before acceptance. A list of tests prescribed are enclosed in Annexure-“F”.

ii) Tests shall be carried out and certified by the manufacturer and by the Bank's approved agencies as per sampling below :

<b>UPS Rating</b>	<b>% Sampling in lot</b>
6VA to 10 KVA	25% of total supply subject to certain minimum numbers at Bank's discretion
12.5 KVA to 25 KVA	50% of total supply subject to certain minimum numbers at Bank's discretion
30 KVA and above	100% of total supply subject to certain minimum numbers at Bank's discretion in presence of Bank's Engineer at Factory.

**TECHNICAL SPECIFICATIONS FOR ON-LINE MODULAR UPS systems  
OF 30 KVA TO 100 KVA**

Sl.No.	Description	Specifications of Modular 30 KVA & above
1	Technology	Digital Signal Processing (DSP) controlled Microprocessor based technology true On-line configuration. a) Modular UPS design in N+1 redundant configuration with scalability (vertical paralleling) b) Provision for configuring three or more modules in parallel load sharing mode. Indicate the maximum No. of modules that can be connected in parallel for forming N + 1 (Configuration) c) The requirement is for fully rated capacity of single module in parallel with similar module sharing the load having provision for adding one or two modules of similar units. Paralleling of UPS should be achieved by paralleling the output on the power side using control logic signal bus. Each UPS should be capable of individually starting, running and feeding to the load apart from parallel operation
2	Scalability	For vertical scalability in multiple of 10 KVA to 30 KVA.
3	Module Rating	10 KVA to 30 KVA each.
4	Inversion technique	Adaptive pulse width modulation or sine weighted pulse width modulation with high switching frequency.
5	Input Voltage range	[ii] <b>Three phase:</b> 380/400/415 V $\pm$ 20% In either case, there should be input to output isolation through separate isolation transformer ( External to UPS).  <b>Note:</b> Static bypass arrangement may be connected in such a way that the input and output sides shall always remain galvanically isolated.
6	Input Frequency	47 Hz to 55 Hz
7	Generator compatability	Should be compatible with Generator
8	Type of rectifier	DSP controlled IGBT based Rectifier.
9	Duration in which totally discharged batteries are to be recharged	8-10 hrs
10	<b>Inverter</b>	

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10.1	Technology	DSP controlled PWM using IGBTs
10.2	Efficiency of Inverter	> 95 %
11	Output Voltage	380/400/415VAC $\pm$ 1% Above for 3Ph IP / 3Ph OP
12	Output Frequency	50 Hz $\pm$ 4% (Synchronous to mains) 50 Hz $\pm$ 0.1% (free running)
	Power factor	The UPS shall be provided with Active Input P.F. Correction system to obtain P.F from 0.96 to Unity. (where the connected load P.F varies from 0.8 to Unity.
13	Harmonic Distortion (input current)	$\leq$ 5% at 50 % load
14	Wave form (output)	Sine wave
15	Crest factor	$\geq$ 3
16	Overload capacity	110% for 10 minutes 150% for 1 minute (during the test the load should not get transferred to mains through static switch)
17	Efficiency	
	i) Efficiency AC/AC (Overall)	
	At Full load	$\geq$ 94 %
	At 75 % load	$\geq$ 94 %
	At 50% load	$\geq$ 93 %
	At 25% load	$\geq$ 91 %
	<p><b>Definition of overall efficiency :</b> It is the ratio of output power in KW to the input power to the UPS system, keeping battery disconnected.</p> <p><b>Penalty for lower efficiency:</b> If the overall efficiency is found to be less than the Bank's specified value, the UPS is to be rejected and replacement passing the test to be obtained. No further tolerance is permissible.</p>	
18	Operating temperature	Should be designed for delivering rated KVA at ambient temperature from 0 to 40 Degree Celsius, however it should operate upto 50degree Celsius.
20	Relative Humidity	10-90% at 35 C non-condensing. It should be capable to work in the entire geographical region of the Circle including coastal region.
19	Noise level	At 1 meter from the UPS  $\leq$ 65 decibles for > 10kVA (Prototype test certificate required).

**EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE**

20	Charger	Built in solid state float-cum-boost charger with automatic boost/trickle charge modes with current limiting features. The charger characteristics will be such as to match the float/boost charging of the batteries as per battery characteristic, for enhancing the life of batteries. The charger is designed for atleast 15% of the total battery current.
21	Interface Facility	<p>The UPS System has necessary hardware and software with RS 232 port to work on DOS/SCOUnix (Open Server) Novell Netware/Windows NT OS. operating systems. It should be compatible for connecting to Building Management System.</p> <p>B) Remote Managibility through SNMP Facility. There is facility to monitor &amp; broadcast to servers whenever necessary, conditions such as:</p> <p>i) Power failure, backup time, low battery warning &amp; auto file closure.</p> <p>ii) The software is capable of automatically closing the files ("Auto File Closure" feature) in the server so that the data/ programme files on the server are not lost / corrupted.</p>
22	Protection	<p>a) Current limiting protection (Fuse less Electronic). Built in overload/ short circuit protection with snubber circuits for current limit.</p> <p>b) Soft start on inverter and charger arrangement.</p> <p>c) Phase locking mechanism for UPS and mains frequency.- for 3 phase output.</p> <p>d) Over voltage/ under voltage protection.</p> <p>e) Short circuit/ overload protection through MCB / MCCB</p> <p>f) All other protection systems required for safety of UPS system, such as over temperature protection etc.</p> <p>g) Protection against earth leakage current by suitable protective devices like negative sequence current sensor/ RCCB.</p>
23	*i) Thyristor based Static (Auto) bye-pass switch	Bi-directional with change over time less than 10 milliseconds in free running mode and instantaneous in synchronous mode from inverter to by-pass and vice-versa.
24	Indications	<p>a) Mains ON with phase indication for single phase/ 3 phase separately for all the phases.</p> <p>b) Inverter ON/ OFF/ FAULTY/ TRIP (Reason)</p> <p>c) Charger ON/ FAULTY or TRIP (Reason)</p> <p>d) Battery Low</p> <p>e) Static by-pass ON</p> <p>f) Over temperature</p> <p>g) % load</p>

**EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE**

25	Alarm	<p>i) Low battery alarm and mains failure / load on battery alarm provided.</p> <p>ii) Over temperature alarm in two stage :  1st stage : Warning  2nd stage : Tripping</p>
26	Metering	<p>Digital Panel Meter duly calibrated to indicate the following</p> <p>a) AC Voltage:Input/ Output</p> <p>b) AC Current : Input/ Output</p> <p>c) % Load</p> <p>d) DC Battery Voltage</p> <p>e) DC Charging/ Discharging Current</p> <p>f) Frequency- Input/ Output</p>
27	System Controller	<p>The System controller is a redundant device that provides;</p> <ul style="list-style-type: none"> <li>* All system measurements from modules and Static Switch.</li> <li>* Basic system configuration</li> <li>* Alarm indications</li> <li>* Power Analysis</li> <li>* Remote monitoring</li> <li>* Battery handling</li> </ul> <p>In case of System controller failure, the operation of the UPS should not change eventhough the UPS features will not be available.</p> <p>It should also be possible to replace System controller without interrupting the UPS system operation</p>
28	Event logging at front panel	Should be Available
29	SNMP web Monitoring and software compatibility.	Should be available
30	Battery set A. SMF Batteries (To be installed in ventilated/ cooled rooms only)	<p>i) Complete with self standing cubicle or cabinet</p> <p>ii) Make/ Brands : Exide/ Panasonic/ Amara Raja/ Rocket/ HBL.</p> <p>(iii) <b>Note:</b> Only Valve Regulated Lead Acid (VRLA) type SMF batteries of 20 Hour rating with electrolyte in paste form are acceptable. Any other type including calcium batteries are not acceptable. The sr. no., date and year of manufacturing of batteries shall be specified .</p>



## EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE

Note : Tubular batteries have longer life at higher ambient temperature but they require more space. Wherever maintenance facilities/ well ventilated battery room are available, The tubular batteries should be preferred over SMF batteries.

The life of SMF batteries reduces drastically with increase in temperature, Where the space is costlier and a site constraint, SMF batteries may be used.

Minimum VAH required as per details as under:

UPS Capacity (KVA)	Minimum VAH and Back-up required	
	30 Minutes	60 Minutes
30	34704	58212
40	46272	77616
50	57840	97020
60	69408	116424
80	92544	155232
100	115680	194028

In the both cases, the UPS vendors to specify, the make of battery they propose to use, they have to submit detailed literature of battery and battery manufacturers capability etc with following details:.							
S No.	UPS Rating	DC Voltage	Battery AH	Nos.	Total VAH	Make	
1							
2							
3							
4							
5							
6							
<p>a) The back-up time at full load shall be <b>30 Minutes/ 60 Minutes</b> <u>Note</u> ( strike out whichever is not applicable).                      ( End cell voltage for cut off shall be considered as 1.75 / cell)</p>							

31 Testing : i). The supplier shall have facilities to carry out all the tests at factory center, and tests will have to be satisfactorily carried out before acceptance. A list of tests prescribed are enclosed in annexure-“D”.

ii) Tests shall be carried out and certified by the manufacturer and by the agencies specified here under (a). SAMEER (b).ETDC (c).ERTL (d) CPRI (e) ERDA Vadodara (f) I.I.T.s (g) NITs h) National Research & Technology Consortium, Parwanoo (H.P.), i) reputed Engineering colleges ( discretion with LHO) j) Regional Testing Centre ( E.R.), Govt. Of India, Kolkata, (k) SV University Tirupati/ JNTU, Hyderabad/ L D College of Engineering Ahemadabad (l) Electronis Quality Development Centre, Gandhinagar (m) as per sampling below:

UPS Rating	% Sampling in lot
25 KVA and above	100% in presence of Bank's Engineer at factory

## EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE

(iii) If the UPS does not conform to specifications either during factory test or at site, the Bank reserves the right to reject the same. The successful tenderer shall then have to remove the same at his cost from site and supply a new piece conforming to the specifications.

iv). The Bank reserves the right to randomly decide to carry out testing of a few UPS systems at site after installation at the cost of UPS vendor, who will be required to arrange for all the requisite variacs, maters, loads etc. and carry out the tests through vendor's personnel in the presence of Bank's Officials.

Place:  
Date:

Applicant's Signature  
Stamp:

## EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE

### SCOPE & ANNUAL MAINTENANCE CONTRACT TERMS & CONDITIONS:

- The UPS Vendor after empanelment must provide Comprehensive AMC for UPS as well as batteries.
- The rates quoted for the UPS must include three years AMC period inclusive of service tax after the warranty period of one year.
- The UPS vendor must verify all vital and running parameters of UPS sets, leakages and attending all breakdown calls within 8 hours, Battery maintenance with verification of tightness of battery connection, cleaning of external surface, application of petroleum jelly on battery terminals, verification of specific gravity, topping of distilled water & electrolyte free of cost for Tubular model, replacement of major internal components such as Transformers, Chokes, semiconductor devices like IGBT, Mosfet, Diodes, SCR and DC capacitor etc due to failure of system due internal factors.
- The UPS vendor must support the Bank during shifting of premises and during the UPS down times.
- The service personnel should visit and check the UPS systems once in every month for periodical maintenance and submit the service report regarding the healthiness of system, back-up time, Specific gravity readings of battery, Voltage.
- The AMC payment will be disbursed quarterly at the end of each quarter.

Place:

Applicant's Signature

Date:

Stamp:

## EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE

### TEST PARAMETERS

Sr. No	Parameters to be measured
1	Technology
2	Nominal input voltage
3	No load input voltage range =Voltage regulation
4	Input frequency range (on D.G set)
5	Input power factor
6	Inversion Technique
7	Capacity
8	Output voltages
9	Output frequency
10	Distortion (o/p voltage) THD
11	Crest factor
12	Static bypass switch
13	Wave form (output)
14	Efficiency
15	Indications
16	Alarm
17	Metering
18	DC isolation between input line & output line
19	Input current harmonics
20	Batteries
21	Rated KVA
22	Charger
23	Manual bypass switch
24	Transient response
25	Overload capacity 110% & 150%

**EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE**

**PARTICULARS IN RESPECT OF MAJOR WORK ORDERS FOR THE LAST 5 YEARS (WORK ORDERS & WORK COMPLETION CERTIFICATE TO BE ENCLOSED)**

Sr No	Name of work/ project with address	Description of work executed	Name and address of the clientele	Time of completion
1	2	3	4	5

**EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE**

**OTHER RELEVANT INFORMATION**

S No	City	Service center with address	Details of Technical staff	
			Name & Contact details	Designation & Qualification
1	Hyderabad			
2	Secunderabad			
3	Nalgonda			
4	Warangal			
5	Nizamabad			

**EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE**

**OTHER RELEVANT INFORMATION**

S No	Particulars	Details	Remarks
1	List of major production equipment in possession of the firm		
2	List of testing instruments		
3	List of laboratory equipments		

Applicant

Signature of the  
(with seal)

Date:

Place:

Signature of the Tenderer

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**EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE**

**ANNEXURE - I**

**WORK COMPLETED DURING THE LAST SEVEN YEARS**  
**(FROM 01.05.2017 to 30.04.2024)**

Sl n o	Rati ng of the UP S in KVA and loca tion	Con tract Am ount	PO Number and Date of Award	Stipul ated Date of install ation	Actual Date of installation	Actual value of installa tion in ₹	Name & Addres s,  contact Of Client	Contact number of the client	Email Id of the client.
1									
2									
3									
4									
5									

Note: (1) Request to upoad the maximum 5 highest value of the works executed in the above period.

(2) Request you to fill the all the data as required and not mention enclosed, submitted, Yes, No etc.

Please attach evidence like copy of award letter / completion certificate given by client / architect. Please also attach colored photographs of completed work.

Signature with seal

Name:

Place:

Date:



**WORKS ON HAND**

UPS rating in KVA and Location	Contract Amount	Date of Award	Stipulated Date of installation	Present Status	Name & Address of Client	Name & Phone Nos Of client's Contact Person	Name, Address & Phone nos Of architect

Signature with seal

Name:

Place:

Date:

**DECLARATION**

1. All the information furnished by me/us here above is correct to the best of my knowledge and belief.
2. I/We have no objection if enquiries are made about the work listed by me/ us in the accompanying sheets/ annexures.
3. I/We agree that the decision of Bank in selection of contractors will be final and binding to me/ us
4. I/We hereby confirm that our firm/agency/company has not been disqualified / debarred / blacklisted by any Governments, Semi-governments, PSUs, Banks including any of the Offices/Branch of State Bank of India Pan India during last 7 year from the date of application.
5. I hereby confirm that all information, particulars, copies of certificates & testimonials in connection with my empanelment are correct and genuine. I am, therefore, liable to face appropriate actions as deemed fit by the Bank in the event of any of the information, particulars, copies of certificates and testimonials are not found correct and genuine.

Place:  
seal  
Date:

Signature of the contractor with

**EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE**

**ANNEXURE "A"**

**BIO-DATA OF THE PROPRIETORS/ PARTNERS / ASSOCIATES / DIRECTORS**

(Use one sheet per official)

1.	Name	:	
2.	Date of Birth	:	
3.	Professional Qualifications	:	
4.	Professional Experience	:	
5.	Professional Affiliation	:	
6.	Associated with the firm since	:	
7.	Membership in	:	
8.	Details of Published papers in Magazine	:	
9.	Details of cost effective methods/ designs adopted in the projects	:	
10.	Exposure to new materials/Techniques	:	

Note: Please enclose relevant copies of documents.

Applicant

Signature of the

(with seal)

Date:

Place:







Signature of the Tenderer

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**EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE**

**APPLICATION FORM  
TO BE FILLED IN ONLINE PORTAL (i.e, <https://etender.sbi>)**













**Category applied for supply & installation of online UPS systems :All categories/ upto 5 KVA/ upto 25 KVA/ upto 30 KVA/ upto 60KVA**

Sn o	Details	<b><u>Please fill the data (Don't mention as Enclosed/YES/ NO/ Submitted etc.,)</u></b>	Type of Document to be Uploaded	<b><u>Attachment</u></b>
1)	Name of the Firm			
2)	Constitution of the Firm (Proprietorship/Partnership/Company)			
3)	Proof of Original Equipment Manufacturer		Proof of document	
4)	Registered in panel of organization/statutory bodies such as PSU/ Govt Dept/ Semi Govt Dept/CPWD, PWD, MES, Banks etc. furnish their names, category and date of registration.		Enclose empanelment with other organizations	
5)	Date, month & year of Establishment of the firm		shop Establishment/companies registration/partnership deed	
6)	GST Number		GST	
7)	PAN Number		PAN	
8)	Contact person name			
9)	Mobile Numbers & Telephone numbers			
10)	Email ID			
11)	Registered Office Address			
12)	Communication Address			
13)	Local Address in Telangana		Enclose valid proof	
14)	Name of Partners /Associates /Directors.			

**EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE**

15)	Bio-data of Partners / Associates / Directors. Bio-data to be given in the Uploaded format		Annexure-A	U
16)	Whether registration / obtention of licence from Govt. Authorities e.g. labour dept., ESIC, etc. are in place			
17)	Detailed description of high value of three works done during last 7 years, as per the criteria given. ( i.e. name of organization, value of work done and date of completion) Copies of work orders, completion certificates must be enclosed.		Annexure I	U
18)	Name and value of other similar major works on hand in PSU / Banks / Govt. Organizations / Software firms.		Annexure-II	U
19)	Banker's Name			
20)	Technical systems specifications for on-line UPS of 1KVA to 5KVA	Upload the UPS parameters of the OEM	Annexure 'C-I'	
21)	<i>Technical Specifications for on-line UPS systems from 6 KVA to 25 KVA</i>	Upload the UPS parameters of the OEM	Annexure 'C-II'	
22)	<i>Technical Specifications for on-line modular ups systems of <b>30 KVA to 100 KVA</b></i>	Upload the UPS parameters of the OEM	Annexure 'C-III'	
23)	Declaration regarding near relatives working in the Bank.			
24)	Names and addresses of the persons who will be in position to certify about the quality as well as performance of your organization.			

**EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE**

25)	ISO certificate		Enclose the copy of ISO certification	
26)	Declaration (Annexure-III)		Annexure-III	
27)	Turnover			
	FY 2022-23	₹	Certificate issued by CA/ Profit & Loss statement	
	FY 2021-22	₹	Certificate issued by CA/ Profit & Loss statement	
	FY 2020-21	₹	Certificate issued by CA/ Profit & Loss statement	
28)	Office details in the state of Telangan		Enclose the proof of office	
29)	service centers (if any)details in the state of Telangan		Enclose the proof of service center	
30)	Testing equipment and facilities at factory.		Enclose the details of testing equipments with photos	
31)	<b><u>WORK-1</u></b>			
	<u>Work Order Details for Work-1</u>			
	Name of the Work			
	Work Order No			
	Work Order Amount			
	Work Order Date		Work order (work-1)	
	<u>Work Completion Details for Work-1</u>			
	Work Completion Value			
	Work Completion Date			
	Client Name			
	Client Address		Completion Certificate (work-1)	
	Client Mobile Number and landline			
	Client official email ID:			
32)	<b><u>WORK-2</u></b>			
	<u>Work Order Details for Work-2</u>			
	Name of the Work			
	Work Order No			
	Work Order Amount			
	Work Order Date		Work order (work-2)	
	<u>Work Completion Details for Work-2</u>			

**EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE**

	Work Completion Value		Completion Certificate (work-2)	
	Work Completion Date			
	Client Name			
	Client Address			
	Client Mobile Number and landline			
	Client official email ID:			
33)	<b>WORK-3</b>			
	<u>Work Order Details for Work-3</u>		Work order (work-3)	U
	Name of the Work			
	Work Order No			
	Work Order Amount			
	Work Order Date			
	<u>Work Completion Details for Work-3</u>		Completion Certificate (work-3)	U
	Work Completion Value			
	Work Completion Date			
	Client Name			
	Client Address			
	Client Mobile Number and landline			
	Client official email ID:			
34)	<b>WORK-4</b>			
	<u>Work Order Details for Work-4</u>		Work order (work-4)	U
	Name of the Work			
	Work Order No			
	Work Order Amount			
	Work Order Date			
	<u>Work Completion Details for Work-4</u>		Completion Certificate (work-4)	U
	Work Completion Value			
	Work Completion Date			
	Client Name			
	Client Address			
	Client Mobile Number and landline			
	Client official email ID:			
35)	<b>WORK-5</b>			
	<u>Work Order Details for Work-5</u>		Work order (work-5)	U
	Name of the Work			
	Work Order No			
	Work Order Amount			
	Work Order Date			
	<u>Work Completion Details for Work-5</u>		Completion Certificate (work-5)	U
	Work Completion Value			
	Work Completion Date			
	Client Name			

**EMPANELMENT OF UPS MANUFACTURES FOR HYDERABAD CIRCLE**

	Client Address		Completion Certificate (work-5)	
	Client Mobile Number and landline			
	Client official email ID:			

NOTE: Separate sheets, photographs, documents, etc. requirement to the proposed work in support of above can be uploaded.