



# **Request For Proposal(RFP) document for Computer Hardware and Other Items**



**Tender No.: TSREDCO/EC/E-TENDER LED SL/ 2020-21 dated  
17.11.2020**



**Telangana State Renewable Energy Development Corporation Ltd  
(TSREDCO)**

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## Section A : Tender Call Notice

TSREDCO has been appointed by the Government of Telangana as the Project Monitoring Consultant (PMC) for implementation of LED Street Lights in Various Gram Panchayats of the state. In this reference TSREDCO has entered into an agreement with EESL ( Energy Efficiency Services Limited) to implement 15 Lakhs Street Lights in various Gram Panchayats of Telangana State.

Tender Call Notice for Procurement of Computer Hardware and other items Telangana State Renewable Energy Development Corporation, Telangana, Hyderabad

### Time schedule of various tender related events

Bid calling date	17-11-2020
Last date for receipt of clarification	19-11 -2020 5.00PM
Bid end date/time	02-12 -2020, 04:30 PM
Bid opening date/time	02-11-2020, 05:00 PM
Bid Document Fee	Rs. 25,000/-
Contact person	T.Srinivasulu, Project Director, <a href="mailto:tsledsl@tsredco.telangana.gov.in">tsledsl@tsredco.telangana.gov.in</a>
TSREDCO Reference No.	<b>TSREDCO/EC/E-TENDER LED SL/ 2020-21 dated 17.11.2020</b>

\*Any Clarifications may be sent to our email(In view of Covid-19 Pandemic no personal representations) are entertained :: [tsledsl@tsredco.telangana.gov.in](mailto:tsledsl@tsredco.telangana.gov.in)

### **A.1. Solution, Service or material required:**

This tender call is issued on e-procurement market place at [www.eprocurement.telangana.gov.in](http://www.eprocurement.telangana.gov.in). All the terms and conditions are to be read jointly as mentioned in the e-procurement market website and in this document. Telangana State Renewable Energy Development Corporation Ltd has decided to procure computer hardware and others items to invites the bids from the interested parties for the supply, installation, commissioning and Maintenance of the following items.

Sno.	Description	Qty	UOM
	Schedule		
1	D.1.1. Servers	2	Nos.
2	D.1.2. Storage	1	Nos.
3	D.1.3. Desktop Computers	10	Nos.
4	D.1.4.1 Laptops	50	Nos.

5	D.1.4.2 Mac Book Air	1	No.
6	D.1.4.3 Mac Book Pro	1	No.
7	D.1.5. Network Switch	1	Nos.
8	D.1.6. Wifi Access Points	2	Nos.
9	D.1.7. Firewall	1	Nos.
10	D.1.8 Copier	1	Nos.
11	D.1.9 MFP Printer	5	Nos.
12	D.1.10 UPS	1	Nos.
13	D. 1.11 Site Preparation	1	Nos.
	<b><u>Centralized Dashboard with MIS</u></b>		
14	D1.12.1 Cost of Customization and Implementation		Lumpsum
15	D.1.12.2 Cost Of Integration per Light during Implementation Phase		Per Light
16	D.1.12.3 Quarterly Charges per Light		Per Light
	<b><u>Command and control Centre</u></b>		
17	D.1.13.1Cost of Customization and Implementation		Lumpsum
18	D.13.2Quarterly Charges for Command Center		Lumpsum
19	D 1.14 Displays for Monitoring at PR & RD	1	Nos

## **A.2. Scope of incidental services:**

Furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods.

## **A.3. Maintenance:**

Successful bidder has to supply, install, commissioning & maintain the all items including re-installation of software, if required, and other applications in case gets corrupted. In case the supplied items are down and not working, same need to be repaired and restored for normal functioning as per agreed Service Level Requirements. Failing which penalty will be recovered from Performance Security as per Clause mentioned in Section C.

## **A.4. Delivery and Installation period:**

Bidder shall deliver the goods/services, install and commission the same within Six(6) weeks from the date of signing of the contract.

## **A.5. Warranty:**

As defined in Section-D of the RFP. During warranty & maintenance period the bidders should conduct preventive maintenance once in a year besides attending the calls.

Service Level Agreement (SLA) for performance during maintenance period:

1. The original call log for all the logged calls of complaints & calls closed status should be sent by email to Department on fortnightly basis for monitoring.
2. Along with the above mentioned call log, a date wise abstract of calls logged and repair status within SLA and outside SLA should be provided to TSREDCO in the following format with supporting call reports duly signed by the user:

		Calls closed				
Date	No. of calls logged	Within 12 hrs	Within 1 day	Within 2 days	Within 4 days	Beyond 4 days

The above table may be used for calculation of penalties for not meeting the SLA requirements during maintenance/warranty period. In case the information is not provided as mentioned above, a penalty of 1% per week up to a maximum of 10% will be levied until the information is provided.

3. Persistent complaints from the user department during the warranty period relating to the improper service will be sufficient ground for the TSREDCO to blacklist the successful bidder from participating in the future tenders.

Note:

- a. Representations received after opening of the Bids will not be considered and strictly rejected.
- b. The bidder should upload all the required documents with clear visibility, avoid missing documents and avoid bidding mistakes. In such cases, TSREDCO reserves its right in seeking clarification from the bidder and may disqualify the bidder for the bidding mistakes, missing documents and for the documents that are not clear.

## Section B – Pre Qualification Criteria

1. The Bidder should be a manufacturer/ authorized representative of a manufacturer/whole sale dealer and should be in business of manufacture and or supply & maintenance of the computer hardware for a minimum period of Three (3) years in India as on bid calling date.
2. The Manufacturer's Authorization Form (MAF) specific to this tender should be submitted as per the Annexure-III for offered Servers, Computers, Wifi Access Points, UPS and firewall.
3. The bidder should be a company registered under the Indian Companies Act, 1956 /2013 Copies of Certificate of Incorporation, GST and PAN should be submitted.
4. The bidder should have cumulative financial turnover of Rs. 40 Crore or above in the last 3 financial years (2016-17, 2017-18 and 2018-2019). The

Firm should have positive net worth. Audited balance sheets or CA certified report should be submitted.

5. The bidder should reflect a minimum cumulative turnover for the items/products mentioned (irrespective of brand/model) below.

S. No.	Item name	Period	Total Sales turnover (nos.)
1.	Servers	2016- March 2020	20
2.	Laptops/Desktops	2016- March 2020	200
3.	Switches	2016- March 2020	10
4.	Wifi Access Points	2016- March 2020	20

Purchase Order/ Work Order/Contract Agreement copies for the above items should be furnished as a proof of document.

6. The bidder should furnish the information on major past supplies under the product/services for the last Three financial years and satisfactory performance report from customers.
7. The Bidder should have minimum one authorized service centre as on bid calling date in Hyderabad and in at least 2 Districts (OLD) of Telangana. Details of the service centres and service personnel should be enclosed in Form P5.
8. The Bidder should submit/give declaration stating that they are not blacklisted by any Government departments / PSU / State Government as on bid submission date. Further stating/declaring that no cases pending against the firm/organization either in Government (State or Union) for involvement in cases for supply of substandard goods/material or track record of supply of inferior quality or no enquiries on past supplies are being conducted or underway in the Format P6.

If the bidder is blacklisted as mentioned above, such bidder becomes ineligible to participate in the bidding process. In case of any concealing of information relating to blacklisting or pending of cases as mentioned above, TSREDCO reserves the right to cancel the work order/contract allotted, apart from forfeiting EMD/PBG. TSREDCO reserves the right further to take penal action on the bidder.

9. TSREDCO /User Department reserves their right in not considering the bid of a bidder, if such bidder member was a previous supplier and had a past bad track record or their earlier performance was unsatisfactory on any count.
10. No consortium is allowed.

**Note: The bidders should meet the above criteria for each schedule and the PQ forms, Technical Forms & Financial Forms are to be submitted separately for each respective schedule. Relevant documents in support of above with due attestation of the competent authority should be furnished along with the bid documents.**

## Section C -Statement of important limits/values related to bid

S.No.	Item	Description	
1	EMD Schedule	<b>Rs.2,00,000/-</b> Note: Scanned copy of EMD document should be uploaded on eProcurement website. The Original Copy of EMD should be submitted to TSREDCO on next day of Bid Closing Date.	
2	Bid Validity Period	<b>150 days</b> from the date of opening of bids	
3	EMD Validity Period	EMD shall be submitted in the form of <b>Online Payment</b> OR EMD shall be submitted in the form of DD/Bank Guarantee from any Nationalized bank/Schedule Bank having a Branch at Hyderabad . BG Validity period should be 150 days from the Bid Calling date.	
4	Maintenance Period	As mentioned in Section-D including warranty period for all items	
5	Variation in quantities	TSREDCO reserves the right to vary the quantities based on the requirement. And will Place the orders on Need basis.	
6	Period for furnishing performance security	Within 7 days from date of issue of Purchase Order	
7	Performance security value	10% of Contract Value in favor of ““The Managing Director, Telangana State Renewable Energy Development Corporation” from any Nationalized / Scheduled Bank from Hyderabad branches.	
8	Performance security validity period	90 days beyond warranty period	
9	Period for signing contract	Within 7 days from date of receipt of Notification of Award	
10	Warranty period	As mentioned in Section-D	
11	Up time	The bidder should resolve the breakdown calls within 24 Hours of call reporting. Failing which penalty is applicable as per terms & conditions. In case of any spare parts are required for replacement, the bidder should resolve the problems within 96 hours.	
12	Payment terms	Payment terms	
		For Item No. D .1.1 to D.1.11 & D.1.14 On delivery & successful installation.	90% of contract value
		For 1.12 & 1.13	1.12 Up on successful Customization, and implementation 90% of Customization Cost Will be Paid. 90% of the per Light Cost for integration on to the Dashboard will be paid based on the number of lights integrated During the Project Implementation Phase.

		Quarterly Amount for a period of 7 Years will be Paid towards Maintenance for Every Quarterly. D 1.13 Up on Successful Customization and Integration Installation Cost will be Paid and Quarterly Maintenance Cost Will be Paid for Every Quarter.				
		On Acceptance Test Remaining 10% on Submission of Performance Bank Guarantee.				
		Incase site not ready 75% of the value of the Material Delivered for that site / location.				
		Note : All the Delivery Challans/Installation Reports/Site Not Ready Certificate/report to be Counter signed by the respective Competent Authority as designated by the user department. The certificate/report should have Name, Designation, Signature, Date and Seal of the Officer.				
13	LD for late deliveries/installations	LD for late deliveries/Installations: 1% of the late delivered or deemed late delivered/installed goods for One week or part thereof, 1.5% for Two weeks or part thereof, 2% for Three weeks or part thereof, 2.5% for 4 weeks or part thereof and so on.				
14	Maximum LD for late deliveries/installation	Maximum LD for late deliveries/installations: 5% on the Total value of goods for that location/site for late delivery/installation or deemed late delivered/installed goods				
15	Penalty for failure to maintain during warranty period for all items	<table border="1"> <tr> <td>Item</td> <td>Penalty applicable for the downtime as below</td> </tr> <tr> <td>For All Items</td> <td>For any delay beyond permissible down time, a penalty of 0.5% of the total cost of the item will be subject to a maximum of total equipment cost.</td> </tr> </table>	Item	Penalty applicable for the downtime as below	For All Items	For any delay beyond permissible down time, a penalty of 0.5% of the total cost of the item will be subject to a maximum of total equipment cost.
Item	Penalty applicable for the downtime as below					
For All Items	For any delay beyond permissible down time, a penalty of 0.5% of the total cost of the item will be subject to a maximum of total equipment cost.					

		* The penalty amount will be deducted from the amounts payable to the bidder by TSREDCO. Once this amount is exhausted, penalty amount will be recovered from the Performance Security. Once the Performance Security also exhausted, the bidder will be required to recoup the Performance Security. If the bidder fails to recoup the Performance Security, the bidder will be debarred from participating in tenders till the time he recoups the Performance Security.
16	Conditional bids	Not acceptable and liable for rejection
17	Eligibility Criteria	As per Section B
18	Transaction Fee	Online Through e-Procurement Portal
19	Transaction Fee Payable to	Online Through e-Procurement Portal



20	Bid submission	<p>On Line on e-procurement platform. Bidders are totally responsible for incorporating/complying the changes/amendments issued if any in corrigendum in their bid.</p>
21	Procedure for Bid Submission	<p>Bids shall be submitted online on <a href="http://www.eprocurement.telangana.gov.in">www.eprocurement.telangana.gov.in</a> platform</p> <ol style="list-style-type: none"> <li>1. The participating bidders in the tender should register themselves free of cost on e-procurement platform in the website <a href="http://www.eprocurement.telangana.gov.in">www.eprocurement.telangana.gov.in</a>.</li> <li>2. Bidders can log-in to e-procurement platform in Secure mode only by signing with the Digital certificates.</li> <li>3. The bidders who are desirous of participating in e-procurement shall submit their technical bids, price bids as per the standard formats available at the e-market place.</li> <li>4. The bidders should scan and upload the respective documents in Pre Qualification and Technical bid documentation as detailed at Section E &amp; G of the RFP including EMD. The bidders shall sign on all the statements, documents certificates uploaded by them, owning responsibility for their correctness/authenticity.</li> <li>5. The rates should be quoted in online only</li> </ol>
22	Other conditions	<ol style="list-style-type: none"> <li>1. After uploading the documents, the copies of the uploaded statements, certificates, documents, original Demand Drafts in respect of Bid Security (except the Price bid/offer/break-up of taxes) are to be submitted by the bidder to the O/o The Managing Director, TSREDCO, Hyderabad on or before the following day of the Bid closing date. Failure to furnish any of the uploaded documents, certificates, will entitle in rejection of the bid. The TSREDCO shall not hold any risk on account of postal delay. Similarly, if any of the certificates, documents, etc., furnished by the Bidder are found to be false / fabricated / bogus, the bidder will be disqualified, blacklisted, action will be initiated as deemed fit and the Bid Security will be forfeited.</li> <li>2. TSREDCO will not hold any risk and responsibility regulating non visibility of the scanned and uploaded documents.</li> <li>3. The Documents that are uploaded online on e-Procurement place will only be considered for Bid Evaluation.</li> <li>4. Important Notice to Contractors, Suppliers and Department users (i) In the endeavour to bring total automation of processes in eProcurement, the Govt. has issued orders permitting integration of electronic Payment Gateway of ICICI/HDFC/Axis Banks with eProcurement platform, which provides a facility to participating suppliers / contractors to electronically pay the transaction fee online using their credit cards.</li> </ol>

## Section D –Technical Specifications

The specifications are as per the requirement needed and indicative. The bidders offering higher to the requirements are acceptable.

### D.1.1: Server

Feature	Requirement
Make & Model	To be Specified by the Bidder
Form Factor	Shall be 2U Rack Form Factor with Slidable Rackmount Kit.
CPU	Two (2) Intel® Xeon 10 Core Processors each with 2.2GHz, 13.75 MB L3 Cache, 2666 MT/s or Higher
L3 Cache per CPU	Minimum 13.75 MB L3 Cache per CPU
Memory	Minimum 64 GB or More using DDR-2666 RAM upgradeable to 1.5TB minimum. - Proposed Memory shall be capable of identifying and reporting whether genuine OEM memory is installed for system reliability. - All the Integrated Memory channels of the offered Processors shall be populated with Identical DIMMs. - Mixing of Different Size Memory DIMM is not allowed in the same bank. - - If required Bidder Shall Provide More memory to fulfil this requirement.
DIMM Slots	Minimum 24 DIMM Slots across Two CPUs
Persistent memory	The Proposed server shall support up to 512GB Scalable Persistent Memory
Memory Protection	The Proposed server shall support Advanced ECC with multi-bit error protection, Online spare, Mirrored memory and Fast Fault Tolerance.
HDD Bays	Shall include Eight (8) x Hot Plug SFF 12G SAS Drive Bays from Day1
Hard disk drive	6 x 600GB SAS 12G Enterprise 10 SFF HDDs The Proposed HDDs shall have a caution indicator that gets activated automatically in order to avoid data loss/downtime due to wrong drive removal.
RAID Controller	PCIe 3.0 based 12G SAS RAID Controller with Minimum 8 SAS/SATA lanes, RAID Levels 0, 1, 5, and 10 support by default and shall support encryption for data-at-rest on any drive with an optional License.
NICs	Minimum 4x Gigabit Ethernet Ports with RJ-45 I/F
FC HBAs	Minimum One Dual Port 16G FC Host Bus Adapter with LC I/F.
Bus Slots	Minimum Six (6) PCI-Express 3.0 slots with at least Two x16 PCIe Full-height, full-length slots from Day One.
Accelerator / GPU support	The Proposed Server shall support and certified to use minimum 2 Double-Wide Graphics cards or PCIe Storage Devices.
Interfaces	The Proposed Server shall include Minimum 3x USB Ports, 1 Dedicated 1GbE (RJ-45) MGMT Port, Minimum 1 Internal Micro SD slot and 2 internal USB Ports.
System tuning for performance	The Proposed Server shall support and include a Feature for improved workload throughput for applications sensitive to frequency fluctuations. And shall support workload Profiles for simple performance optimization

Server and OS Provisioning	The Proposed Server shall support and include required tools for Server and OS Provisioning
RESTful API & Scripting Tools	The Proposed Server shall support RESTful API & Scripting Tools
Secure encryption	The Proposed Server shall support Encryption of the data (Data-at-Rest) on both the internal storage and cache module of the array controllers using encryption keys
Firmware security	The Proposed Server shall support Firmware security features that test and verify the Integrity of the Server Firmware and automatically rollback to known-good Firmware to make sure that a server never boots up with the Firmware that has been compromised or tampered with any way The Proposed Server shall have the ability to store firmware and driver recipes on the management Controller to aid rollback or patching of compromised firmware.
System Security	The Proposed Server shall have Security features like UEFI Secure Boot and Secure Start support, Immutable Silicon Root of Trust, Common Criteria certification, TPM 1.2 and 2.0.
Server Management	Shall include Server Management Software that supports multiple operating systems from the same OEM for managing the server.
Embedded Remote Management and firmware security	The Proposed Server shall have Embedded Remote Management with dedicated Gigabit Ethernet Management port with RJ-45 I/F and shall include the required license for Browser based graphical remote console along with Virtual Power button, remote boot using USB/CD/DVD Drive with the required license from Day one.
Agentless Management	The Proposed Server shall support Agentless Management
Direct Remote Support without OS Agents	The Proposed Server shall support "Remote Management" without any OS Agent.
Integrated Remote Console Collaboration with privileged users	The Proposed Server shall support Integrated Remote Console Collaboration with Minimum 5 privileged users.
Integrated Remote Console Record and Playback	The Proposed Server shall support and shall include the required license for Integrated Remote Console Record and Playback
SSL and TLS Encryption for Remote Management	Remote Management Shall be through SSL and TLS Encryption from Day1.
Cloud-based IT dashboard	The Proposed Server shall support and include the required license for Personalized cloud-based IT dashboard from OEM with Mobile App to Track the Servers remotely to view Server configurations, auto-generated service events and support cases and to Proactively monitor the OEM contracts and warranties.
Java-free Integrated Remote Console and Secure Mobile App	The Proposed Server shall support Java-free Integrated Remote Console and shall have Secure Mobile App from the same OEM.

Operating Systems and Virtualization Software Support	The Proposed Server shall support and Certified for the current Versions / Editions of the Windows Server 2012 R2 - Windows Server 2016 - Red Hat Enterprise Linux (RHEL) 6.9 and 7.3 - SUSE Linux Enterprise Server (SLES) 11 SP4 and 12 SP2 - Canonical Ubuntu - CentOS - VMware ESXi 6.0 U3 - VMware ESXi 6.5 and U1 upon release etc.
Fans	The Proposed Server shall include Redundant Cooling FANs from Day1
Power Supply	The Proposed Server shall include Redundant Power Supplies from Day1
Rack Rail Kit	The Proposed Server shall include the required slidable Rack Rail Kit
Warranty	The Proposed Server shall include 3 Years Warranty.

**D.1.2. : NAS Storage**

Feature	Requirement
Make & Model	To be Specified by the Bidder
Rack mount	NAS Controller Should be rack mounted with a form factor of not more than 2U
Processor	Intel Xeon Processor Bronze 3104 @ 1.7Ghz with 8.25MB L3 Cache or higher.
Memory	16GB DDR4 RAM or higher, scalable to 384GB DDR4 RAM
Hard Drives	Shall be supplied with minimum of 3 x 4 TB NL-SAS drives in Raid 6. Offered NAS Storage shall have separate dedicated SSD drives for Operating system in Raid 1+0. Hard drives shall be M2 form factor.
Storage expandability	1. Offered NAS controller shall support at-least 12 internal LFF Slots and shall be offered with at-least 12 LFF Slots.  2. Offered storage shall also have capability to attach additional drive enclosures. NAS shall support at-least 300TB of external capacity using 10TB drives.
Network Connectivity	Min. 4 X 1Gbps auto sensing NICs ports and shall be further scalable to additional 8 numbers of 10Gbps ethernet port.
Protocols support	TCP/IP, ISCSI, FTP, FTPS, CIFS/SMB 3.1.1, HTTP, HTTPS, NFS 4.1, WebDev etc.
Fault Tolerance for internal drives	Offered NAS shall support Raid 0, Raid 1, Raid 1+0, Raid 5 and Raid 6 for internal drives. Offered Raid controller shall have minimum of 4GB flash back write cache.
Fault Tolerance for external drives	Offered NAS shall support Raid 0, Raid 1, Raid 1+0, Raid 5 and Raid 6 for external drives. Supported Raid controller shall have minimum of 4GB flash back write cache.
Network Client Types Support	Should support Windows 10, Windows 2012, 2016, HP-UX, AIX, SOLARIS, Linux etc.
Operating System	Microsoft Windows Storage Server 2016 - 64 bit edition ( NAS optimized ) including powered OS drivers

De-duplication	<p>Offered NAS shall have block based De-duplication which can be enabled for for all required volumes. De-duplication engine shall have:</p> <ol style="list-style-type: none"> <li>1. Flexibility to decide the multiple schedules when de-duplication process can be run.</li> <li>2. Flexibility to limit the time period of de-duplication process so that production operations remains intact.</li> <li>3. Flexibility to bypass the recent files under the de-duplication process so that production operations remains intact.</li> <li>4. License for De-duplication shall be provided.</li> <li>5. Shall support more than 64TB of file system for de-duplication.</li> </ol>
File screening and quota management	<ol style="list-style-type: none"> <li>1. Offered NAS shall have support for file screening so that administrator can ensures that users shall not be able to store unwanted files on offered NAS device.</li> <li>2. Offered NAS shall have Quota management for both Volume and Directory.</li> <li>3. Software for both File screening as well as Quota management shall be provided.</li> </ol>
File Management	<ol style="list-style-type: none"> <li>1. Shall have flexibility to expire or move files to different folder / Location / Volumes / drives on the basis of polices like day of creation / modification / access of on the basis of file pattern like extension.</li> <li>2. Shall also be able to expire or move files to different folder / Location / Volumes / Drives on the basis of content classification within files.</li> </ol>
SAN storage (iSCSI based)	Integrated iSCSI for block access over LAN.
Snapshots	Point in time copies of your data to guard against data corruption.
Encryption and compression	Shall have support for encryption and Compression. License for both of same shall be offered.
Replication	Offered NAS shall also be supported with leading NAS replication software's in the industry
Power Supply and FAN	Offered NAS shall also have Hot Plug redundant power supply and FAN
Warranty	The Proposed NAS Storage shall include 3 Years Warranty.

### D.1.3 Desktop

Feature	Specifications
Processor	Intel® 9th Generation Intel® Core i5 9500 Processor/AMD Ryzen 5 3400G
Chipset	Intel B365 /AMD Pro 500 Chipset or better
Motherboard	OEM Motherboard with logo embossed (no sticker)
Memory	8 GB DDR 4 RAM expandable to 32GB;
	Two DIMM slots
Hard Disk Drive	1 TB , 7200 RPM HDD

Optical Drive	8x DVD Writer
Graphics	Integrated Intel UHD 630 Graphics or better
Audio	High Definition Integrated Audio with internal speaker
Ethernet	Integrated Gigabit (10/100/1000 NIC) LAN
Slots	1 x PCIe16, 1xPCIe1,1 PCI, 1 M.2
Bays	(1) 3.5" Internal drive bays
	(1) ODD bay
Ports	Minimum 8 USB Ports (4 USB 3.1 Gen 1, 4 USB 2.0)
	(1) VGA video port; (1) HDMI Port
	(1) RJ-45 network connector
	1 universal audio jack for headphone& MIC
	1 audio line in, 1 audio line out
Form Factor	Small form factor , Volume no more than 12 L
Power Supply	180 W with 90% efficiency or better
Keyboard/Mouse	USB 104 keys keyboard (Same make as PC)
	USB 2 Button Scroll Mouse (Same make as PC)
Operating System	Genuine Microsoft Windows 10 Pro 64-bit
Diagnostic Tool	BIOS Diagnostics
Security	TPM 2.0
	SATA port disablement (via BIOS)
	Serial, USB enable/disable (via BIOS)
	Removable media write/boot control
	Power-On password (via BIOS)
	Administrator password (via BIOS)
	Setup password (via BIOS)
	Support for chassis padlocks and cable lock devices
Compliance Certification And	Energy Star ver 7.1 for the given form factor of desktop & monitor
	EPEAT certified in India for the given form factor of desktop & Monitor
	FCC, CE, RoHS Certificate for quoted desktop & Monitor
	UL Certificate
	Windows certificate
	ISO 9001, 14001,20001,27001 for OEM
System Weight / Volume	Weight should be less than 5 KG
Information Accessibility	Product details, specifications and brochure to be available in public domain
Support	Drivers should be available for download from OEM site for at least 5 years from the date of purchase order
Market Credibility	The OEM vendor should be of positive net worth for the last three years
Monitor	19.5" Monitor with resolution of 1600 x 900 or higher with VGA & HDMI Ports, TCO 8.0 Certified
Other	The detailed Technical specifications of the Model with images should be available to public on OEM's official website for verification.

Warranty	3 Years Onsite Warranty.
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**D.1.4.1 : Laptop**

Feature	Specifications
Processor	<b>Intel Core i3 10th gen or equivalent processor</b>
Chipset	System on Chip
Wireless	Integrated wireless 802.11 ac with Bluetooth 4.2 Combo ( <b>supporting MU-MIMO</b> )
<b>Memory</b>	<b>8 GB DDR4 RAM expandable to 16 GB (total 2 DIMM slots)</b>
Hard Disk Drive	1 TB 5400 rpm
Graphics	Integrated Graphics HD 620
Display	Not more than 14-inch diagonal LED-backlit (1366 x 768 resolution)
Webcam	720p HD webcam supporting <b>Wide Dynamic Range</b>
Keyboard	Full size keyboard
Ethernet Interface	Integrated Ethernet 10/100/1000 NIC
Ports	HDMI 1.4b- One(1)
	Headphone / microphone Combo : One (1)
	Power connector -One(1)
	Minimum 3 USB Ports with at least 2 USB 3.1
Integrated Media Card Reader	1 multi-format digital media reader supporting SD, SDHC, SDXC cards
Weight	not more than 1.6 Kgs with battery
Thickness	Not more than 20 mm
<b>Security</b>	<b>TPM 2.0, Security Lock Slot</b>
Speaker / Microphones	Integrated stereo speakers; HD audio
	Integrated microphone
Battery	Internal <b>Long Life battery</b> supporting Fast Charge
Operating System	Preloaded Genuine Windows 10 Professional
OS Certification	Must be certified for Windows
Warranty	3 Year Comprehensive
AC Adapter	Standard Indian Adaptor
<b>Mandatory Industry Standard Certifications</b>	<b>UL, FCC Compliance, EPEAT, Energy Star</b>
	<b>ISO 9001,14001,20001, 27001 for OEM</b>

**D.1.4.2 Mac Book Air**

Feature	Specifications
Model	Mac Book Air
Color	Silver

Display	<p>Retina display 13.3-inch (diagonal) LED-backlit display with IPS technology; 2560x1600 native resolution at 227 pixels per inch with support for millions of colours Supported scaled resolutions: 1680x1050, 1440x900, 1024x640 &amp; 400 nits brightness. Wide colour (P3) True Tone technology</p>
Chip	<p>Apple M1 chip 8-core CPU with 4 performance cores and 4 efficiency cores 8-core GPU 16-core Neural Engine</p>
Battery & Power	<p>Up to 15 hours wireless web Up to 18 hours Apple TV app movie playback Built-in 49.9-watt-hour lithium-polymer battery 30W USB-C Power Adapter</p>
Charging & Expansion	<p>Two Thunderbolt / USB 4 ports with support for: Charging DisplayPort Thunderbolt 3 (up to 40 Gbps) USB 3.1 Gen 2 (up to 10 Gbps)</p>
Memory	<p>8 GB 8GB unified memory Configurable to:16GB</p>
Storage	<p>512GB SSD Configurable to: 1TB or 2TB</p>
Keyboard and Trackpad	<p>Backlit Magic Keyboard with: 78 (US) or 79 (ISO) keys including 12 function keys and 4 arrow keys in an inverted-T arrangement Ambient light sensor Force Touch trackpad for precise cursor control and pressure-sensing capabilities; enables Force clicks, accelerators, pressure-sensitive drawing and Multi-Touch gestures</p>
Touch ID	<p>Touch ID sensor</p>
Wireless	<p>Wi-Fi 802.11ax Wi-Fi 6 wireless networking IEEE 802.11a/b/g/n/ac compatible Bluetooth Bluetooth 5.0 wireless technology</p>
Camera	<p>720p FaceTime HD camera</p>
Video Support	<p>Simultaneously supports full native resolution on the built-in display at millions of colours and: One external display with up to 6K resolution at 60Hz Thunderbolt 3 digital video output Native DisplayPort output over USB-C VGA, HDMI and Thunderbolt 2 output supported using adapters (sold separately)</p>



Audio	<p>Stereo speakers Wide stereo sound Support for Dolby Atmos playback Three-mic array with directional beamforming 3.5mm headphone jack</p>
Operating Requirements	<p>Line voltage: 100V to 240V AC Frequency: 50Hz to 60Hz Operating temperature: 10° to 35° C (50° to 95° F) Storage temperature: -25° to 45° C (-13° to 113° F) Relative humidity: 0% to 90% non-condensing Operating altitude: tested up to 3,000 metres Maximum storage altitude: 4,500 metres Maximum shipping altitude: 10,500 metres</p>
Size & Weight	<p>Height: 0.41–1.09 cm (0.16–0.43 inches) Width: 30.41 cm (11.97 inches) Depth: 21.24 cm (8.36 inches) Weight: 1.29kg (2.8 pounds)</p>
Operating System	Mac OS
Accessibility	<p>Accessibility features help people with disabilities get the most out of their new MacBook Air. With built-in support for vision, hearing, mobility and learning, you can create and do amazing things. Features include:</p> <p>Voice Control VoiceOver Zoom Increase Contrast Reduce Motion Siri and Dictation Switch Control Closed Captions Text to Speech</p>
Others	<p>0W USB-C Power Adapter USB-C Charge Cable (2m)</p>
Warranty	3 Years Warranty with Applecare +

#### D.1.4.3 Mac Book Pro

Feature	Specifications
Make & Model	MacBook Pro
Processor	<b>Intel Core i7 10th gen or equivalent processor</b>
<b>Memory</b>	<b>16 GB DDR4 RAM expandable to 64 GB</b>
Hard Disk Drive	Flash Memory Solid State
Display	16-inch (2072X1920 pixel)
Keyboard	Full size keyboard
Ports	Four Thunderbolt 3 (USB-C) ports

	Headphone / microphone Combo : One (1)
	Power connector -One(1)
Speaker / Microphones	Six-Speaker system with force cancelling woofers
Operating System	Preloaded Genuine Windows 10 Professional
AC Adapter	Standard Indian Adaptor
Battery	100Watt-hour upto 11 hours
Size	14.1X9.7X0.64 <b>Inches</b>
Warranty	3 Years Warranty with Appplecare +

### D.1.5 Network Switch

Feature / Parameter	Specifications
Make & Model	<< To be Specified by the Bidder>>
	Architecture
Form Factor	Shall be 1RU, 19" Rack Mountable with the required Rackmount kit to install in an Industry standard Wall Mount / Floor Mount Racks
1GbE-T Ports	24 * RJ-45 autosensing 10/100/1000 PoE+ Ports with Auto-MDI/MDIX Support from Day1
PoE power	Shall support up to 370 Watts PoE power to Support Minimum 24 PoE Devices or 12 PoE+ Devices or to support Combination of PoE & PoE+ Devices.  And Shall also Support up to 740Watts of PoE Power with the addition of Additional /Optional Power Supply as and when needed, to Support up to 24 PoE+ Devices or to support Combination of PoE & PoE+ Devices.
10GbE-T Ports	The switch shall include Minimum Two (2) 10-Gigabit RJ-45 (1/10GBASE-T) Ports in addition to the above ports from Day1
10G SFP+ Ports	The switch shall include Minimum Two (2) 10-Gigabit SFP+ ports in addition to the above ports from Day1
Console Port	1 RJ-45 serial console port
IPv4 and IPv6 Support	Shall Support IPv4 and IPv6 Layer 2 switching from Day1
Packet Buffer	Shall have at least 3 MB Packet buffer
Switching capacity	Shall have switching capacity of 125 Gbps or More
Throughput	Shall have up to 90 Million PPS switching throughput or More
Routing table size	Shall support Minimum 32 entries (IPv4), 32 entries (IPv6)
Latency	Shall have < 5 $\mu$ s Latency for 1000 Mbps and < 1.5 $\mu$ s Latency for 10 Gbps
MAC Address Table size	Should support 16000 MAC address or More
	Layer 2 switching
VLAN support	The Switch should support IEEE 802.1Q with 4,000 simultaneous VLAN IDs
BPDU Filtering	The Switch should support BPDU filtering to improve network efficiency by filtering unnecessary BPDU packets on a port and for preventing forged BPDU attacks.
Spanning Tree Protocol Support	The Switch should support standard IEEE 802.1D STP, IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) for faster convergence, and IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) and shall include the required License from Day1.
	Layer 3 services

ARP Support	The Switch should support Address Resolution Protocol (ARP) to determines the MAC address of another IP host in the same subnet
Layer 3 routing	
IPv4/IPv6 Routing	The switch should support Static IP routing for both IPv4 and IPv6 networks from Day1
	Resiliency and high availability
Stacking with Distributed LACP	The Switch should support stacking to create a single logically managed unit with up to Four Switches minimum with Distributed Link Aggregation LACP across the Ports of different member Units of the Stack from Day1  - Shall include the required the required Stacking Cable(s) with 10Gbp and the required License from Day1.
IEEE 802.3ad Support	The Switch should support Industry Standard IEEE 802.3ad Link Aggregation Control Protocol (LACP) - Shall be able to group up to 8 ports per trunk and shall support up to 124 Trunks. - Shall include the required license from Day1.
	Quality of Service (QoS)
Traffic Prioritization	The Switch should support Traffic prioritization for time-sensitive traffic like VoIP or video - Shall allow real-time traffic classification and mapped to Four queues. Shall support both IEEE 802.1p and DSCP prioritization tagging
IEEE 802.3X flow control	The Switch should support IEEE 802.3x Flow Control for intelligent congestion management and to prevent packet loss.
Broadcast Control	The Switch should support Broadcast control to limit the broadcast traffic rate to reduce an unwanted network broadcast traffic.
Storm protection	The Switch should support Packet storm protection to protect against broadcast, multicast, or unicast storms with user-defined thresholds
Jumbo frame Support	The Switch should support Jumbo frame up to 9216 bytes frames
IGMP / MLD Support	The Switch should support IGMP for IPV4 to prevent flooding of IP multicast traffic
	<b>Security</b>
Access Control Lists (ACLs)	The Switch should support Access Control Lists (ACLs) based on MAC-address or IP-address or time-based for granular security control by enabling network traffic filtering.
IEEE 802.1X and RADIUS	The Switch should support IEEE 802.1X and RADIUS network logins to controls port-based access for authentication and accountability
Automatic VLAN assignment	The Switch should support Automatic VLAN assignment to assigns users automatically to the appropriate VLAN based on their identity, location and time of day
Port isolation	The Switch should support Port isolation feature that isolates Layer 2 traffic for data privacy and security without using VLANs.
STP BPDU port protection	The Switch should support STP BPDU port protection to blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs
STP root guard	The Switch should support STP root guard to protect the root bridge from malicious attacks or configuration mistakes
Denial-of-service protection	The Switch should support Automatic denial-of-service protection to protect the network by blocking malicious DoS attacks aimed at the switch itself.

secure Management Access.	The Switch should support secure Management Access with with HTTPS / SSL and Password Protection in addition to IEEE 802.1X and RADIUS.
	<b>Management</b>
Switch Management	The Switch should support management of the Switch in an IPv4 network and in an IPv6 network environment
Secure Web-management	The Switch should support Secure Web-management sessions with HTTPS / SSL for Secure Access.
SNMP Support	The Switch should support Industry Standard SNMPv1, v2c, and v3 SNMP Management Frameworks
RMON	The Switch should support RMON for advanced monitoring and reporting capabilities
Complete session logging	The Switch should support Complete session logging that provides detailed information for problem identification and resolution.
Dual / backup FLASH for OS	The Switch should support Dual flash images for an independent primary and secondary operating system files for backup while upgrading
Port mirroring	The Switch should support Port mirroring from Monitoring the Network Traffic by network analyser.
NTP Support	The Switch should support Network Time Protocol (NTP) for synchronizing with distributed time servers.
IEEE 802.1AB LLDP Support	The Switch should support IEEE 802.1AB Link Layer Discovery Protocol (LLDP) for easy mapping by network management applications
DHCP client mode Support	The Switch should support DHCP client modes to obtain its IP address automatically from an existing DHCP Server with plug-and-play operation.
Cable diagnostic tool	The Switch should A cable diagnostic tool that lets users troubleshoot basic connectivity problems via the web management interface further simplifying network installation.
	<b>Convergence</b>
LLDP-MED (Media Endpoint Discovery)	The Switch should support LLDP-MED (Media Endpoint Discovery) to configure network devices such as IP phones automatically with QoS and VLAN Parameters.
Auto VLAN configuration for voice	The Switch should support Auto VLAN configuration for voice to automatically configure a VLAN for IP phones by using a standard RADIUS attribute and LLDP-MED
	<b>Power</b>
Power Supply	Shall have an Internal Power Supply with 100 - 240 VAC, 50/60 Hz Frequency Support. - Bidder Shall Clearly furnish the Maximum power consumption in Watts.
Redundant Power Supplies	The Switch shall have a provision for optional Redundant Power supply for redundancy and to supplement the PoE power of the PoE+ switches. - Bidder Shall Clearly furnish the information regarding the RPS model and Power Capacity for the proposed PoE+ Switch.
	<b>Environmental Features</b>
RoHS and WEEE Compliance	Shall Comply to RoHS and WEEE regulations
Energy saving Features	The Switch shall support Energy-efficient Ethernet (EEE) in accordance with IEEE 802.3az
Operating temperature	Shall support Operating temperature of 0°C to 45°C

Safety Standards	Shall Comply to UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1 Safety Standards
Emission standards	Shall Comply to VCCI Class A; CNS 13438; ICES-003 Issue 5 Class A; FCC CFR 47 Part 15, Class A; EN 55032: 2015/CISPR-32 Emission standards
Dimensions	Bidder Shall Furnish the Dimensions (height x W x D) of the unit proposed
Weight	Bidder Shall Furnish the depth of the unit proposed
Warranty	Minimum Five (3) Years On-Site Warranty from the OEM with next-business-day Replacement.
Support Subscription	Shall include the required support subscription for Firmware, Software upgrades/updates for a period of 5 Years Minimum.

### D.1.6 WIFI Access Points

Make & Model	<<To be Specified by the Bidder>>
Access Point Type	The proposed "Access Point" should be an enterprise class Indoor dual-band 802.11ac Wave 2 Access Point that supports 802.11ac and legacy 802.11a/b/g/n Clients
Wi-Fi Alliance Certification	The proposed "Access Point" should be Wi-Fi Alliance (WFA) certified for 802.11a/b/g/n/ac and 802.11ac with Wave 2 features from Day 1 for Seamless interoperability
Operating Mode & Wireless LAN Management	The proposed "Access Point" - Should work as standalone AP without a WLAN Controller, - should have Inbuilt Virtual controller mode to manage up to 96 other Access Points of the same Make in specific requirements with out Central WLAN Controller And Should also work with Central WLAN Controller
Dual Band/ Radio Support	The proposed "Access Point" shall have the capability to transmit on the 5 GHz and 2.4 GHz wireless bands (Dual Band Support) Simultaneously for increased flexibility and performance
Supported Aggregated Wireless Data Rate	The proposed "Access Point" shall deliver an aggregate (Combined Maximum Data Rate) data rate of 1Gbps or More with - up to 800Mbps minimum with 2SS/VHT80 clients in the 5GHz band and - up to 300Mbps minimum with 2SS/HT40 Clients in the 2.4GHz band
Supported Spatial Stream (SS) in 5GHZ Band	The proposed "Access Point" should support Multi-User MIMO (MU-MIMO) and 2 Spatial Stream (2SS) Minimum.
Supported Spatial Stream (SS) in 2.4GHZ Band	The proposed "Access Point" should support 2 Spatial Stream(2SS) for for Single User (SU) MIMO communications.
Client Load Balancing / Band Steering	The proposed "Access Point" shall support Band balancing to balance the client load on radios by distributing clients between the 2.4 GHz and 5 GHz radios
Max number of BSSIDs (per radio)	The proposed "Access Point" should support 8 or More BSSID per AP radio.
No. of Client Devices supported per Radio	The proposed "Access Point" should support Minimum 224 clients per Radio

Antenna Type and Count	The proposed "Access Point" should have minimum Two (2) Internal vertically polarized dual-band downtilt omni-directional antennas for 2x2 MIMO and are optimized for horizontal ceiling mounted orientation of the AP.  The transmit power of the Antennas shall be configurable in increments of 0.5 dBm
Antenna Gain (dBi)	Should have Antenna gain of the average (effective) pattern is 2.1dBi in 2.4GHz and 4.6dBi in 5GHz or better.
Maximum (conducted) transmit power (dBm)	Should have Maximum (aggregate, conducted total) transmit power - 2.4GHz band: +21dBm (18dBm per chain) - 5GHz band: +21dBm (18dBm per chain)
BLE Beacon for Location Services*	The proposed "Access Point" should have Internal /Built-in or External Bluetooth Low-Energy (BLE) beacon to support advance location based services for Mobile engagement solutions and Applications.
Transmit Beamforming	Access point should support industry standard IEEE 802.11ac transmit beamforming to improve signal quality for increased signal reliability and range and for assured compatibility with IEEE 802.11ac Devices.
RF Radio Management for performance optimization	The proposed Access Point shall have Radio Management technology that ensures that APs stay clear of all sources of RF interference to deliver reliable, high-performance WLANs.
RF interference avoidance/ Advanced Cellular Coexistence (ACC)	The proposed Access Point shall feature that Minimizes interference from 3G/4G cellular networks, distributed antenna systems and commercial small cell/femtocell equipment.
Spectrum Analysis / Spectrum Intelligence	The proposed "Access Point" should be capable of performing security scanning and serving clients on the same radio. It should be also capable of performing spectrum analysis and security scanning using same radio.  Shall be able to configure to provide part-time or dedicated air monitoring for spectrum and wireless intrusion protection
DFS Support	The proposed "Access Point" shall support Dynamic frequency selection (DFS) for Optimal utilization of the available RF spectrum
QoS for unified communications applications	Shall Support Quality of service for priority handling and policy enforcement for unified communication apps, including Skype for Business with encrypted videoconferencing, voice, chat and desktop sharing
Rogue detection and containment.	The proposed "Access Point" shall Support rogue detection, and containment
CDD/CSD support for Downlink RF performance	The proposed "Access Point" should have the CDD/CSD technology to improve downlink performance to all mobile devices.
Wireless Mesh network Capability	The proposed "Access Point" shall also support Secure enterprise wireless mesh connections
Modulation types supported	The proposed "Access Point" should support the following Industry Standard Modulation types - 802.11b: BPSK, QPSK, CCK - 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
Wireless Intrusion Prevention System (WIPS)	The proposed "Access Point" Must operate as a sensor for wireless IPS

	The proposed "Access Point" must be able to function both as a client-serving AP and as a monitor-only AP for Intrusion Prevention services
Network I/F	The proposed "Access Point" should have at least One (1) 10/100/1000BASE-T Ethernet RJ-45 Port with PoE Capability
Console Port	Access point should have console port.
Power Source	The proposed "Access Point" should have Power over Ethernet ( 802.3af/802.3at compliant PoE) capability with precedence for DC power over PoE When both power sources are available.  Bidder shall clearly furnish the "DC power" I/P rating.
Worst-case Max Power consumption	Maximum (worst-case) power consumption shall be less than or Equal to - 11W (PoE) or - 10W (DC)
Maximum power consumption in idle mode	Vendor shall furnish Maximum power consumption in idle mode
Restrictions from 802.3af PoE (without IPM)	Vendor shall clearly specify regarding the Restrictions from 802.3af PoE (without IPM)
Restrictions from 802.3at PoE (without IPM)	Vendor shall clearly specify regarding the Restrictions from 802.3at PoE (without IPM)
PoE Power Injector	Shall support industry standard "PoE Injector" from the same OEM for each of the Access Point.
Kensington lock slot.	AP should have Kensington lock slot.
Visual indicators	AP should have Visual indicators (multi-colour LEDs): for System and Radio status
Factory reset button	AP should have Reset, factory reset button
Safety Certifications	CB Scheme Safety, cTUVus
Plenum rating	AP should be UL2043 Plenum rating certified.
Operating Temperature	Shall operate in 0° C to +40° C (+32° F to +104° F) Temperature range - Humidity: 5% to 93% non-condensing
Enclosure volume / Dimensions	Vendor Shall furnish the information regarding Enclosure Dimensions
Weight	Vendor Shall furnish the information regarding Enclosure
Warranty / Support	Shall include Five Year warranty and Support subscription for OS/Firmware updates directly from OEM.
Datasheet	Datasheet/ Product Boucher shall be attached for reference
Mounting kit	Shall include Ceiling Mounting Kit from the Same OEM with each of the AP.
OEM Part Code	Vendor shall Submit OEM/ ISV Part coded BOM for the offered Configuration of the Switch
Gartner Magic Quadrant.	All active components like Wireless AP, switches & Transceivers should be from same OEM and the OEM should be listed in Leaders Quadrant Of latest Gartner Magic quadrant.

**D.1.7 Firewall**

Sl. No	Specification
1	The Firewall must be appliance based supporting NAT/Route & Bridge mode. There should be not be any user/IP/host based license for the Firewall
2	The Firewall OEM should be ICSA Labs certified for Firewall and should be Common Criteria EAL 4 certified. Should be IPv6 Phase II ready.
3	The Firewall OEM should be in leader in latest Gartner's Magic Quadrant for Network Firewall.
4	Should support User-Group based Authentication (Identity based Firewalling) & Scheduling
5	Should Support Virtualization (i.e, Virtual Systems / Virtual Domains). Should be having 10 or more virtual system license from day one
6	Should have 10 or more gigabit RJ45 interfaces with auto sensing 10/100/1000 capability
7	Must support at least 700,000 or more concurrent connections and 30,000 New connections per second
8	Should have Firewall throughputs of minimum 5 Gbps or more
9	IPsec VPN throughput should be 2 Gbps or more
10	NGFW throughput should be 1 Gbps or more
11	Threat Protection Throughput of 500 Mbps or more
12	Should support Static routing, Dynamic Routing (RIP, OSPF,BGP) and Policy Based Routing for IPv4 and IPv6
13	Should support minimum 200 IPsec Site-to-Site and 500 no of IPsec Site-to-Client VPN tunnels.
14	Should have integrated SSL VPN with no user license restriction. If license is required add license for 100 concurrent SSL VPN users
15	Should support Active-Active as well as Active- Passive redundancy.
16	The HA Architecture should have the ability for Device Failure Detection and Notification as well as Link Status Monitor
17	Should have a built-in Signature and Anomaly based IPS engine on the same unit
18	Should have protection for 4000+ IPS signatures
19	Able to prevent denial of service and distributed Denial of Service attacks.
20	Supports user-defined signatures (i.e., Custom Signatures) with Regular Expressions.
21	IPS should also include Botnet filtering and detecting and preventing Botnet command and control traffic
22	Should have Application control feature for 2500 or more applications
23	Should control popular IM/P2P applications regardless of port/protocol
24	The appliance should facilitate embedded anti virus support
25	Gateway AV should be supported for real-time detection of viruses and malicious code for HTTP,HTTPS, FTP, SMTP, SMTPS, POP3 and IMAP, NNTP and IM protocols
26	Should have configurable policy options. Possible to select traffic to scan for viruses
27	Should have ability of IPS Checking, application control and Antivirus scanning for IPv6 traffic and for encrypted traffic like HTTPS
28	The appliance should facilitate embedded Web Content Filtering feature
29	URL database should have 250 million or more URLs under more than 70 categories



30	Should support Gateway Data Loss Prevention (DLP) feature for popular protocols like HTTP, HTTPS, FTP, POP3, IMAP, SMTP, POP3S, IMAPS, SMTPS and IM( AIM, ICQ, Yahoo, MSN) with Document Fingerprinting or provide an equivalent external DLP appliance solution which can be integrated with firewall
31	Firewall should support logging to multiple syslog servers.

### D.1.8.: Copier

Specification	Description
Make & Model	Specify
Print speed	25 ppm (pages per minute) or higher
First output speed	8.5 seconds or higher
Print resolution	Up to 1200 x 1200 dpi
Processor	1 GHz (dual core) or Higher
Memory	Standard: 1.5 Gb or Higher
Duty Cycle (Monthly)	80,000 Pages or Higher
Control Panel Display	Colour LCD touch screen with 7" or above
Copier Source	Flatbed & ADF
Toner	Should be supplied with Full Toner with Minimum yield 30000 pages.
Power Source	220-240 V, 50/60 Hz
DADF (Duplex Automatic Document Feeder)	
Paper Handling	
Recommended paper supported	A3, A4, & Legal Sizes (A3 to A5) The printer should support all makes of locally available paper (A4 & Legal).
Paper Input Capacity	2 Nos. (1x250. 1x550) or more
Paper Weight	60 to 220 g/m
Copier	
Copy speed	Black (A4, normal) Up to 25 cpm
First copy out	Black (A4) As fast as 6.2 sec
	Black (A4, sleep) As fast as 30 sec
Resolution	600 x 600 dpi
Zoom	From 25% to 400%
Fax (Optional)	
Resolution	Up to 600 x 600 dpi
Modem Speed	Maximum: 33.6 Kbps
Scanner	
Scanning Speed	Up to 45 ipm (b&w), up to 45 ipm (color)
Resolution	Up to 600 x 600 dpi
Original Size	ADF 297 x 437 mm Flatbed 297 x 437 mm
File formats	PDF, JPG, TIFF, XPS, Compact PDF, PDF/A, PDF Encryption, Digital Signature in PDF
Bundled Drivers	Network TWAIN Driver
Scan to Email	SMTP (Mail Server) Gateway and TCP/IP, POP, IMAP4
Scan to Folder	SMB, FTP

Printer	
Printer Languages	Standard: PCL6, PS3, PDF (v 1.7)
Print Resolution	Maximum 1,200 x 1,200 dpi
Interface(s)	2 Hi-Speed USB 2.0 Host; 1 Hi-Speed USB 2.0 Device; 1 Gigabit Ethernet 10/100/1000T network
Network Protocols	TCP/IP(IP v4,IP v6)
Convenient Duplex Printing	Back to Back Printing
Warranty	One year Comprehensive on-site warranty (including Spares- Parts / Service / Labour)
Windows® environments	Windows Vista/7/8/8.1/10, Windows Server/2008/2008 R2/2012/2012 R2

### D.1.9.: MFP Printer

Specification	Description
<b>Laser Printer MFP</b>	
Print Speed	Up to 26 ppm, letter, Up to 25 ppm, A4
Document Delivery Speed	First page out: as fast as 8.5 sec seconds from Power save mode (letter/A4)
Print Resolution	Up to 600 x 600 x 2 dpi;
<b>Processor</b>	600 Mhz or Higher
<b>Memory</b>	256 MB
Print Language	PCL5, PCL6 and Post Script
Duty cycle	Up to 8,000 pages
<b>Copy</b>	Yes
Copy Resolution	600 x 600 dpi;
Copy Speed	Black Up to 25 cpm
Maximum No. of Copies	Up to 99 copies
<b>Scan</b>	Yes
Colour Scanning	Yes
Scan Type	Flatbed, ADF
Scan Resolution	Up to 1200 dpi
Scan Speed	Up to 14 ppm (b&w), up to 5 ppm (colour)
Scan Features	Scan to USB, Scan to e-mail, Scan to network folders
<b>Fax</b>	
Fax Resolution	Up to 300 x 300 dpi
Fax transmission speed	33.6 kbps
<b>Paper</b>	
Input	250-sheet tray 2, 10 Sheets MP Tray,35-sheet Automatic Document Feeder(ADF)
Output	100-sheet output bin
Two-sided Printing	Automatic (standard)
Sizes	Tray 1 (priority feed tray): Minimum: 76 x 127 mm; Maximum: 216 x 356 mm; Tray 2 (main tray): Minimum: 76 x 187 mm; Maximum: 216 x 356 mm
Cartridge Technology	Integrated drum and toner
Interfaces	1 Hi-Speed USB 2.0 port; 1 10/100 Ethernet network port; Built in Wireless, telephone port
Warranty	One year Comprehensive on-site warranty (including Spares- Parts / Service / Labour)

**D.1.10.: UPS**

Make	
Model	
Technology	True online double conversion technology UPS system with IGBT based rectifier / inverter
Capacity	10 KVA / 8 KW
<b>Input Parameters:</b>	
Voltage	230 VAC, 1 Phase 3 Wire
Voltage Range	175 V to 300 VAC at full load, 120 to 300 VAC at 0 to 50 % load
Frequency	50 Hz ( 46 to 54 Hz )
Power Factor at rated load	0.99 at full load
Current Harmonic Distortion	Less than 10% at full load and nominal input voltage
OVCD	Required (built in)
Isolation Transformer	Required (built in) at input side
<b>Output Parameters:</b>	
Voltage	220/230/240 VAC +/- 1%, 1 Phase
Frequency	50 Hz +/- 0.25 Hz (in Battery Mode) +/- 5% (in Sync)
THD v	< 3 % for Linear Load ; < 5 % for Non Linear Load
Overload rating	105 to 110 % for 3 min ; 111 to 130 % for 30 sec
Output waveform	Pure sinewave
Crest Factor	3 : 1
Power Factor	0.8 PF
Over all Efficiency	>= 90 %
Frequency Slew Rate	1 Hz / Sec
<b>Battery Parameters:</b>	
Type	Sealed Maintenance Free Batteries
Make	Exide / Amara raja
End cell voltage	10.5 V per Battery
DC Voltage	216 VDC
Backup Time	2 Hrs
VAH	min 25920
Battery Rack & Connectors	Powder coated battery rack / stand to be provided
Charger	Constant Current / Float Charging with Temperature Compensated
Charging Capacity	10 % of the Battery AH Capacity
Transfer time	0 ms
<b>Other Features:</b>	
Static Bypass	inbuilt
Transfer time	< 4 ms in Sync Mode
Bypass parameter configurable via front panel	Required
<b>Other Features:</b>	
LCD Display	Input Voltage, Frequency
	Output Voltage, Frequency, Load level
	Battery Voltage, Level in %, Remaining backup time
	Fault Information

	MIMIC Information
LED Indication	Bypass, Line, Battery and Fault
Protection	Input High / Low, Over Load, Short Circuit, Over Temperature, Battery Over Charge, Surge Protection, UPS Input MCB
Audible Alarm	Battery Mode, Low Battery, Fault, Over Load, Bypass Mode
Cold Start	Required
Auto Restart	Required
Intelligent Fan Operation	Required
Generator Compatibility	Required
Features should be available	CVCF, 200 / 208 VAC Output
Connections	Input & Output : Terminal
EPO	Required
Communication Port	RS 232, USB
SNMP	Provision should be available
Noise Level	< 58 dB at 1 meter distance
Operating Temperature	0 to 40 Deg C
Humidity	upto 95 %
Altitude	< 1000 meters
Warranty	2 Years onsite
Test Report / Certificate	CE ( Safety : IEC / EN 62040-1 & EMI / EMC : IEC / EN 62040-2 )
	BIS : IS 16242 Part 1 : 2014 ( Manufacturing address of offered model should be in India - Refer Make in India policy )
	PeP Certification
	Performance test report from any Central Gov Lab / NABL Approved Lab

### D 1.11. Site Preparation

The Site Preparation includes Raised Antistatic Flooring with required electrical and LAN Cabling. Cooling System. Required Racks or any other item required to complete the setup. Bidders to Study the requirement and quote the same along with the detailed BOQ. Specifications of the Rack:

SL. No	Description
1	Racks manufactured out of steel sheet punched, formed, welded and Powder coated
2	Rack should be from ISO 9001:2008 Certified Company & UL Listed
3	Standard for Racks configuration will be CKD with side panel and vented top cover
4	Rack should have Front Convex Perforated Door and Dual Perforated door at Rear.
5	Rack should have provision to mount racks on Floor
6	Rack should be 42U (1U = 44.45 mm) in Height.
7	It should be 600MM Wide 1200MM Deep and Overall height 2095 MM.
8	Rack should Conform to DIN 41494 or Equivalent EIA /ISO / EN/CEA Standard
9	Rack should have Adjustable mounting depth,

10	Rack should have 4 No Adjustable, 19" verticals with Punched 10mm Square Hole and Universal 12.7mm-15.875mm-15.875mm alternating hole pattern offers greater mounting flexibility, maximizes usable mounting space.
11	Rack should have Numbered U positions,
12	Rack should have 100% assured compatibility with all equipment's conforming to DIN 41494 (General industrial standard for equipment)
13	Powder coated finish with seven Tanks pre-treatment process meeting IS
14	Rack should have Proper Grounding & Bonding
15	Rack should have 4 Fan module Mount Provision on top Cover
16	2 No's of 1Ph, 230V, 32A, Zero U standard Vertical rack mount power distribution unit with 20 X IEC C13 Sockets & 4X IEC C19 , (Inlet Plug Not Installed, Recommended IEC30932A 2P +E), 16A MCB X 2 Circuits- PDU Rating 7.3KVA
17	Shelf to be provided
18	sliding tray to be provided for keeping Keyboard
19	Rack should have provision for cable entry Exit from Both top & Bottom.
20	Rack should have 1 Packet of mounting hardware, Pack of 20.
21	Rack Should carry 3 years warranty

### D 1.12 Centralized Dashboard with MIS

The solution must Facilitate Centralized Gathering of all the parameters from the Field. The solution should be capable of, Integrated Data Management, Data Quality Assessment, Analytics and Visualization Workbench, generating dynamic reports based on requirements of TSREDCO, Bulk SMS/ Bulk /mail reporting facility, Inherent Asset Management

1. Bidder shall provide Customizable CCMS and GPSLNP Dashboard for state Level and the same has to be linked with EESL SLNP Portal.
2. It shall have a centralized & dedicated web-server setup to ensure 100% guarantee of the data transmission and data storage for the contract period.
3. Centralized server shall receive and record all data from the streetlight controllers/ CCMS for the contract period (7 years) at any point of time.
4. Server should be capable of handling minimum 100000 number CCMS units.
5. Bidder Should integrate all the lights to the Dashboard. The number of lights may vary from 8 lakhs to 15 lakhs.
6. TSREDCO shall be able to monitor all the CCMS systems from this central server/web application software
7. The solution shall acquire and collate data from different suppliers of CCMS supplier from all GPs/DPOs implemented at the GP's of the Telangana State.
8. Should enable data collection from different CCMS units installed at various locations in the GP (i.e. individual CCMS data) and display to enable an easy integration. The Data Collection should be from the CCMS vendor cloud or individual CCMS units whichever is feasible.

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9. GIS Mapping should be done covering all streetlights and switching points and the details of each lamp shall be viewable in the web application software through a Google-map interface. GIS mapping of each pole will be provided by Individual CCMS supplier/LED street light vendor.
  10. Different user authorization levels should be enabled and the central server should be capable of handling high traffic.
  11. The minimum interval for the update of data should be one minute or based on the setting on the CCMS units whichever is higher.
  12. It should monitor electrical data (V,I, KW,PF) all the following from the CCMS unit.
  13. The Proposed Solution should include all the software Licenses and no additional cost will be paid for the same by TSREDCO
  14. Further system is able to indicate various faults
    - Number of operational lights
    - Number of non-operational lights
    - Failure of contactor
    - Status of the incoming supply (power failure)
    - High /low voltage
    - Overload on the phases

### **D 1.13 Command & Control Centre**

The agency shall provide the following services through the Command Control Centre:

1. Lodging of complaints from customers related to non-glowing LED streetlights and generating complaint number.
2. The details of complaints shall consist of Pole no., wattage, Ward no., location etc.
3. Entry of the LED Installation details by capturing the Latitude & Longitude of the Streetlight & CCMS panel.
4. Providing the information of the complaints received to the Vendor/ Contractor agency or any other EESL authorized agency electronically via email within 3 working hour from the time of receiving complaint. Emails shall be copied to EESL or its designated agency(ies).
5. To follow-up with the Vendor/ Contractor till the complaints are sorted out during stipulated time period of 1 working day or any such time as decided by EESL.
6. After the complaint resolutions, taking feedback from the customers, if required and closing the complaint number.
7. Vendor/ Contractor to electronically submit the fortnightly (15 days), the scan copy of the service call report(s) to Call Center Agency.
8. Providing the above information's related to complaint closure/ service call report(s) to EESL or any of its authorized agencies.
9. Miscellaneous queries related to LED streetlight project as a whole or general queries

regarding the Project.

10. Bidder has to supply one Agent License at each District Head Quarters (total 32 districts) with local language by 24/7 and also 4 Agents at Commissioner of PR&RD.

11. Other Features include:

- A Cloud-based Contact Center Software Solution that functions as an Inbound and Outbound Call Center, operating out of a web browser
- A cloud-based Contact Centre Software Solution that functions as an Inbound and Outbound Call Centre, functioning out of a web browser
- A fully featured Browser based Plug and Play Contact Centre.
- Should be Mobile Ready
- CRM
- Quality Control
- Live monitoring and analytics
- Call Recording
- Multi Level IVR

#### D 1.14 Displays at PR & RD

Specification	Description
<b>Large Format Display</b>	
<b>Panel</b>	
Diagonal Size	75"
Resolution	3,840 x 2,160
Brightness(Typ.)	350 Cd/m2 or more
Native contrast Ratio(Typ.)	3000:1 or more
Viewing Angle(H/V)	178:178
Response Time(G-to-G)	8ms or less
Operation Hour	16/7
Haze	2% or more
<b>Sound</b>	Built in Speaker (10W x 2)
<b>Input Connectivity</b>	
HDMI 2.0	2 ports or More
DVI-D	1 Port
USB	2 Ports or More
AUDIO	Stereo Mini Jack In /out
Screen Mirroring	Built in required
Web Browser	Built in required
External control	RS232C(in/out) thru stereo jack, RJ45
Power Supply	AC 100~240V 50/60Hz
<b>Power Consumption</b>	
Power Consumption	150 or less
Sleep mode	0.5
Operating Temperature	0°C~ 40°C
Humidity	10~80%
<b>Special</b>	

Media Player	Embedded
Built in Storage	8GB or more
Certifications	BIS, UL, EMC Class B
Accessories	Wall mounting kit, Power Cord, Remote With Battery/s
Warranty	3 Years Onsite

## Section E – Bidding procedure

### E.1. Bidding Procedure:

Bids for entire items of the schedule Offers should be made in three parts namely, “Pre-qualification bid”, “Technical bid” and “Financial bid (on e-procurement website only)” and in the format given in bid document on e-Procurement website.

- 1.) On line EMD Payment / EMD copy should be uploaded on e-procurement website.
- 2.) Tenders will be accepted only from those who have purchased the Bid Document.
- 3.) All correspondence should be made with TSREDCO contact person.

### E.2. Pre-qualification bid:

It shall include the following information about the firm and/or its proposal.

1. General information on the bidder’s company in Form P1
2. Turn over details of the Firm in Form P2
3. Sales Turn over details of the products offered in Form P3
4. List of major customers in support of turnover in Form P4
5. Details of service centres in Telangana in Form P5
6. Manufacturer’s authorization(Annexure-III) to participate in bidding process apart from such other documents like authorization certificate for dealing in the products for which bid is submitted.( However this will not apply to Manufacturers)
7. Declaration of Clean Track record -Form P6.
8. Any other documents as per RFP
9. ROC, GST and PAN Copies
10. EMD
11. Tender documents fee Receipt
12. Bid Letter Form
13. Document proofs as per Pre Qualification Criteria of the tender document

### E.3. Technical Bid:

1. Deviation(s) to technical specifications, if any in Form T1
2. Check list in Form T2
3. Detailed technical documentation, reference to various industry standards to which the products/services included in vendor’s offer conform, and literature concerning the proposed solution, Certificates like ISO, Microsoft, ROHS, TCO, FCC etc. in Form T3 (Bidder’s format)
4. Other information, if any required in the bid document in Form T4 (Bidder’s format).



## 5. Un-Priced Form F1

### **E.4. Financial bid:**

The financial bid should provide cost calculations corresponding to unit price of each item of the schedules in Form F1(on e-procurement website only) inclusive of all taxes.

## **Section F - Bid Evaluation Procedure**

Bids would be evaluated for entire schedule of the tender. Bidders should offer prices for all the items of Schedules and for the full quantity of an item of the Schedule failing which such bid will not be considered. Technical bid documentation should be in the prescribed format. In case the schedule or procedure of tender processing is revised, the same shall be communicated by hosting the same in e-procurement and TSREDCO websites as the case may be to all the vendors who have paid the tender document fee.

For Arriving at the lowest Bid Only the Total cost (One year amount for the quarterly line items will be calculated) will be considered for all the line items specified in the tender document.

### **F.1. Opening of bids:**

Immediately after the closing time, the TSREDCO shall open the pre-qualification bid', and list them for further evaluation. The Technical bids will be opened on e-procurement website . After evaluation of technical bids, the financial bids of only those bidders who qualify in technical evaluation will be opened.

#### **F.1.1 EMD Validity:**

The EMD will be scrutinized first for the amount and validity period. The bids submitted with required EMD amount and validity only be considered for the evaluation. The bids submitted with insufficient EMD amount/validity will be treated as disqualified bids and those bids will not be considered for further evaluation.

#### **F.2. Pre-qualification bid documentation:**

The Pre-qualification bid documentation shall be evaluated in two sub-steps. Firstly, the documentation furnished by the vendor shall be examined prima facie to see if the technical skill base and financial capacity and other vendor attributes claimed therein are consistent with the needs of this project. In the second step, TSREDCO may ask vendor(s) for additional information, visit to vendors site and/or arrange discussions with their professional, technical faculties to verify claims made in Pre-qualification bid documentation.

#### **F.3. Technical bid documentation:**

Technical bid documentation shall be evaluated in two sub-steps. Firstly, the documentation furnished by the vendor shall be examined prima facie to see if the product /services offered,

technical skill base and financial capacity and other vendor attributes claimed therein are consistent with the needs of this project. In the second step, TSREDCO may ask vendor(s) for additional information, visit to vendors site and/or arrange discussions with their professional, technical faculties to verify claims made in technical bid documentation.

**F.4. Award Criterion:**

Final choice of firm to execute the project shall be made on the basis of conformity to technical specifications, appropriateness of the product offered, capability of bidder to execute and service the project and appropriateness of financial offer from the point of view of cost effectiveness over the entire maintenance period for the product/services.

**Section G - General instructions to bidders**

**G.1. Definitions:**

1. Tender call or invitation for bids means the detailed notification seeking a set of solution(s), service(s), materials or any combination of them.
2. Specification means the functional and technical specifications or statement of work, as the case may be.
3. Firm/Agency means a company, authority, co-operative or any other organization incorporated under appropriate statute as is applicable in the country of incorporation.
4. Bidder/Supplier means any firm offering the solution(s), service(s) and/or materials required in the tender call. The word vendor when used in the pre award period shall be synonymous with bidder and when used after award of the contract shall mean the successful bidder with whom TSREDCO signs the contract for rendering of goods and services.
5. Pre-qualification and Technical bid means that part of the offer that provides information to facilitate assessment by TSREDCO, professional, technical and financial standing of the bidder, conformity to specifications etc.
6. Financial Bid means that part of the offer, that provides price schedule, total project costs etc.
7. Three part Bid means the pre-qualification bid, technical and financial bids submitted in Physical to TSREDCO.
8. Two part Bid means the Technical bid and financial bids submitted in physical to TSREDCO and their evaluation is sequential.
9. Composite bid means a bid in which the technical and financial parts are combined into one but their evaluation is sequential.
10. Goods and services mean the solution(s), service(s), materials or a combination of them in the context of the tender call and specifications.
11. The word goods when used singly shall mean the hardware, firmware component of the goods and services.
12. Maintenance period means period mentioned in bid document for maintaining the systems beyond warranty period.

**G.2 General Eligibility**

1. This invitation for bids is open to all firms both from within and outside India, who are eligible to do business in India under relevant Indian laws as is in force at the time of bidding subject to meeting the pre qualification criterion.
2. Bidders marked/considered by TSREDCO to be ineligible to participate for non-satisfactory past performance, corrupt, fraudulent or any other unethical business practices shall not be eligible.
3. Bidder is blacklisted by any Central or State Govt. / Quasi –Govt. Departments or organizations as on bid calling date for non-satisfactory past performance, corrupt, fraudulent or any other unethical business practices shall not be eligible.
4. Breach of general or specific instructions for bidding, general and special conditions of contract with TSREDCO or any of its user organizations may make a firm ineligible to participate in bidding process.

### **G.3 Bid forms**

1. Wherever a specific form is prescribed in the bid document, the bidder shall use the form to provide relevant information. If the form does not provide space for any required information, space at the end of the form or additional sheets shall be used to convey the said information.
2. For all other cases the bidder shall design a form to hold the required information.

### **G.4 Cost of bidding**

1. The bidder shall bear all costs associated with the preparation and submission of its bid, and TSREDCO will in no case be responsible for those costs, regardless of the conduct or outcome of the bidding process.
2. Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or to submit a bid not substantially responsive to the bidding documents in every respect will be at the bidder's risk and may result in the rejection of its bid.

### **G.5 Clarification of bidding documents**

1. A prospective vendor requiring any clarification of the bidding documents may notify TSREDCO contact person. Written copies / e-mail of the TSREDCO response (including an explanation of the query but without identifying the source of inquiry) will be sent to all prospective bidders that have received the bidding documents.
2. The concerned person will respond to any request for clarification of bidding documents which it receives no later than bid clarification date mentioned in the notice prior to deadline for submission of bids prescribed in the tender notice. No clarification from any bidder shall be entertained after the close of date and time for seeking clarification mentioned in tender call notice. It is further clarified that TSREDCO shall not entertain any correspondence regarding delay or non-receipt of clarification from TSREDCO .

### **G.6 Amendment of bidding documents**

1. At any time prior to the deadline for submission of bids, TSREDCO , for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, may modify the bidding documents by amendment.

2. All prospective bidders those have received the bidding documents will be notified of the amendment and such modification will be binding on all bidders.
3. In order to allow prospective bidders reasonable time in which to take the amendment into account in preparing their bids, the TSREDCO , at its discretion, may extend the deadline for the submission of bids.

#### **G.7 Period of validity of bids**

1. Bids should be valid for a period of 150 days from date of opening of the financial Bid
2. Bids shall remain valid for the days or duration specified in the bid document, after the date of bid opening prescribed by TSREDCO . A bid valid for a shorter period shall be rejected as non-responsive.
3. In exceptional circumstances, the TSREDCO may solicit the bidders' consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The bid security shall also be suitably extended. A bidder granting the request will not be permitted to modify its bid.

#### **G.8 Submission of bids**

1. The bidders shall submit all the bids i.e., Pre-Qualification, Technical and Financial Bids on e-Procurement website only.

#### **G.9 Deadline for submission of bids**

1. Bids must be submitted on e-procurement website not later than the bid submission date and time specified in the tender call notice.
2. The TSREDCO may, at its discretion, extend this deadline for the submission of bids by amending the tender call, in which case all rights and obligations of the TSREDCO and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

#### **G.9 Modification and withdrawal of bids**

1. No bid can be modified subsequent to the deadline for submission of bids.
2. No bid can be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity. Withdrawal of a bid during this interval will result in the forfeiture of its bid security (EMD).

#### **G.10 General Business information:**

The bidder shall furnish general business information to facilitate assessment of its professional, technical and commercial capacity and reputation.

#### **G.11 Bid security i.e. earnest money deposit (EMD)**

1. The bidder shall furnish, as part of its bid, a bid security for the amount specified in the tender call notice.

2. The bid security is required by TSREDCO to:
  - a. Assure bidder's continued interest till contract and
  - b. Conduct in accordance with bid conditions during the bid evaluation process.
3. The bid security shall be in Indian rupees and shall be a Demand Draft/ Banker Cheque/ BG. Unsuccessful bidder's bid security will be discharged or returned as promptly as possible but not later than thirty (30) days after the expiration of the period of bid validity prescribed by TSREDCO .
4. Unsuccessful bidder's bid security will be discharged or returned as promptly as possible but not later than thirty (30) days after the expiration of the period of bid validity prescribed by TSREDCO .
5. The successful bidder's bid security will be discharged upon the bidder signing the contract, and furnishing the performance security,
6. The bid security may be forfeited:
  - a. if a bidder withdraws its bid during the period of bid validity or quoted conditional bids deviating from the tender terms and conditions.
  - b. in the case of a successful bidder, if the bidder fails:
    - i. to sign the contract in time; or
    - ii. to furnish performance security.

#### **G.12 Preparation of Pre-qualification bid**

It shall contain of the following parts:

- 1.General business information, 2. Turnover details, 3. Major clients' details, 4.Service centre details, 5. Bid security (EMD), 6. Any other relevant information\_as per the tender document

#### **G.13 Preparation of technical bid**

It shall consist of the following parts.

1. Technical documentation – confirmation to technical specifications etc.
2. Plan for in lab proof of concept, if required in tender call.
3. Plan for field demonstration if required in tender call
4. Detailed technical documentation, reference to various industry standards to which the goods and services included in vendor's offer conform, and other literature concerning the proposed solution. In particular, the vendors should identify areas in which their solution conforms to open standards and areas that are proprietary in nature. Justification about proprietary components in terms of functionality and performance should be given.
5. A statement about appropriateness of the product design and solution plan for operating conditions in India, including physical, infrastructure and human factors.
6. In the case of a bidder offering to supply goods under the contract which the bidder did not manufacture or otherwise produce, the bidder has been duly authorized by the good's manufacturer or producer to supply the goods in India.
7. A statement of the serviceable life of goods and services offered by the firm. Available sources of maintenance and technical support during the serviceable life. Available sources of spare parts, special tools, etc. Necessary for the proper and continuing functioning of the goods and services, for the serviceable life.

## **G.16 Preparation of financial bid**

### **1. Overview of financial bid**

The financial bid should provide cost calculations corresponding to each component of the project.

### **2. Bid prices**

- a. The bidder shall indicate the unit prices (where applicable) and the total bid price of the goods/services it proposes to supply under the contract.
- b. The bidder shall indicate Basic Prices and taxes, duties etc. (if required) in the form prescribed.
- c. Bidder's separation of price components will be solely for the purpose of facilitating the comparison of bids by TSREDCO and will not in any way limit the purchaser's right to contract on any of the terms offered.
- d. Prices quoted by the bidder shall be fixed during the bidder's performance of the contract and not subject to variation on any account unless otherwise specified in the tender call. A bid submitted with an adjustable price quotation will be treated as nonresponsive and will be rejected.

### **3. Bid currency:**

Prices shall be quoted in Indian rupees.

## **Section H - Standard procedure for opening and evaluation of bids**

### **H.1. Outline of bid evaluation procedure**

1. The bid opening and evaluation process will be sequential in nature. Means that bidder must qualify a particular stage to be eligible for next stage. Immediately after the closing time, the TSREDCO contact person shall open the Pre-qualification bids and list them for further evaluation. Thereafter, Technical bids of qualified bidders will be opened. Finally financial bids of those bidders will be opened who are short listed in technical evaluation.
2. In case of composite bid - technical and financial bids combined together, first technical evaluation will be done followed by financial evaluation of only those bids, which have qualified in technical evaluation.
3. Any participating vendor may depute a representative to witness these processes.
4. The standard procedure, described here will stand appropriately modified, in view of special procedures of bid evaluation as mentioned in tender call or elsewhere in this bid document or TSREDCO may deviate from these in specific circumstances if it feels that such deviation are unavoidable, or will improve speed of processing and consequent project execution.

### **H.2. General Guidelines for bid opening and evaluation:**

Bids will be in three parts (pre-qualification, technical and financial) or two parts (Technical and financial) or composite bid (technical and financial bid together) as indicated in the tender call. For three part bids there will be three bid opening events, in two part bid there will be two bid opening events and in case of composite bids there will be only one bid

opening event. Following guidelines will generally be followed by TSREDCO officers at each such event. However TSREDCO may deviate from these in specific circumstances if it feels that such deviation are unavoidable, or will improve speed of processing and consequent project execution.

#### 1. Opening of bids

Bids will be opened on the e-Procurement web site at the scheduled time & date.

- a) The bidders names, bid modifications or withdrawals, discounts, and the presence or absence of requisite bid security and such other details as the TSREDCO officer at his/her discretion, may consider appropriate, will be announced at the opening. No bid shall be rejected at bid opening, except for late bids, which shall be returned unopened, in case of manual bidding.
- b) Bids that are not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances. Withdrawn bids will be returned unopened to the bidders, in case of manual bidding.

#### 2. Preliminary examination of Bids

1. Preliminary scrutiny will be made to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.
2. Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If the vendor does not accept the correction of the errors, its bid will be rejected and its bid security may be forfeited. If there is a discrepancy between words and figures, the amount in words will prevail.
3. TSREDCO may waive any minor informality, nonconformity or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any bidder.
4. Prior to the detailed evaluation, TSREDCO will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these clauses, a substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations.
5. If a bid is not substantially responsive, it will be rejected by the TSREDCO and may not subsequently be made responsive by the bidder by correction of the nonconformity.

#### 3. Clarification of bids

During evaluation of the bids, TSREDCO may, at its discretion, ask the bidder for clarification of its bid.

#### 4. Evaluation of Pre - qualification bids

Pre - qualification bid documentation shall be evaluated in two sub-steps.

- a. Firstly, the documentation furnished by the vendor will be examined prima facie to see if the technical skill base and financial capacity and other vendor attributes claimed therein are consistent with the needs of this project.

- b. In the second step, TSREDCO may ask vendor(s) for additional information, visit to vendors site and/or arrange discussions with their professional, technical faculties to verify claims made in technical bid documentation.

#### 5. Evaluation of technical bids.

Technical bid documentation shall be evaluated in two sub-steps.

- a. Firstly, the documentation furnished by the vendor will be examined prima facie to see if the offer made, technical skill base and financial capacity and other vendor attributes claimed therein are consistent with the needs of this project.
- b. In the second step, TSREDCO may ask vendor(s) for additional information, visit to vendors site and/or arrange discussions with their professional, technical faculties to verify claims made in technical bid documentation.

#### 6. In lab proof of concept

The in lab proof of concept on demand may be organized either in TSREDCO or in the vendor's lab by mutual discussion. In case it is organized in TSREDCO lab, TSREDCO would make available generic hardware for this purpose. Application specific hardware and software will have to be brought in by the vendor.

#### 7. Field demonstration

TSREDCO will identify a part or segment of the proposed project site. The concerned bidder, on demand, should be able to demonstrate functional requirements as described in the specifications.

#### 8. Evaluation of financial bids

Financial bids of those vendors who satisfy all phases of the pre-qualification and technical bid and corresponding to chosen technical bid choices will only be opened. All other financial bids will be ignored. TSREDCO will assess the nature of financial offers and may pursue any or all of the options mentioned under financial bid TSREDCO may at its discretion discuss with vendor(s) available at this stage to clarify contents of financial offer.

#### 9. Evaluation and comparison of financial bids

1. Evaluation of financial bids will exclude and not take into account any offer not asked for or not relevant to the present requirements of user.
2. Evaluation of financial bid will take into account, in addition to the basic bid price, one or more of the following factors
  - a.) The projected costs for the entire contract period;
  - b.) Past track record of bidder in supply/ services and
  - c.) Any other specific criteria indicated in the tender call and/or in the specifications.

### **H.3 Performance and productivity of the equipment**

Bidders shall state the guaranteed performance or efficiency in response to the specifications.



#### **H.4 Contacting TSREDCO**

Bidder shall not approach TSREDCO officers outside of office hours and / or outside TSREDCO office premises, from the time of the tender call notice to the time the contract is awarded.

1. Any effort by a bidder to influence TSREDCO officers in the decisions on bid evaluation, bid comparison or contract award may result in rejection of the bidder's offer and bidder may also be marked as ineligible for future bids. If the bidder wishes to bring additional information to the notice of the TSREDCO , it should do so in writing.

#### **H.5 TSREDCO 'right to vary quantities at time of award**

TSREDCO reserves the right at the time of award to increase or decrease the quantity, as indicated in tender call, from the quantity of goods and services originally specified in the specification without any change in unit price or other terms and conditions.

#### **H.6 TSREDCO ' right to accept any bid and to reject any or all bids.**

TSREDCO reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected bidder(s) or any obligation to inform the affected bidder(s) of the grounds for such decision.

#### **H.7 Notification of award**

- a. Prior to expiration of the period of bid validity, TSREDCO will notify the successful bidder in writing, that its bid has been accepted.
- b. Upon the successful bidder's furnishing of performance security, TSREDCO will promptly notify each unsuccessful bidder and will discharge its bid security.

#### **H.8 Signing of contract**

- a. At the same time as the TSREDCO notifies the successful bidder that its bid has been accepted, the TSREDCO will send the bidder the Contract Form provided in the bidding documents, incorporating all agreements between the parties.
- b. On receipt of the Contract Form, the successful bidder shall sign and date the contract and return it to the TSREDCO .

#### **H.9. Performance security**

- a. On receipt of notification of award from the TSREDCO , the successful bidder shall furnish the performance security in accordance with the conditions of contract, in the performance security form provided in the bidding documents or in another form acceptable to the TSREDCO .
- b. Failure of the successful bidder to sign the contract, proposed in this document and as may be modified, elaborated or amended through the award letter, shall constitute sufficient grounds for the annulment of the award and forfeiture of the

bid security, in which event the TSREDCO may make the award to another bidder or call for new bids.

**H.10. Corrupt, fraudulent and unethical practices**

- a. "Corrupt practice" means the offering, giving, receiving or soliciting of any thing of value to influence the action of a public official in the process of contract execution and
- b. "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to detriment of the purchaser, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Purchaser of the benefits of free and open competition:
- c. "Unethical practice" means any activity on the part of bidder, which try to circumvent tender process in any way. Unsolicited offering of discounts, reduction in financial bid amount, upward revision of quality of goods etc after opening of first bid will be treated as unethical practice.
- d. TSREDCO will reject a proposal for award and also may debar the bidder for future tenders in TSREDCO , if it determines that the bidder has engaged in corrupt, fraudulent or unethical practices in competing for, or in executing a contract.

## **Section I - General conditions of proposed contract (GCC)**

### **I.1. Definitions**

In this contract, the following terms shall be interpreted as indicated. Terms defined in general instructions to bidders section shall have the same meaning.

- a.) "Contract" means the agreement entered into between the TSREDCO and the vendor, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein;
- b.) "Contract price" means the price payable to the vendor under the contract for the full and proper performance of its contractual obligations;
- c.) "Incidental services" means those services ancillary to the supply of the goods and services, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training and other such obligations of the vendor covered under the contract;
- d.) "GCC" means the general conditions of contract contained in this section.
- e.) "SCC" means the special conditions of contract if any.
- f.) "TSREDCO " means the Telangana State Renewable Energy Development Corporation,
- g.) "Purchaser/ User" means ultimate recipient of goods and services
- h.) "Vendor or Bidder or supplier or System Integrator " means the individual or firm supplying the goods and services under this contract.
- i.) "Project site", where applicable, means the place(s) where goods/services are to be made available to user.
- j.) "Day" means calendar day.
- k.) "Up time" means the time period when specified services with specified technical and service standards are available to user(s)
- l.) "Down time" means the time period when specified services with specified technical and service standards are not available to user(s).

### **I.2 Application**

These general conditions shall apply to the extent that they are not superseded by provisions of other parts of the contract.

### **I.3 Standards**

The goods supplied under this contract shall conform to the standards mentioned in the specifications, and, when no applicable standard is mentioned, the authoritative standards appropriate to the goods' country of origin shall apply. Such standard shall be the latest issued by the concerned institution.

#### **I.4 Use of documents and information**

1. The vendor shall not, without prior written consent from TSREDCO , disclose/share/use the bid document, contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the TSREDCO in connection therewith, to any person other than a person employed by the vendor in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.
2. The Vendor shall not, without prior written consent of TSREDCO , make use of any document or information made available for the project, except for purposes of performing the Contract.
3. All project related document (including this bid document) issued by TSREDCO , other than the contract itself, shall remain the property of the TSREDCO and shall be returned (in all copies) to the TSREDCO on completion of the Vendor's performance under the contract if so required by the TSREDCO .

#### **I.5. User license and patent rights**

1. The Vendor shall provide licenses for all software products, whether developed by it or acquired from others. In the event of any claim asserted by a third party for software piracy, the vendor shall act expeditiously to extinguish such claim. If the vendor fails to comply and the TSREDCO is required to pay compensation to a third party resulting from such software piracy, the vendor shall be responsible for compensation including all expenses, court costs and lawyer fees. The TSREDCO will give notice to the vendor of such claim, if it is made, without delay.
2. The Vendor shall indemnify the purchases against all third party claims of infringement of patent, trademark or industrial design rights arising from use of the goods, software package or any part thereof.

#### **I.6. Performance security**

1. On receipt of notification of award, the Vendor shall furnish performance security to TSREDCO in accordance with bid document requirement.
2. The proceed of the performance security shall be payable to the TSREDCO as compensation for any loss resulting from the supplier's failure to complete its obligations under the contract.
3. The performance security shall be denominated in Indian rupees or in a freely convertible currency acceptable to TSREDCO and shall be in one of the following forms:
  - a. A bank guarantee or an irrevocable letter of credit, issued by a reputed bank located in India with at least one branch office in Hyderabad, in the form provided in the bidding document or another form acceptable to the TSREDCO ; or
  - b. A cashier's cheque or banker's certified cheque or crossed demand draft or pay order drawn in favour of the TSREDCO .
4. The performance security will be discharged by the TSREDCO and returned to the Vendor not later than thirty (30) days following the date of completion of all formalities under the

contract and if activities, post warranty, by the Vendor is envisaged, following receipt of a performance guarantee for annual maintenance as per bid document.

5. In the event of any contract amendment, the vendor shall, within 15 days of receipt of such amendment, furnish the amendment to the performance security, rendering the same valid for the duration of the Contract.

### **I.7. Manuals and drawings**

1. Before the goods and services are taken over by the user, the Vendor shall supply operation and maintenance manuals, (together with drawings of the goods and services where applicable).
2. The Vendor shall provide complete technical documentation of hardware, firmware, all subsystems, software.
3. The manuals and drawings wherever applicable shall be in English or Telugu.
4. At least one set of the manuals should be supplied for each installation sites.
5. Unless and otherwise agreed, the goods and services shall not be considered to be completed for the purpose of taking over until such manuals and drawings have been supplied to the user.

### **I.8. Inspection and acceptance tests**

1. Inspection and tests prior to shipment of Goods and at final acceptance are as follows:
  - a. Inspection of the goods shall be carried out to check whether the goods are in conformity with the specifications mentioned in the bid document. Following broad test procedure will generally be followed for inspection and testing of hard ware and firm wares. The vendor will dispatch the goods to the ultimate consignee after internal inspection testing along with the supplier's inspection report, manufacturer's warranty certificate. If desired, the TSREDCO will test the equipment after completion of the installation and commissioning at the site of the installation. (If site preparation is not included in the tender call or specification, the vendor should furnish all details of the site requirement to the TSREDCO sufficiently in advance so as to get the works completed before receipt of the equipment.)
  - b. The Inspections and tests, at the discretion of TSREDCO , may be conducted on the premises of the Vendor or its subcontractor(s), at point of delivery, and / or at the good's final destination. If conducted on the premises of the Vendor or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the TSREDCO .
  - c. Should any inspected or tested goods fail to conform to the specifications the TSREDCO may reject the goods, and the vendor shall either replace the rejected goods or make alterations necessary to meet specification requirements free of cost to the TSREDCO /user.
  - d. TSREDCO ' right to inspect, test and, where necessary reject the goods after the goods' arrival at user's site shall in no way be limited or waived by reason of the

- goods having previously been inspected, tested and passed by the TSREDCO or its representative prior to the goods shipment from the country of origin.
- e. Nothing in this clause shall in any way release the vendor from any warranty or other obligations under this contract.
  - f. The acceptance test will be conducted by the TSREDCO , their consultant or any other person nominated by the TSREDCO , at its option. There shall not be any additional charges for carrying out acceptance tests. Any reduction in functional requirements, and performance specifications shall be ground for failure. Any malfunction, partial or complete failure of any part of hardware, firmware or excessive heating of hardware enclosures, motors attached to printers, drivers etc. or bugs in the software shall be grounds for failure of acceptance test. All the software should be complete and no missing modules / sections will be allowed. The vendor shall maintain necessary log in respect of the results of the tests to establish to the entire satisfaction of the TSREDCO , the successful completion of the test specified. An average uptake efficiency of 97% for the duration of test period ( 7 days) shall be considered as satisfactory.
  - g. In the event of the hardware and software failing to pass the acceptance test, A period not exceeding two weeks will be given to rectify the defects and clear the acceptance test, failing which the TSREDCO reserves the rights to get the Equipment replaced by the vendor at no extra cost to the TSREDCO /user.

### **I.9. Acceptance certificates**

On successful completion of installation and Department is satisfied with the working of the systems, it shall be deemed to be the date of successful commissioning of the systems .

### **I.10. Packing**

1. The vendor shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperature, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.
2. The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the TSREDCO .

### **I.11. Delivery and documents**

Delivery of the goods/services shall be made by the vendor in accordance with the terms specified in the Schedules of requirements. The details of shipping and / or other documents to be furnished and submitted by the vendor are specified below.

For Goods supplied from abroad:

1. Within 24 hours of shipment, the Vendor shall notify the TSREDCO and the Insurance Company by cable or telex or fax full details of the shipment including contract number, description of goods, quantity, the **ves sel**, the bill of lading number and date, port of loading, date of shipment, port of discharge, etc. The Vendor shall mail the following documents to the TSREDCO , with a copy to the Insurance Company.
2. Four copies of supplier's invoice showing goods description, quantity, unit price and total amount;
3. 4 copies of packing list identifying contents of each package;
4. Insurance certificate; Manufacturer's/Supplier's warranty certificate;
5. Inspection certificate, issued by the nominated inspection agency and the
6. Supplier's factory inspection report; and Certificate of origin.

The above documents shall be received by the TSREDCO at least one week before arrival of Goods at the port or place of arrival and, if not received, the Vendor will be responsible for any consequent expenses.

For Goods from within India:

Upon delivery of the goods to the user, the vendor shall notify the TSREDCO and mail the following documents to the TSREDCO :

1. Four copies of the Vendor invoice showing goods description, quantity, unit price total amount;
2. Delivery note, or acknowledgement of receipt of goods from the user;
3. Manufacturer's or Supplier's warranty certificate;
4. Inspection Certificate issued by the nominated inspection agency, and the Supplier's factory inspection report.
5. Certificate of Origin;
6. Insurance policy;
7. Excise gate pass Octroi receipts wherever applicable duly sealed indicating payments made; and
8. Any of the documents evidencing payment of statutory taxes.

The above documents shall be received by the TSREDCO before arrival of the Goods (except deliver note and where it is handed over to the user with all documents) and if not received, the vendor will be responsible for any consequent expenses.

## **I.12. Insurance**

1. It is suggested that the goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery up to user site.
2. The insurance should be for replacement value from "Warehouse to warehouse (final destination)" on "All Risks" valid up to 3 months till completion of delivery, installation and commissioning.

### **I.13. Transportation**

Transport of the goods to the project site(s) shall be arranged by the vendor at his cost.

### **I.14. Hardware & Software Installation**

The vendor is responsible for all unpacking, assemblies, installations, cabling between computer units and connecting to output power supplies. The vendor will test all hardware operations and accomplish all adjustments necessary for successful and continuous operation of the computer hardware and Software at all installation sites.

### **I.15. Incidental services**

1. The Vendor may be required to provide any or all the following services, including additional services :
  - a. Performance or supervision or maintenance and/or repair of the supplied goods and services, for a period of time agreed by the parties, provided that this service shall not relieve the Vendor of any warranty obligations under this Contract, and
  - b. Training of TSREDCO and/or its user organization personnel, at the Vendor's site and / or on-site, in assembly, start-up, operation, maintenance and/or repair of the supplied goods and services.
  - c. Prices charged by the Vendor for the preceding incidental services, if any, should be indicated separately ( if required), and same will be mutually negotiated separately.

### **I.16. Spare parts**

1. The Vendor may be required to provide any or all of the following materials, notifications and information pertaining to spare parts manufactured or distributed by the Vendor.
2. Such spare parts as the TSREDCO may elect to purchase from the Vendor, provided that this election shall not relieve the Vendor of any warranty obligations under the contract and
3. In the event of termination of production of the spare parts, an advance notification to the TSREDCO of the pending termination, in sufficient time to permit the TSREDCO to procure needed requirements and
4. The Vendor shall ensure availability of spares in stock at his nearest service centre for immediate delivery such spare parts as: (a) are necessary for a minimum of 5 years of operation after installation at the Purchaser's sites (b) are necessary to comply with specifications.

### **I.17. Warranty**

1. The Vendor warrants that the goods and services supplied under the contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The Vendor further warrants that all goods and services supplied under this contract shall have no defect arising from design, materials or workmanship or from any act or omission of the Vendor, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.



2. The warranty period shall be as stated in bid document. The Vendor shall, in addition, comply with the performance guarantees specified under the contract. If, for reasons attributable to the Vendor, these guarantees are not attained in whole or in part, the Vendor shall, make such changes, modifications, and/or additions to the goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the contract at its own cost and expenses and to carry out further performance tests.
3. The equipment supplied should achieve required up time.
4. TSREDCO /user shall promptly notify the Vendor in writing of any claims arising under this warranty.
5. Upon receipt of such notice, the Vendor shall, within the period specified in GCC and with all reasonable speed, repair or replace the defective goods and services or parts thereof, without costs to the user.
6. If the Vendor, having been notified, fails to remedy the defect(s) within a reasonable period, the TSREDCO /user may proceed to take such remedial action as may be necessary, at the vendor's risk and expense and without prejudice to any other rights which the TSREDCO /user may have against the Vendor under the contract.

#### **I.18. Maintenance service**

1. Free maintenance services including spares shall be provided by the vendor during the period of warranty. User, at its discretion may ask the vendor to provide maintenance services after warranty period, i.e. Annual maintenance and repairs of the system at the rates indicated by bidder in its proposal and on being asked so, the vendor shall provide the same. The cost of annual maintenance and repairs cost (after warranty period), which will include cost of spares replaced, shall be paid in equal quarterly instalments at the end of each quarter.
2. The maximum response time for maintenance complaint from any of the destination (i.e. time required for supplier's maintenance engineers to report to the installations after a request call/telegram is made or letter is written) shall not exceed 48 hours.
3. The vendor will accomplish preventive and breakdown maintenance activities to ensure that all hardware, and firmware execute without defect or interruption for at least required up time.
4. In case up time is less than the stipulated up time, penalty as indicated in the bid document shall be imposed on the vendor.
5. The amount of penalty if any, will be recovered at source from the performance guarantee during the warranty or from annual maintenance charges payable as the case may be.

### **I.19. Payment**

1. The vendor's request(s) for payment shall be made to the TSREDCO in writing, accompanied by an invoice describing, as appropriate, the goods/service delivered/ performed.
2. Payments shall be made promptly by the TSREDCO , but in no case later than (30) days after submission of a valid invoice or claim by the vendor.
3. The currency of payment will be Indian rupees.
4. Payment shall be made as indicated in Bid document.
5. The annual maintenance and repair cost as per separate agreement if any, shall be paid in equal quarterly instalments at the end of each quarter as per the rates quoted and agreed.
6. Payment will be made through Cheque.

### **I.20. Prices**

Prices charged by the Vendor for goods delivered and services performed under the contract shall not vary from the prices quoted by the Vendor in its bid, with the exception if any price adjustments authorized in special conditions of contract or in the request for bid validity extension, as the case may be.

### **I.21. Change orders**

TSREDCO may, at any time, by written order given to the Vendor, make changes within the general scope of the Contract in any one or more of the following:

- i. Drawing, designs, or specifications, where Goods to be supplied under the Contract are to be specifically manufactured for the TSREDCO ;
- ii. The method of shipment or packing;
- iii. The place of delivery and/or the services to be provided by the Vendor. If any such change causes an increase or decrease in the cost of, or the time required for, the vendor's performance of any provisions under the contract, an equitable adjustment shall be made in the contract price or delivery schedules ,or both, and the contract shall accordingly be amended. Any claims by the Vendor for adjustment under this clause must be asserted within thirty (30) days from the date of the Vendor's receipt of the change order.

### **I.22. Contract amendment**

No variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

### **I.23. Assignment**

The Vendor shall not assign, in whole or in part, its obligations to perform under this Contract, except with the prior written consent from TSREDCO.

### **I.24. Subcontracts**

The Vendor shall notify the TSREDCO in writing of all subcontracts awarded under this contract if not already specified in the bidder's proposal. Such notification, in the original bid or later, shall not relieve the Vendor from any liability or obligation under the contract.

Subcontract shall be only for bought-out items and sub-assemblies.

### **I.25. Delays in the supplier's performance**

1. Delivery of the Goods and performance of the services shall be made by the Vendor in accordance with the time schedule specified by the TSREDCO in the specifications.
2. If at any time during performance of the Contract, the Vendor or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the Vendor shall promptly notify the TSREDCO in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the vendor's notice, TSREDCO shall evaluate the situation and may at its discretion extend the Vendor's time for performance, with or without liquidated damages.
3. A delay by the Vendor in the performance of its delivery obligations shall render the vendor liable to the imposition of appropriate liquidated damages, unless an extension of time is agreed upon by TSREDCO with out liquidated damages.

### **I.26. Liquidated damages**

If the Vendor fails to deliver any or all of the goods or perform the services within the time period(s) specified in the Contract, the TSREDCO shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to, as per the terms indicated in the bid document, until actual delivery or performance, subject to maximum limit. Once the maximum is reached, the TSREDCO may consider termination of the contract.

### **I.27. Termination for default**

1. The TSREDCO , without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Vendor, may terminate the Contract in whole or in part:
  - a. if the Vendor fails to deliver any or all of the Goods/services within the time period(s) specified in the contract, or within any extension there of granted by the TSREDCO pursuant to Clause 25 of GCC or
  - b. if the Vendor fails to perform any other obligation(s) under the Contract or
  - c. if the Vendor, in the judgment of the TSREDCO has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
2. In the event the TSREDCO terminated the contract in whole or in part, TSREDCO may procure, upon such terms and in such manner as it deems appropriate, goods or services similar to those undelivered, and the Vendor shall be liable to the TSREDCO for any excess costs for such similar goods or services. However, the Vendor shall continue performance of the contract to the extent not terminated.

### **I.28. Force majeure**

1. The Vendor shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

2. For purposes of this clause, “Force Majeure” means an event beyond the control of the Vendor and not involving the Supplier’s fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the TSREDCO in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
3. If a Force Majeure situation arises, the Vendor shall promptly notify the TSREDCO in writing of such condition and the cause thereof. Unless otherwise directed by the TSREDCO in writing, the Vendor shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

## **29. Termination for insolvency**

TSREDCO , may at any time terminate the contract by giving 30 days written notice to the Vendor if the Vendor becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Vendor, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue there after to the TSREDCO.

### **I.30. Termination for convenience**

1. TSREDCO , may at any time by giving 30 days written notice to the Vendor, terminate the Contract, in whole or in part, for its convenience. The notice of termination shall specify that termination is for the TSREDCO /Purchaser’s convenience, the extent to which performance of the Vendor under the Contract is terminated, and the date upon which such termination becomes effective.
2. The goods that are complete and ready for shipment within thirty (30) days after the vendor’s receipt of notice of termination shall be accepted by the TSREDCO at the contract terms and prices. For the remaining Goods, the TSREDCO may elect to have any portion completed and delivered at the contract terms and prices at its discretion.

### **I.31. Resolution of disputes**

1. The TSREDCO and the Vendor shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the contract.
2. If, after thirty (30) days from the commencement of such informal negotiations, the TSREDCO and the Vendor have been unable to resolve amicably a contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms specified here in. These mechanisms may include, but are not restricted to, conciliation mediated by a third party.
3. The dispute resolution mechanism shall be as follows:
4. In case of a dispute or difference arising between the TSREDCO and the Vendor relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Arbitration and Conciliation Act, of India, 1996.
5. in case of any dispute arises between the parties with regard to any of the terms of the contract, then as per 1.31.4 an Arbitrator may be appointed as per the Arbitration and

Conciliation Act, 1996, and that both parties may appoint a Consent Arbitrator and in case if the same is not done, then the Arbitrator may be appointed by an Order of the Court.

6. Jurisdiction: The place of Arbitration shall be at Hyderabad only. The place of Arbitration shall be at Hyderabad.

### **I.32. Governing language**

The contract shall be written in English or Telugu. All correspondence and other documents pertaining to the contract which are exchanged by the parties shall be written in same languages.

### **I.33. Applicable law**

The contract shall be interpreted in accordance with appropriate Indian laws. Any Disputes arising out of this contract shall be settled in the Jurisdiction of High Court Of Telangana.

### **I.34. Notices**

1. Any notice given by one party to the other pursuant to this contract shall be sent to the other party in writing or by telex, email, cable or facsimile and confirmed in writing to the other party's address.
2. A notice shall be effective when delivered or tendered to other party whichever is earlier.

### **I.35. Taxes and duties**

The vendor shall be entirely responsible for all taxes, any other future taxes as per the then prevailing laws established by the Government or Statute duties, license fee Octroi, road permits etc. incurred until delivery of the contracted Goods/services at the site of the user or as per the terms of tender document if specifically mentioned.

### **I.36. Licensing considerations**

The software mentioned in the Schedules of Requirement will be used throughout Telangana or user's sites even outside Telangana.

### **I.37. Protection against damages- site conditions:**

1. The system shall not be prone to damage during power failures and trip outs. The normal voltage and frequency conditions available at site are as under:
  - a. Voltage 230 Volts
  - b. Frequency 50Hz.
2. However, locations may suffer from low voltage conditions with voltage dropping to as low as 160 volts and high voltage conditions with voltage going as high as 220 + 20% volts. Frequency could drop to 50Hz + 2%. The ambient temperature may vary from 10°C to 48°C. The relative humidity may range in between 5% to 95%.
3. The goods supplied under the contract should provide protection against damage under above conditions.

### **I.38. Fail-safe procedure**

The vendor should indicate in detail fail-safe procedure(s) for the following:

1. Power failure
-

2. Voltage variation
3. Frequency variation
4. Temperature and humidity variations.

**I.39 Training:**

For each hardware and software component installed, the Vendor may be required to train the designated TSREDCO and user Department personnel to enable them to effectively operate the total system. The training, if required, shall be given, as specified in the SCC at the locations specified.

The training schedule will be agreed to by both parties during the performance of the Contract.

**Site Preparation and Installation :**

The Purchaser is solely responsible for the construction of the installation sites except where it is specifically required under bid document. The bidder will designate to perform a site inspection to verify the appropriateness of the sites before the installation of every hardware related item.

## Bid Letter Form

From:

(Registered name and address of the bidder.)

To:

Sir,

Having examined the bidding documents and amendments there on, we the undersigned, offer to provide services/execute the works including supply, delivery installation of hardware, firm wares and software as the case may be, in conformity with the terms and conditions of the bidding document and amendments there on, for the following project in response to your tender call no & dated .....

Project title: \_\_\_\_\_

We undertake to provide services/execute the above project or its part assigned to us in conformity with the said bidding documents for an amount quoted in financial bid accordance with the schedule of prices attached herewith and coverage options made by TSREDCO or its user organization.

If our bid is accepted, we undertake to;

- a. provide services/execute the work according to the time schedule specified in the bid document,
- b. obtain the performance guarantee of a bank in accordance with bid requirements for the due performance of the contract, and
- c. agree to abide by the bid conditions, including corrigendum, if any, which remain binding upon us during the entire bid validity period and bid may be accepted any time before the expiration of that period.

We understand that you are not bound to accept the lowest or any bid you may receive, nor to give any reason for the rejection of any bid and that you will not defray any expenses incurred by us in bidding.

Place:

Bidder's signature  
Date and seal.

**Annexure I - Bid Security (EMD) Form (BG)**

TSREDCO Ref. No.....

(To be issued by a bank scheduled in India and having at least one branch in Hyderabad)

Whereas..... (Here in after called "the Bidder") has submitted its bid Dated ..... (Date) for the execution of..... (Here in after called "the Bid")

KNOW ALL MEN by these presents that WE ..... of ..... having our registered office at..... (hereinafter called the "Bank") are bound unto the Telangana State Renewable Energy Development Corporation (hereinafter called "The TSREDCO ") in the sum of ..... for which payment well and truly to be made to the said TSREDCO itself, its successors and assignees by these presents.

The conditions of this obligation are:

1. If the bidder withdraws its bid during the period of bid validity or
2. If the bidder, having been notified of the acceptance of its bid by the TSREDCO during the period of bid validity:
  - a. fails or refuses to execute the contract form if required; or
  - b. fails or refuses to furnish the performance security, in accordance with the bid requirement;

We undertake to pay the TSREDCO up to the above amount upon receipt of its first written demand, without the TSREDCO having to substantiate its demand, provided that in its demand the TSREDCO will note that the amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to the period mentioned in Section-C and any demand in respect thereof should reach the Bank not later than the above date.

Place: Date:

Signature of the Bank  
and seal.



**Annexure II - Performance Security Form**

TSREDCO Ref. No.....

(To be issued by a bank scheduled in India and having at least one branch in Hyderabad)

To: ..... (Address of TSREDCO )

WHEREAS..... (Name of Vendor) hereinafter called “the Vendor” has undertaken, in pursuance of Contract No..... Dated ... (Date), to supply..... called “the Contract”.

AND WHEREAS it has been stipulated by you in the said Contract that the Vendor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with the Supplier’s performance obligations in accordance with the Contract.

WHEREAS we have agreed to give the Vendor a Guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Vendor, up to a total of Rs. .... and we undertake to pay you, upon your first written demand declaring the Vendor to be in default under the Contract and without cavil or argument, any sum or sums within the limit of Rs..... . (Amount of Guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the ..... day of..... (Date)

Place:

Date:

Signature and seal of guarantors

### Annexure III - Manufacturer Authorization

Tender Ref. No: \_\_\_\_\_ Dt: \_\_\_\_\_

The authorization should be in the nature of a letter, memorandum or certificate regularly granted by the manufacturer to its channel partners, authorized solution providers, system integrators, distributors, etc. or a specific letter issued for purposes of this bid. Such communication should include statements / undertakings from the said manufacturer to the following effect:

1. Warranty coverage in respect of the goods and services manufactured by the said manufacturer shall be honoured by that manufacturer, their channel partners, distributors, authorized service centres as the case may be.
2. The manufacturer updates the bidder and their technical personnel with relevant technical literature, training and skill transfer workshops etc. on a regular basis.
3. The manufacturer provides back to back technical support to the said bidder on a continuing basis.
4. The said bidder is authorized to provide service and solutions using hardware, firmware and / or software as the case may be.

Signature with Name,  
Designation,  
Phone No & e-mail ID.

Note: The letter of authority should be signed by a person competent and having the power of attorney to bind the manufacturer. The MAF shall be submitted on Letter Head of the OEM.

Form P1 - Bidder Information

1	Name of the Organization	
2	Year of establishment	
3	Registered Office Address	
4	Phone No.	
5	Fax No.	
6	Email	
7	Contact person details with phone no.	
8	Total No. of branch offices in AP	
9	Total Support engineers at -	
10	At Head office ( No.)	
11	At branch offices (No.)	
12	Whether Manufacturer?	If Yes, Provide relevant documents
13	Whether authorized dealer/ Service Provider?	If Yes, Provide relevant documents
14	Details of EMD furnished	
15	Details of certificates enclosed.	

Relevant supporting documents for the above information to be submitted.

Place & Date

Bidder's signature and Seal

### Form P2 - Turnover Details

	March 31 <sup>st</sup> 2017	March 31 <sup>st</sup> 2018	March 31 <sup>st</sup> 2019
Turnover (in INR crore)			
Profit Before Tax (in INR crore)			
Net Worth of Company			

Place & Date

Bidder's signature and Seal

### Form P3 - Turnover Claim Details

Item wise sales turnover details as per pre-qualification criteria of this document (taking in to consideration all the amendments issued to this document if any) are to be provided in the following format along with supporting documents:

Schedule:

	Item : <<To be specified by the bidder>>		
	Brand Offered : <<To be specified by the bidder>>		
		Year	
Sl. No.	Document Ref. No. (copies of documents to be uploaded)	2016- March 202	0
		Total Sales Turnover er	
		Nos.	In Rs.
1			
2			
3			
4			
	Total		

Valid Supporting document proofs shall be submitted (Purchase Orders/contract copies)

Place & Date

Bidder's signature and Seal

### Form P4 - List of Major Customers & Supplied items

Schedule:

S.No	Customer Full Address	Year supply	of	Item Name	Turn over Under Form P-2(Qty in Nos.)	Turn Over Under Form P-2(Value in Rs.)
A	B	C	D	E	F	

Place & Date

Bidder's signature and Seal

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## Form P5 - Details of Service Centers in Telangana State

Schedule:

S.No	District	Full Address of service centre	Contact person with phone No.	No. of support engineers and their details : Name, Qualification and Experience
A	B	C	C	D
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Place & Date

Bidder's signature and Seal

Schedule:

## Form P6 – Declaration Regarding Clean Track Record

To,  
The Managing Director  
TSREDCO.

Sir,

I have carefully gone through the Terms & Conditions contained in the RFP Document [No. \_\_\_\_\_]. I hereby declare that my company has not been debarred/ black listed as on Bid calling date by any Central or State Government / Quasi Government Departments or Organizations in India for non-satisfactory past performance, corrupt, fraudulent or any other unethical business practices. I further certify that I am competent officer in my company to make this declaration.

Yours faithfully,

(Signature of the Bidder)

Printed Name

Designation

Seal

Date:

Business Address:

Schedule:

**Form T1 - Technical Compliance**

Item wise technical compliance statement as per technical specifications mentioned in Section-D of this document (taking in to consideration all the amendments issued to this document, if any) is to be submitted in the following format:

Item Code:

Item Name:

Sl. No.	Parameter/ Feature	Specification Required	Specification of proposed item along with Part Code, Qty. & Description if any	Compliance (Complied/Higher/Lower)	Reference for proof of compliance (Required documents to be uploaded along with technical bid)	REMARKS
A	B	C	D	E	F	G
					(Detailed reference such as doc name, para no. page no. etc. should be provided)	

Place & Date:

Bidder's signature and seal



Schedule:

**Form T2 - Check List**

Compliance/Agreed/Enclosed/ Deviation Statement

The following are the particulars of compliance/deviations from the requirements of the tender specifications.

Bid document reference	Submitted/Agreed/Remarks
1.Delivery period	
2. Form P1	
3. Form P2	
4. Form P3	
5. Form P4	
6. Form P5	
7. Form P6	
8. Form T1	
9. Form T2	
10. Form T3 (bidders format)	
11. Form T4 (bidders format)	
12. Form F1 ( Empty format)	
13. Pre-qualification criterion	
14. Technical specifications	
15. Sign and seal of tender document	
16. MAFs	
17. ROC Copies	
18. . Other Document copies if any as per tender	
19. PAN and GST	
20. CA certified Audited balance sheets or net worth certificate for last 3 years	
21	

The specifications and conditions furnished in the bidding document shall prevail over those of any other document forming a part of our bid, except only to the extent of deviations furnished in this statement.

Schedule:

Place & Date

Bidder's signature and Seal

NOTE: For every item appropriate remarks should be indicated like 'no deviation', 'agreed', 'enclosed' etc. as the case may be.

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Form T3 - Technical Datasheets, Tech,. **Leterature**, Certifications etc

Schedule:

Detailed technical documentation, reference to various industry standards to which the products/services included in vendor's offer conform, and literature concerning the proposed solution, Certificates mentioned in Section-D like ISO, Microsoft, ROHS, TCO, FCC etc.

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**Form T4 – Any other documents as per RFP Schedule:**

Other information, if any required in the bid document.

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**Form F1**
**Schedule**

#	Item details (specifications as per section D of the tender document)	Unit	Price	Taxes/ Duties etc	QTY	Total price without taxes	Total price incl. of all
1	2	3		4	5	6	7
1	D.1.1. Servers				2		
2	D.1.2. Storage				1		
3	D.1.3. Desktops				10		
4	D.1.4.1 Laptops				50		
5	D.1.4.2 Mac Book Air				1		
6	D.1.4.3 Mac Book Pro				1		
7	D.1.5. Switches				2		
8	D.1.6. Wifi Access Points				10		
9	D.1.7. Firewall				1		
10	D.1.8. Copier				1		
11	D.1.9. MFP Printer				5		
12	D.1.10. UPS				1		
13	D. 1.11 Site Preparation			Nos.	1		
	Centralized Dashboard with MIS						
14	D1.12.1 Cost of Customization and Implementation			Lumpsum	1		
15	D.1.12.2 Cost Of Integration per Light during Implementation Phase			Per Light			

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16	D.1.12.3 Quarterly Charges per Light		Per Light			
	Command and control Centre					
17	D.1.13.1 Cost of Customization and Implementation		Lumpsum			
18	D.13.2 Quarterly Charges for Command Center		Lumpsum			
19	D1.14 Displays for Monitoring at PR & RD		Nos	1		

Place & Date

Bidder's signature and Seal

Note

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1. Unit of Measurement is as per the particulars mentioned in Section – A.
2. Un-priced Form F1 should be submitted along with Technical bid.

- END OF DOCUMENT -