

# **Bid Documents**

## **PROCUREMENT OF IT EQUIPMENT**



**Punjab Thermal Power (Pvt.) Limited**

Ground Floor, 7/C-1, Gulberg-III, Lahore.

Phone No. 04235711278-80



## **PUNJAB THERMAL POWER (PVT.) LTD.**

Ground Floor, 7-C-1, Gulberg III, Lahore.

### **TORs FOR PROCUREMENT OF “IT EQUIPMENT” FOR PUNJAB THERMAL POWER (PRIVATE) LIMITED**

1. Bidders having active tax payer certificate of NTN & GST shall be eligible to participate in this bidding process.
2. Bank Draft / Call Deposit Receipt (CDR) of **Rs. 40,000/-** as Bid Security in favor of “Punjab Thermal Power (Pvt.) Limited” must be enclosed with the bid.
3. Only those Bidders can participate who are working as authorized distributors, reseller or dealer of manufactures for the items prescribed and Bidder must attach relevant documentary proof in this of regard, otherwise, bids will not be entertained.
4. A certificate / undertaking on a stamp paper of relevant value that the Bidder is never blacklisted by any Government Department, PPRA, FBR or any other organization, shall also be submitted with the Bid.
5. The procurement procedure shall be **Single Stage Single Envelope** as per Punjab Procurement Rules 2014.
6. The Bidder should have a registered office in Lahore for at least 3 years at the date of submission. The Bidder shall submit sufficient documentary proofs of its existence at Lahore for said period. Sufficient local and relevant resources shall also be available in the said office to cater for all the after-sales support and services.
7. The Successful Bidders shall supply the items as per the specifications attached with these TORs within provided timeframe.
8. No downward deviation from the required specifications of IT EQUIPMENT will be accepted and the Company can reject the items found deviated downward from the specification prescribed herein.
9. Rates quoted in Bids must be valid for at least 60 days from the date of submission of Bid.
10. Bids shall be submitted in Pak Rupees only.
11. Bids quoted and submitted shall be inclusive of all applicable taxes and levies.
12. All Bids received late, found incomplete or over-written will not be accepted and shall be rejected without evaluation.
13. Rates will be accepted on the basis of item wise lowest rate.
14. The scope of this procurement process shall include the supply of all the IT EQUIPMENT as specified in Schedule-A.
15. The items will be provided ex-stock on immediate basis after the award of Purchase Order.
16. The successful Bidder will be responsible to supply the items in Store Room at his own cost and complete in all respect as per specifications approved by the Competent Authority.



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- 17.** The Company / Competent Authority can accept or reject the Bids without assigning any reason at any stage as per PPRA Rules, 2014.
- 18.** Successful Bidder shall submit valid warranty cards for each item supplied to the Company. Warranty shall be locally claimable by the Company. Warranty must be as per the specifications of items provided and must be verifiable from the manufacturer's resources.
- 19.** An Authorized Representative / Company will inspect the equipment within one week of supply. Any discrepancies found during inspection must be removed within 03 working days by the Bidder / supplier.
- 20.** Payments shall be made after the clearance by the Company / Authorized Representative Company.
- 21.** Taxes will be deducted as per applicable Government Rules / Policy.
- 22.** At the time of payment against Invoice, 10% payment shall be held as Performance Guarantee for Warranty Period (i.e. 06-months from the date of delivery).
- 23.** Successful Bidder will be allowed a maximum of 48 hours' downtime for all components in warranty claim including replacement of whole unit.



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## SCHEDULE - A SPECIFICATIONS OF IT EQUIPMENT

Sr. No.	Description of Item	Quantity
1	Projector	02 No.
2	A3 Color Printer	01 No.
3	Access Point	02 No.
4	LED	02 No.

### **1. Projector (Quantity: 02 units)**

Minimum specifications are given below.

Item	Description of Requirement
Projection Technology	3LCD
Resolution	XGA (1024 X 768) 4:3
Contrast Ration	15000:1
Lamp Life	Normal 6,000 hours / Eco 12,000 hours
Brightness	3500 Lumens
Projection Distance	Zoom (30'' - 300'' [0.89 - 9.12 m) Tele (30'' - 300'' [1.07 - 10.95 m) Standard (60'' screen 1.8 - 2.17 m)
Key Stone Correction	Auto vertical: $\pm 30^\circ$ , Manual horizontal $\pm 30$ , Quick Corner
Input Connectivity	3 in 1: Image / Mouse / Sound Wireless LAN IEEE 802.11b/g/n, Cinch audio in, Composite in, HDMI in, VGA in
Network	Wireless WIFI with USB Dongle included ELPAP10 , LAN Port yes
Wireless Security	Quick Mode: WPA2-PSK, Advanced Mode: WPA/WPA2-PSK
USB	1 X Type A (USB 2.0 high speed or above) for PC Less Projection, 1 Type B for Virtual Mouse and USB Display
Video Signal	NTSC 3.58; NTSC 4.43; PAL; PAL-M; PAL-N; PAL60; SECAM
Split Screen	Split Screen for display of two devices on screen, PNP
Projection Screen	8 X 6' Wall mount motorized screen with remote control
Installation	20 Meters VGA, HDMI, Power Cable and mounting kit
WARRANTY	As per Principle

### **2. A3 Color Printer (Quantity: 01 units)**

Minimum specifications are given below.

Item	Description of Requirement
Printing Method	Precision Core
Resolution	4,800 x 2,400 dpi (with Variable-Sized Droplet Technology
Nozzle Configuration	400 x 2 nozzles Black, 128 x 2 nozzles per colour (Cyan, Magenta, Yellow)
Print Direction	Bi-directional printing, Uni-directional printing
Duplexing	(up to A3)
WI-FI	DIRECT WI-FI STANDARD
Maximum Copies	999-COPIES



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ADF	AS STANDARD
Trays	(2 Front, 1 Rear)
STARTER	I-PRINT/E-MAIL PRINT/SCAN TO CLOUD PRINT
Noise Level	2 X Type A (USB 2.0 hi-fg speed or above)
STARTER STANDARD	MINIMUM 10,000 COPIES ON A4
SPEED	Up to 32 ppm / 20 ppm
Photo Default -10 x 15 cm / 4x6	Approx. 42 sec per photo (Border)
LCD SCREEN	4.3 " TFT Color LCD
WARRANTY	As per Principle

### **3. Wireless Access Point (Quantity: 02 Unit)**

Minimum specifications are given below:

Item	Description of Requirement
Dual Radio 802.11ac Access Point	Supports 867 / 1.3 Mbps and up will be preferred in the 5GHz band
Built-in Bluetooth Low-Energy (BLE) Radio	<ul style="list-style-type: none"> <li>Enables Location-Based Services with BLE-enabled Mobile devices receiving signals from multiple Beacons at the same time</li> <li>Enables management of a network of Beacons</li> </ul>
Advanced Cellular Coexistence (ACC)	<ul style="list-style-type: none"> <li>Minimizes interference from 3G/4G cellular networks, distributed antenna systems and commercial small cell/femtocell equipment.</li> </ul>
Quality of service for app visibility and control	<ul style="list-style-type: none"> <li>Supports priority handling and policy enforcement for unified communication apps, including Microsoft Skype for Business with encrypted videoconferencing, voice, chat and desktop sharing</li> </ul>
RF Management	<ul style="list-style-type: none"> <li>Adaptive Radio Management (ARM) technology automatically assigns channel and power settings, provides airtime fairness, and ensures that APs stay clear of all sources of RF interference to deliver reliable, high-performance WLANs</li> <li>The APs can be configured to provide part-time or dedicated air monitoring for wireless intrusion protection, VPN tunnels to extend remote locations to corporate resources, and wireless mesh connections where Ethernet drops are not available.</li> </ul>
Intelligent app visibility and control	<ul style="list-style-type: none"> <li>AppRF technology leverages deep packet inspection to classify and block, prioritize or limit bandwidth for over 2,500 enterprise apps or groups of apps</li> </ul>
Security	<ul style="list-style-type: none"> <li>Integrated wireless intrusion protection offers threat protection and mitigation, and eliminates the need for separate RF sensors and security appliances</li> <li>IP reputation and security services identify, classify, and block malicious files, URLs and IPs, providing comprehensive protection against advanced online threats</li> <li>Integrated Trusted Platform Module (TPM) for secure storage of credentials and keys</li> </ul>



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### WI-FI RADIO SPECIFICATIONS

AP type: Indoor, dual radio, 5GHz 802.11ac 2x2 MIMO and 2.4GHz 802.11n 2x2 MIMO

Software-configurable dual radio supports 5 GHz (Radio 0) and 2.4 GHz (Radio 1)

5GHz: Two spatial stream Single User (SU) MIMO for up to 867 Mbps wireless data rate to individual 2x2 VHT80 client devices

2.4GHz: Two spatial stream Single User (SU) MIMO for up to 400 Mbps wireless data rate to individual 2x2 VHT40 client devices (300 Mbps for HT40 802.11n client devices)

Support for up to 256 associated client devices per radio, and up to 16 BSSIDs per radio

Supported frequency bands (country-specific restrictions apply):

- 2.400 to 2.4835 GHz
- 5.150 to 5.250 GHz
- 5.250 to 5.350 GHz
- 5.470 to 5.725 GHz
- 5.725 to 5.850 GHz

Available channels: Dependent on configured regulatory domain

Dynamic frequency selection (DFS) optimizes the use of available RF spectrum

Supported radio technologies:

- 802.11b: Direct-sequence spread-spectrum (DSSS)
- 802.11a/g/n/ac: Orthogonal frequency-division multiplexing (OFDM)

Supported modulation types:

- 802.11b: BPSK, QPSK, CCK
- 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM

Transmit power: Configurable in increments of 0.5 dBm

Maximum (conducted) transmit power (limited by local regulatory requirements):

- 2.4GHz band: +18 dBm per chain, +21 dBm aggregate (2x2)
- 5GHz band: +18 dBm per chain, +21 dBm aggregate (2x2)
- Note: conducted transmit power levels exclude antenna gain.

For total (EIRP) transmit power, add antenna gain

Advanced Cellular Coexistence (ACC) minimizes interference from cellular networks

Maximum ratio combining (MRC) for improved receiver performance

Cyclic delay/shift diversity (CDD/CSD) for improved downlink RF performance

Short guard interval for 20 MHz, 40 MHz and 80 MHz channels

Space-time block coding (STBC) for increased range and improved reception

Low-density parity check (LDPC) for high-efficiency error correction and increased throughput

Transmit beam-forming (TxBF) for increased signal reliability and range

Supported data rates (Mbps):

- 802.11b: 1, 2, 5.5, 11
- 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
- 802.11n: 6.5 to 300 (MCS0 to MCS15)
- 802.11ac: 6.5 to 867 (MCS0 to MCS9, NSS = 1 to 2 for VHT20/40/80)

802.11n high-throughput (HT) support: HT 20/40

802.11ac very high throughput (VHT) support: VHT 20/40/80

802.11n/ac packet aggregation: A-MPDU, A-MSDU



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WI-FI ANTENNAS	<p>Two integrated dual-band down tilt omni-directional antennas for 2x2 MIMO with peak antenna gain of 3.4dBi in 2.4GHz and 6.6dBi in 5GHz. Built-in antennas are optimized for horizontal ceiling mounted orientation of the AP. The down tilt angle for maximum gain is roughly 30 degrees.</p> <ul style="list-style-type: none"> <li>Combining the patterns of each of the antennas of the MIMO radios, the peak gain of the effective per-antenna pattern is 2.2dBi in 2.4GHz and 4.5dBi in 5GHz.</li> </ul>
POWER SOURCES AND CONSUMPTION	<p>The AP supports direct DC power and Power over Ethernet (PoE) When both power sources are available, DC power takes priority over PoE Power sources are sold separately Direct DC source: 412Vdc nominal, +/- 5%</p> <ul style="list-style-type: none"> <li>Interface accepts 2.1/5.5-mm center-positive circular plug with 9.5-mm length</li> </ul> <p>Power over Ethernet (PoE): 48 Vdc (nominal) 802.3af/802.3at compliant source</p> <ul style="list-style-type: none"> <li>Unrestricted functionality with 802.3af PoE</li> </ul> <p>Maximum (worst-case) power consumption: 12.3W (PoE) or 10.1W (DC) Maximum (worst-case) power consumption in idle mode: 5.3W (PoE) or 4.4W (DC)</p>
MOUNTING	<p>With two (white) mounting clips to attach to a 9/16-inch or 15/16-inch flat T-bar drop-tile ceiling</p>
MECHANICAL	<p>Dimensions/weight (unit, excluding mount accessories):</p> <ul style="list-style-type: none"> <li>150mm x 150mm x 40mm</li> <li>380g</li> </ul> <p>Dimensions/weight (shipping):</p> <ul style="list-style-type: none"> <li>190mm x 180mm x 70mm</li> <li>590g</li> </ul>
ENVIRONMENTAL	<p>Operating:</p> <ul style="list-style-type: none"> <li>Temperature: 0° C to +50° C (+32° F to +122° F)</li> <li>Humidity: 5% to 93% non-condensing</li> </ul> <p>Storage and transportation:</p> <ul style="list-style-type: none"> <li>Temperature: -40° C to +70° C (-40° F to +158° F)</li> </ul>
RELIABILITY	<p>MTBF: 753,457hrs (86yrs) at +25C operating temperature</p>
CERTIFICATIONS	<p>CB Scheme Safety, UL2043 plenum rating Wi-Fi Alliance (WFA) certified 802.11a/b/g/n/ac</p>
WARRANTY	<p>As per Principle</p>



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### **4. LED Android TV (Quantity: 02 units)**

Minimum specifications are given below.

Item	Description of Requirement
Size	55"
Product Type	Google Android TV--LED UHD DTV
Chassis	MT58CU-AP
CPU	CA53*4 64bit 1.1GHz
GPU	Mali T860 MP2 480MHz
OS	Android N Certified by Google Android TV
RAM/ROM	2.5 GByte DDR3 /16GByte Flash
UI Style	Google Android TV UI & TV+3.0 UI
Power Consumption	140W
Certification	CB, Dolby, DTS, CTS (Google official certification)
Display	
Display Type	LED UHD DTV
Display Resolution	3840*2160
UHD Support	Yes
HDR	HDR10 Decoding
HDR Support	Yes
High Color Gamut (DCI-P3)	Yes
Micro Dimming Pro	Yes
Brightness (cd/m2)	450nit□(Type)
Contrast Ratio	4000:01:00
Response Time (G to G)	6.5ms (Type)
Colors	1.07B(10bit)
Refresh Rate	60Hz
Dynamic Contrast	Yes
Backlight Adjustable	Yes (0~100)
	DTS Decode (DTS HD, DTS express 5.1), DTS Premium Sound/DTS Studio Sound, On/Off, Remote control Voice Promp
Connectivity	Yes
Internet Link	WiFi integrated 802.11 b/g/n 2T2R, WiFi 2.4GHz, Ethernet Network
HDMI	3
HDMI&HDCP Version	HDMI1.4&HDMI2.0, HDCP1.4&HDCP2.2
HDMI Support	MHL & ARC
Cable Port	Yes
SPDIF	Yes
USB	1 * 2.0 - 1 * 3.0
A/V IN	Yes
Headphone	Yes
EasyCast	Yes
Installations	Yes, As per requirement
Wirless Keyboard / Mouse	Yes
WARRANTY	As per Principle





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**Note:** Replacement Warranty from the original manufacturer for the above-mentioned IT EQUIPMENT during the warranty period (i.e. 6 months from the date of delivery) shall be provided by the Bidders.



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## **BIDDING DOCUMENTS / TORs FOR PROCUREMENT OF "IT EQUIPMENT" FOR PUNJAB THERMAL POWER (PVT.) LIMITED ("PTPL")**

Bid Documents Price: \_\_\_\_\_ Rs.500/- \_\_\_\_\_  
(Nonrefundable)

Receipt No: \_\_\_\_\_

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

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

CDR No. \_\_\_\_\_

Name of Firm: \_\_\_\_\_

Address: \_\_\_\_\_

Phone No: \_\_\_\_\_ N.T.N No. \_\_\_\_\_

G.S.T Registration No: \_\_\_\_\_

<b>Sr. No.</b>	<b>Description of Item</b>	<b>Quantity</b>	<b>Rate Per Unit</b>	<b>Total Amount (Pak Rupees)</b>
1	Projector	02 Nos.		
2	A3 Color Printer	01 Nos.		
3	Access Point	02 Nos.		
4	LED	02 Nos.		

Note:

- Rates quoted in the Bids must be inclusive of all applicable taxes and levies.
- Rates must be given on this Bid Performa, otherwise Bids will not be entertained.
- No Bid shall be entertained without **Rs. 40,000/-** Bid Security in shape of CDR / Bank Draft issued in favor of Punjab Thermal Power (Private) Limited.
- Other conditions are attached.

**Manager Administration  
Punjab Thermal Power (Pvt.)  
Limited**