



An ISO 9001  
Company

## Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

MATERIALS MANAGEMENT

<b>TITLE:</b>  <b>Procurement of Enterprise Telephony System on six Years Financial Lease</b>	Phone: +91 431 2577331 Fax : +91 431 252 07 19 Email : srchandran@bheltry.co.in Web : <a href="http://www.bhel.com">www.bhel.com</a> , <a href="http://tenders.gov.in">http://tenders.gov.in</a>
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	<b>Reference Number:</b> Enquiry 2651100022	<b>Enquiry Date:</b> 14.11.11	<b>Due date for submission of quotation: 17.12.11</b>
You are requested to quote the Enquiry number date and due date in all your correspondences. This is only a request for quotation and not an order			

### Procurement of Enterprise Telephony System on six Years Financial Lease

BHEL commercial terms & conditions with Technical specifications can be downloaded from BHEL web site <a href="http://www.bhel.com">http://www.bhel.com</a> or from the Government tender website <a href="http://tenders.gov.in">http://tenders.gov.in</a> (public sector units) Bharat Heavy Electricals Limited) under enquiry reference "2651100022"	
Tenders should reach us before 14:00 hours on the due date Technical bid will be opened at 14:30 hours on the due date Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present.	Yours faithfully, <b>For Bharat Heavy Electricals Limited</b>  Manager / Capital Purchase/ Manufacturing



# BHARAT HEAVY ELECTRICALS LIMITED

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**ENQUIRY**  
(INDIGENOUS)

( A Government of India Undertaking )  
HIGH PRESSURE BOILER PLANT  
PURCHASE DEPARTMENT - FOSSIL BOILERS  
THIRUCHIRAPALLI - 620014  
TAMILNADU (INDIA)

PHONE : 2577331  
GRAMS : BHARATELEC  
FAX NO: 2520719  
E-mail : <srchandran@bheltry.co.in>  
Web: http://www.bhel.com(or)http://tenders.gov.in

429-002/A

Collective No.	Enquiry Date	Due Date For Quotation
2651100022	14.11.2011	17.12.2011

Please quote Enquiry No, Date and due date in all correspondences.  
This is only a request for quotation and not an order

Item	Description	Unit	Quantity	Delivery Quantity	Schedule Date
10	Proc of Telephony system for Trichy	AU	1.000	1.00	31.03.12
20	Proc. of Telephony system for Thirumayam. PROCUREMENT OF ENTERPRISE TELEPHONY SYSTEM ON SIX YEAR FINANCIAL LEASE RENTAL BASIS	AU	1.000	1.00	31.03.12

Specifications attached separately.  
General Terms and Conditions as per Annexure- B

**General Note:**

1. Please submit your detailed offer in two part bid system i.e  
Part-I. Technical and commercial (unpriced bid) in a sealed cover  
Part-II. Priced offer in another separate sealed cover.  
  
Both the covers shall be duly super-scribed with tender reference and due date of opening. These covers shall be put in a single cover duly super-scribed with tender reference and due date of opening and addressed to us.
2. Point-to-point confirmation to BHEL's specification and commercial terms & conditions shall be provided. The supplier must fill and send all the Annexures as indicated in the list of attachments. Annexure-A & Annexure-B (with taxes and duties, without indicating prices) should be filled and submitted along with the technical bid, else your offer is liable for rejection.
3. Offers with validity of less than 180 days and non-acceptance of LD & RP clause, will lead to rejection of submitted offer.
4. Signed Integrity Pact (IP) should be furnished along with offer. IP should be signed by authorized official of the bidder. Offer without signed IP will not be considered
5. If the due date of tender opening happens to be a holiday, the

The offers should reach us 30 minutes before the time of opening of tenders. The offers will be opened at 14.30 hrs on the due date of tender in the presence of tenderers who have submitted their offer and who may like to be present for the tender opening. Late and delayed offers are liable to be rejected.

Yours faithfully,  
For **BHARAT HEAVY ELECTRICALS LIMITED**

  
MANAGER / PURCHASE  
(FOSSIL BOILERS)  
**S. RAMACHANDRAN**  
Dy. General Manager / MM / MFG  
Purchase / CP, SP & WC  
BHEL, TRICHY - 620 014.



# BHARAT HEAVY ELECTRICALS LIMITED

( A Government of India Undertaking )  
HIGH PRESSURE BOILER PLANT  
PURCHASE DEPARTMENT - FOSSIL BOILERS  
THIRUCHIRAPALLI - 620014  
TAMILNADU (INDIA)

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2651100022 / 14.11.2011

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tenders will be opened on the next working day.

6. Pre-bid meeting will be held 15 days prior to the due date for tender opening.

7. All clarifications may be sought at least ten days prior to tender due date, from the undersigned with due written request.

8. This contract will be monitored by independent external monitor by name Shri. J.M Lyngdoh, IAS (Rtd)

9. BHEL reserves the right to go for a reverse auction (RA) instead of opening the submitted sealed bid, which will be decided after technical evaluation. Information and general terms and conditions covering RA are given in commercial terms and conditions (Annexure-A/Point no.18)

10. Corrigendum if any, with respect to this tender will be hosted only in the website <http://www.bhel.com> or <http://tenders.gov.in>. You are requested to visit the website regularly for updates.

#### List of Attachments:

1. Technical specification-21 Pages
2. Deviation in technical specification - Annexure-I
3. No Deviation Certificate - Annexure-II
4. Third Party non-Disclosure Agreement - Annexure-III
5. Experience Details - Annexure-IV
6. Commercial Terms and Conditions - Annexure-A
7. Model Price bid format Finance Lease- Annexure-B
8. Model Price bid format Outright Purchase- Annexure-B1
9. Integrity Pact - Annexure-C


#### Enclosures:

"LD clause has to be confirmed without fail."

"Payment to vendors will be made only thro E-Payment mode."

The offers should reach us 30 minutes before the time of opening of tenders. The offers will be opened at 14.30 hrs on the due date of tender in the presence of tenderers who have submitted their offer and who may like to be present for the tender opening. Late and delayed offers are liable to be rejected.

Yours faithfully,  
For **BHARAT HEAVY ELECTRICALS LIMITED**

  
MANAGER / PURCHASE  
(FOSSIL BOILERS)  
**S. RAMACHANDRAN**  
Dy. General Manager / **MMR/MEG**  
Purchase / CP, SP & WC  
BHEL, TRICHY - 620 014. 14/11/11

# **Bharat Heavy Electricals Limited**

**High Pressure Boiler Plant**

**Tiruchirappalli**

**Informatics Centre**

**Telephones**



**Tender for**

**Supply of Enterprise Telecommunication Systems**

**On finance lease**

**For a period of 6 years**

**14.11.2011**

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# 1. REQUIREMENT

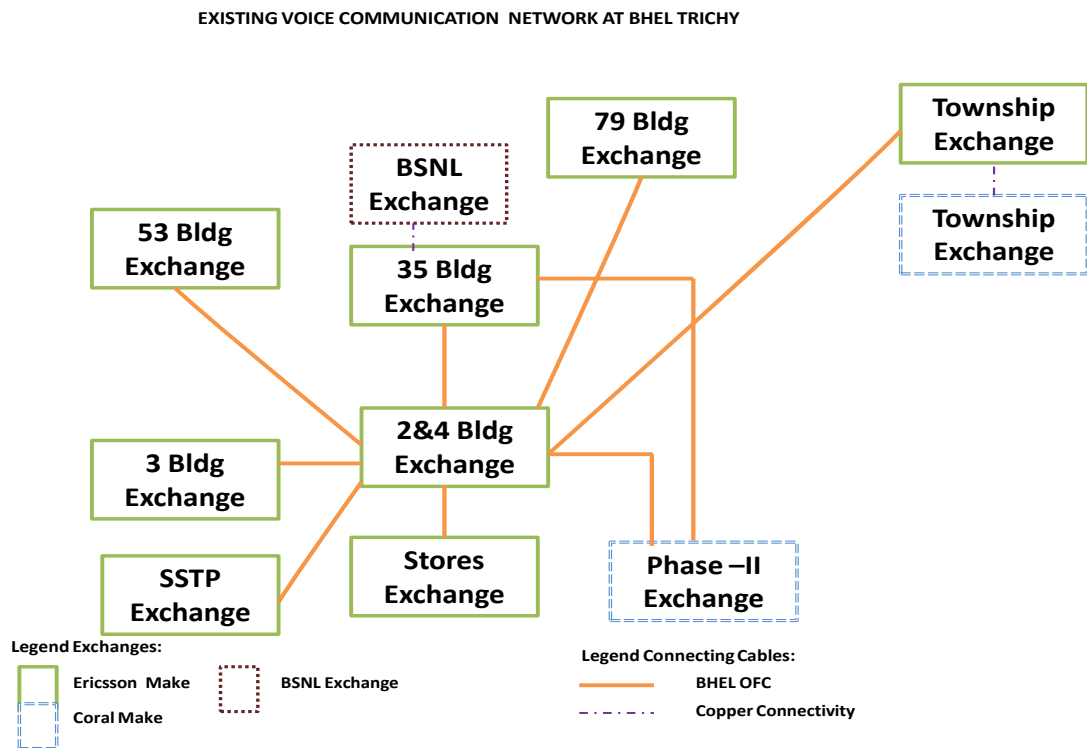
## 1.1. Introduction

BHEL-Trichy proposes to upgrade its Enterprise Telecommunication system. The existing ISDN system was installed in 2002 and it is planned to replace it with IP PBX. As part of the proposed system, it is also proposed to establish a voice network at Thirumayam plant of BHEL, which is located approximately 100 Km from BHEL-Trichy. Leased line of 2 Mbps bandwidth is available between BHEL-Trichy and BHEL-Thirumayam, which will be used for providing interconnectivity. The entire new system shall be supplied on **6-year Financial Lease** and after the lease period, BHEL shall buy the entire system at a notional value of Re. 1. The bidder shall undertake to provide maintenance support, if BHEL opts, for two more years after the expiry of the Financial Lease period.

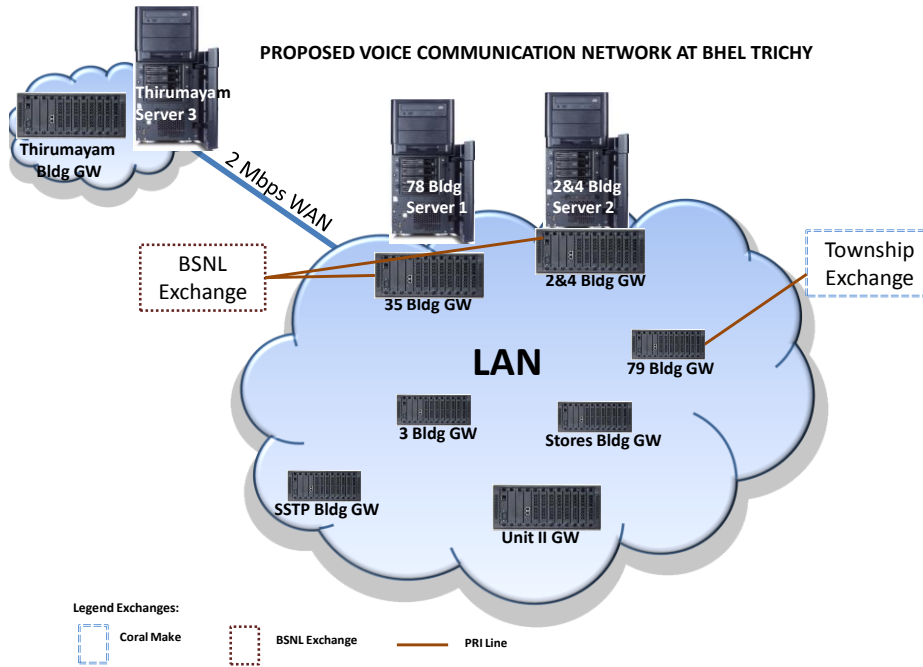
### Existing Enterprise Telecommunication system

The Enterprise Telecommunication System of BHEL, Tiruchirappalli has ISDN EPABXs located at 9 different locations within the campus. There are about 3000 analog instruments and 800 digital instruments. BSNL RSU is situated within the campus and PRI lines have been extended from the RSU to the BHEL Telecom system. In addition, about 150 direct lines from BSNL RSU have also been extended to users.

The ISDN EPABXs are interconnected using fibre optic cables. The connectivity diagram is given below:



## Proposed System



The new system shall meet the capacity required to meet the business growth during the next six years. The solution shall be the state-of-the-art communication system on 24x7 availability. All the hardware and software used in the system shall be highly reliable and resilient, so that an uptime of 99.95% is ensured for the total system.

The proposed telephony system shall be based on Server and Gateway architecture. The system shall be capable of supporting Analog phones, SIP phones, IP phones, Video phones and PC based communicator clients from Day 1. The call processor at the core shall be able to register popular makes of SIP phones directly to it without loss of standard telephony features.

The proposed system shall be based on open standards and shall be capable of interconnection with other telecommunication systems based on open standards, without loss of standard features.

The proposed system shall use the existing LAN for interconnecting the different locations and shall use the existing LAN for connecting SIP/IP phones. The campus LAN is on 10 Gbps / 1 Gbps links. Leased line of 2 Mbps bandwidth is available between BHEL-Trichy and BHEL-Thirumayam.

The installed capacity of the proposed system is 4500 SIP/IP ports and 2000 Analog ports. The system shall be scalable to 15000 ports with no additional hardware on the server side.

## 2. ELIGIBILITY CRITERIA FOR BIDDERS

'Bidder' means the Original Equipment Manufacturer / System Integrator who is offering the Enterprise Telecommunication System for this tender.

'OEM' means the Original Equipment Manufacturer whose equipment is being offered by the Bidder for this tender.

The Bidder shall fulfil the following qualification criteria, which shall be backed by necessary documents.

Signature of the Bidder

SI no.	Description	Vendor Conformance (YES/NO)
1	The Bidder should be in the Enterprise Telephony Business, involving supply and maintenance of IP PBXs, during the last 3 years. PO copies Should be enclosed.	
2	The Bidder should be a profitable company for the last 3 years continuously, with a turnover of minimum Rs. 100 crs / year for the last 3 years. Copy of the audited balance sheet for last 3 years should be enclosed.	
3	Bidder should be an ISO 9000 certified company. The ISO certification should be current.	
4	Bidder should have experience in deploying IP PBXs. Bidder/OEM should have implemented at least Two Nos. of 2,000 lines IP PBXs with SIP/IP Phones (at least 1,000 No.) and Voice gateways, during the last two years. PO copies and Commissioning certificates from the customers should be enclosed.	
5	The Bidder should have Registered and Incorporated office in India for last 3 years. Alliance/liasion office in India shall not be accepted.	
6	Bidder should have executed contracts under lease rental model. Document should be enclosed.	
7	Bidder and OEM should have a clean track record, i.e. the Bidder / OEM / any group company should not have been blacklisted by any PSU/Govt./Quasi Govt/Govt. Undertaking companies in India during the last three years. To this effect, a declaration should be given by the bidder.	
8	The Bidder not being OEM, should have highest level of partnership (Like Platinum / Gold / Premium etc.) with the OEM of the proposed system. Copy of the partnership document should be enclosed.	
9	Offered system should be TEC approved and should be the latest. Documents should be enclosed.	
10	Bidder other than OEM should submit authorisation letter from OEM to quote on behalf of OEM for this tender.	

**(RELAXATION OF THE ABOVE PRE-QUALIFICATION AND ELIGIBILITY CRITERIA WILL NOT BE ENTERTAINED UNDER ANY CIRCUMSTANCE. HENCE BIDDERS WHO DO NOT COMPLY WITH ONE OR MORE OF THE ABOVE ELIGIBILITY CRITERIA NEED NOT APPLY.)**

**Note:**

- (1) The Bidder shall sign all the pages of the Tender document and all the supporting documents. Signing of the document means that the Bidder has fully understood the Tender and complies with all the requirements. In case of any deviation, it has to be brought out explicitly.
- (2) One bidder shall represent only one OEM.
- (3) Bids not received by the due date and time shall be rejected and representatives of such bidders shall not be allowed to attend the bid opening.
- (4) OEM or Bidder shall have spares depot in South India (preferably in Bengaluru/Chennai) for the OEM components, to provide quick after sales support.
- (5) The Bidder shall have back-to-back agreement with the OEM to provide service and spare support for at least 8 years for the offered solution. Bidder shall give an undertaking to provide the agreement on award of contract.
- (6) Bidder shall note that the lease rental contract will be on Bi-partite agreement.

Signature of the Bidder

- (7) All customer references shall clearly mention the e-mail id, Mobile and Office phone numbers of customer contact.
- (8) BHEL reserves the full right to reject any bidder based on other reasons deemed fit but not mentioned above.
- (9) BHEL has the right to cancel/re-float the Tender at its discretion.

### **3. DOCUMENTS/CERTIFICATES TO BE SUBMITTED ALONG WITH THE BID**

Following documents shall be submitted along with the bid. The Bidder shall bear all cost associated with the preparation and submission of its bid and BHEL Trichy will not be responsible or liable for those costs. The bid, all correspondence and documents related to the bid shall be in English.

#### **Documents related to Technical and Un-priced Commercial bid**

- (1) Signed copy of the Technical specification
- (2) OEM partnership certificate and authorisation letter to quote for this tender
- (3) Documents mentioned in Eligibility criteria
- (4) Detailed network diagram / solution document of the offered system, which includes the model of server/gateway quoted and how UC/Conferencing/Mobility/Mirroring are achieved.
- (5) User license policy
- (6) Technical Brochures for the offered products
- (7) Verification procedure to check all the system capabilities (high availability, congestion-free, etc.)
- (8) Declaration from the OEM with regard to "5.22 Telephone Instrument", if applicable
- (9) Technical details of UPS / FCBC offered
- (10) Deviations, if any, as per BHEL Trichy's Format (Annexure-I) or "No-Deviations" Certificate (Annexure-II)
- (11) Non-Disclosure agreement (Annexure-III)
- (12) Previous Experience Details (Annexure-IV)
- (13) Commercial Terms & Conditions (Annexure-A)
- (14) Un-priced Commercial offer as per Price format (Annexure-B & B1)
- (15) Integrity Pact (Annexure-C)

#### **Document related to Price Bid**

- (1) Price in the Price Format as per Annexure B & B1

### **4. SCOPE OF WORK**

#### **4.1 Bidder's Scope of Work**

- (1) Supply, Install, Integrate, Migrate, Test, Commission and maintain the Telecommunication system at BHEL Trichy and at BHEL Thirumayam as per technical specifications & requirements of this tender. The system shall be supplied on 6-year Financial Lease and after the lease period, BHEL shall buy the entire system at a notional value of Re. 1. The bidder shall undertake to provide maintenance support during the lease period and if BHEL opts, for two more years after the expiry of the lease period.
- (2) Supply all the licenses necessary for the solution. The licenses shall be perpetual in nature and shall be in the name of BHEL-Trichy.
- (3) Supply and install endpoints.
- (4) Integrate with ADS for directory services and with MS Exchange 2010 and Microsoft Lync for Unified communication.
- (5) Supply and install a SMS gateway. (The SMS gateway shall have provision for mass messaging from console and for application-triggered SMS using API)
- (6) Supply and install mobile clients and soft phone clients.
- (7) Supply and install UPS/FCBC at each gateway location. Batteries shall be replaced by the bidder at the end of 3 years.
- (8) Supply and install all the equipment, racks, cables, fibre patch cords, UTP patch cord, adapters, power cords and any other interconnects required by the systems to meet the specification. The Bidder shall carry out all electrical and systems interfacing pertaining to equipment at the different locations as per the best international standards and practices.
- (9) Supply and install browser based enterprise telephone management application software to manage the various components of the communication system.
- (10) Supply and install Storage for voice mailboxes.

Signature of the Bidder

- (11) Supply and install required number of Krone boxes and modules, and connect the gateway to the MDF.
- (12) Integrate with the existing Coral Iris exchange at Township over QSIG from Bldg 79 gateway.
- (13) Integrate with the Polycom (EX H323, HDX 8000-720, HDX 4002) and Tandberg (990 MXP) Video conferencing solutions existing in the campus. Hardware and software required for fulfilling this requirement is under the scope of the bidder.
- (14) Arrange requisite tools, measurement equipment and resources required for installation and commissioning of the hardware, software and other equipment.
- (15) All software to be provided as part of the solution shall be licensed to "Bharat Heavy Electricals Limited –HPBP - Trichy". Two sets of all documents, manuals, administration manuals and software CD/DVDs shall be submitted to BHEL before commissioning the systems.
- (16) The Bidder shall ensure that none of BHEL's equipment/structure/setup gets damaged during commissioning and operations of the supplied equipment. Any damages, if caused to BHEL's property due to Bidder's activity/negligence or the operations of the equipment, shall be rectified, repaired by the Bidder at their own cost.
- (17) Maintain the hardware, software and other equipment throughout the lease period as per the service level agreement. Periodically take backup of the application and configuration. Two maintenance engineers shall be posted at Trichy and One maintenance engineer at Thirumayam. They shall be OEM trained engineers, preferably with OEM certification. The engineers shall be posted with the approval of BHEL.
- (18) The products shall be the latest model meeting the requirement. Products that have reached the end-of-sale or nearing end-of-sale within one year from the date of supply, shall not be offered.
- (19) Insurance of the hardware, software and other equipment during the duration of lease.
- (20) Movement of material inside the premises, including lifting to requisite floor is the responsibility of Bidder.
- (21) Any other hardware and software which is required to complete the solution shall be under the scope of the bidder.
- (22) The System (All the items) shall be supplied within 45 days after placement of order or issue of letter of intent/work order/Fax order and successfully installed/commissioned within 30 days as per scope of work in all respect from the date of supply of system.
- (23) Pre bid meeting shall be arranged (15 day before the due date) with all the bidders who are desirous to work. The pre bid meeting shall be held at Informatics Centre, near to 24Building at BHEL, Trichy-14.

## **4.2 BHEL Scope of Work**

- (1) PoE (IEEE 802.3af) switches for connecting SIP/IP phones.
- (2) Air conditioned exchange rooms at different locations.
- (3) AC Raw power at different locations as per requirement.
- (4) UPS power for the servers located at Bldg 78, Bldg 2&4 and Thirumayam. The bidder shall give the power ratings of the servers.

## **4.3 Migration Process:**

The suggested migration plan is as given below. However, the bidder shall submit a detailed migration plan within 15 days from the date of PO.

- (1) Enterprise Communication server shall be put into operation at least one week before migration.
- (2) The Bidder shall install all the SIP/IP Phones at different locations with approximately 2 m patch cable from Phone to PC.
- (3) Features like Boss-Secretary, One-touch dialing, Outward dialing etc. shall be completed before migration.
- (4) Fixing and termination of system cables in new Krone modules, which will be fixed in the existing MDF frames, shall be completed before the migration.
- (5) The downtime for migration shall be a maximum of three days.

## **5. TECHNICAL SPECIFICATION**

The technical specifications and essential features for the proposed 4500 (SIP/IP) +2000(Analog) lines EPABX system are given in the following paragraphs.

### **5.1 Technology**

The IP telephony system shall be based on Server and Gateway architecture. The system shall be capable of supporting Analog telephones, SIP/IP telephones, SIP/IP video phones and PC based communicator clients. The telephony architecture shall be SIP based and shall be able to register SIP phones. The offered system

Signature of the Bidder

shall use open standards for its operating system with user friendly GUI. BHEL has been mandated by Government to use IPv6 in its network in the near future. So, whenever BHEL requires that the IP address shall be converted to IPv6, the bidder shall do the conversion for all equipment supplied by the bidder, with necessary software, hardware and firmware, free of cost.

## 5.2 Architecture

The EPABX system shall be a single system on IP LAN with centralized call processing, with redundant servers in minimum of two geographically distinct locations (Building 78 and Building 2&4), wherein data is mirrored/synchronized on real-time basis among the servers. The secondary site/shall be the true replica of the main site. The servers shall be in active-active or hot-standby mode to ensure redundancy and reliability of the proposed system.

One more server with full configuration shall be placed at BHEL Thirumayam. The configuration of this server shall be replicated in any of the servers at Trichy. In case the server at Thirumayam fails, the server at Trichy shall takeover.

The system shall be based on modular design to support IP at signaling (not trunking), easy growth and future scalability. It shall be possible to take backup of the system configuration, user profile information and local contents of phone on a schedule basis. The number of calls between the server and gateway should be limited by bandwidth and not due to any hardware constraint.

It shall also be possible to operate the Thirumayam system independently with all the basic voice telephony capabilities.

## 5.3 Capacity Table

Location of the Exchange	Analog Ports	SIP/IP Ports
Bldg 35	300	4000
Bldg 2&4	600	
Bldg 3	300	
Bldg 79	100	
Stores	250	
SSTP	300	
Unit II	150	
<b>Capacity at Trichy</b>	<b>2000</b>	<b>4000</b>
<b>Capacity at Thirumayam</b>		<b>500</b>
<b>Total capacity</b>	<b>2000</b>	<b>4500</b>

Interfaces	Trichy	Thirumayam
PRI	12	4
PSTN Trunk	100	20
SIP Trunk channels	40	
Component	Trichy	Thirumayam
Voice mailboxes	600	
Voice mail ports	30	
Fax accounts	120	
Mobility	500	100
Mobile client	500	100
Soft client	500	100
Meet-me-conference bridge	60	

Slno.	Description	Quantity in nos.
1	SIP/IP Video Phones with Touch screen	25
2	SIP/IP Phones with 4 Line Display	350
3	SIP/IP Phones with 2 Line Display	1200
4	SIP/IP Phones with 1 line Display	1300
5	AC Adapter for SIP/IP phones	250
6	System energised analog phone with caller ID	500
7	Audio Conferencing Endpoint	10

**Note:**

1. PRI interface will be at 3 locations: 2 No. at Bldg 79, 5 No. at Bldg 35 and 5 No. at Bldg 2&4.
2. Meet-me conference bridge shall handle any combination of up to 60 in a conference.

**5.4 System Requirements**

- (1) The EPABX system shall be a single system on IP LAN with centralized call processing.
- (2) The voice gateway shall be configurable over TCP/IP connectivity. Serial port shall be the secondary option.
- (3) Networking with different EPABX systems via SIP & QSIG software with feature transparency throughout the network.
- (4) The system shall have SSL for secure remote access for maintenance.
- (5) System shall support IP extensions and IP trunk interfacing to support voice over IP.
- (6) The system shall ensure that there shall be no congestion even at 100% traffic (Non-blocking architecture). This shall be backed by a document.
- (7) The system shall be scalable to 15000 ports (with at least 10000 SIP/IP ports) with no additional hardware on the server side.
- (8) The gateway memory shall be based on flash memory for high reliability and fast rebooting. It shall be possible to take backup of the system on an external compact flash disk. In case the gateway is supported by the server, sufficient memory shall be provided.
- (9) The system shall have a minimum of 8 digit numbering plan.
- (10) System shall support 3<sup>rd</sup> party SIP phones (RFC 3261 and companion RFCs) with features supported as per SIP forum.
- (11) IP to SIP phone conversion shall be possible with/without a free firmware without any additional hardware. In case firmware update is required, it shall be provided.
- (12) System shall support standard SIP/H.323 protocols for IP Phones and Trunks. System shall support minimum 25 locations with media gateways.
- (13) System shall have centralized maintenance. System shall have centralized call billing. System shall integrate with popular email systems like MS Outlook and Lotus Notes. System shall have media encryption for signaling and voice. Server and gateway signaling shall also be encrypted.
- (14) API for XML/WML application development shall be provided.
- (15) All extensions shall have CLI functionality.
- (16) The system shall be inter-connectable with other IP PBXs in other locations of BHEL over WAN.
- (17) Proprietary protocols shall not be used for deployment.
- (18) There shall be communication management application software to manage the various components of the communication system.

**5.5 Server Requirements**

- (1) The system shall be Intel (Xeon or better) processor based main server. The servers shall be rack mountable. The main servers shall have redundant power supply. Supply of suitable rack for the servers in 78 building, 2&4 Building and Thirumayam is under the scope of the bidder.
- (2) The server shall have provision for defining trusted hosts.
- (3) The server shall be hardened against well-known vulnerabilities.
- (4) The server shall have Symantec Endpoint Protection antivirus software installed in it and shall be updated automatically throughout the leased period and the subsequent AMC period, if any.
- (5) The server shall have hot pluggable drives and power supplies.
- (6) The server shall connect to the IP network using 10/100/1000 BASE-T Ethernet interfaces. Each server shall have at least 2 No. Ethernet interfaces.

Signature of the Bidder

- (7) At least two numbers of servers in Active-active / active - hot standby mode shall be offered. The number of such servers shall be decided by the bidder to ensure the uptime requirement of 99.999%
- (8) The Active-active/hot-standby server shall be able to take over the telephony functions automatically as soon as the active server fails. During this interchange period, active calls shall not be dropped, though new calls may be blocked.
- (9) In case a separate server is required for registering SIP endpoints, it shall be provided. It shall also be duplicated in Active/Active or Active/Hot Standby redundant configuration.
- (10) The server for SIP registration shall have the capacity to register at least 10,000 SIP endpoints.
- (11) A separate server shall be provided at Thirumayam for local call processing requirement. However the configurations shall be mirrored at any of the servers in Trichy complex, which is located at a distance of 100 Km.
- (12) The system must incorporate inbuilt advance security features like network and application layer VPN, 128 bit or higher real-time media encryption, and malicious call Trace etc.
- (13) To ensure security of IP voice packets, end-to-end media Encryption shall be 128 bit AES.
- (14) There shall be an external backup option for a disaster recovery scenario. It shall be possible to take system configuration as well as operating system backups on an external removable medium like a flash drive or backup over the LAN.
- (15) The server shall have in-built DVD drive / USB port to allow installation of software and patches, etc.
- (16) All connections between the server and its gateways shall be over a secure encrypted connection.
- (17) The server shall allow installation and maintenance tasks to be performed via browser over a secure web connection.
- (18) The server shall be secure SNMP compliant (having version 3 or above), and the bidder shall provide appropriate MIBs which can allow it to be integrated to any third party NMS like HP open view, CA unicenter or IBM Tivoli.

## 5.6 Gateway

- (1) The Gateway shall support 10/100/1000 base T Ethernet connection providing TCP/IP connectivity.
- (2) The gateway shall provide UDP/IP support, as required by H.323 or SIP (to implement IP solutions).
- (3) The IP signaling capabilities shall include:-
  1. The registration, Admission, and security (RAS) protocol of H.323/H.225 or SIP.
  2. The Q.931 protocol of H.323/H.225 or SIP for signaling and advanced application.
  3. The H.245 protocol of H.323 for user input indication messages.
  4. The SIP or H.323 based signaling for IP soft phone and IP Telephone.
- (4) Gateway shall support hybrid end point mixture (IP as well as analog endpoints).
- (5) The availability of each gateway shall be maintained at 99.95%, System shall have universal port slot architecture / shall be modular to support seamless growth and ease of management (In case Bidder has any such limitation the same should be mentioned specially). Applicable peripheral cards (Extension card, trunk card, ISDN card, etc.) shall be HOT Swappable.
- (6) Alerts (email and SMS) shall be sent to predefined persons, in case of alarm events.
- (7) Each gateway shall support all type of trunks.
- (8) The gateway shall contain all necessary SIP resources and a standard based connectivity for legacy trunk and stations.
- (9) Gateway shall support standard codecs like G.711, G.729, G.722, G.723.
- (10) It shall also support additional VoIP resource modules if required.
- (11) The gateway shall have the option for using WAN/LAN data modules.
- (12) The gateway shall have minimum 2 Ethernet ports and 1 serial port.
- (13) The gateway shall support Media Modules that allow support for interfacing network access such as ISDN BRI, ISDN PRI, PSTN Trunks, as well as connections to TDM based endpoints. The modules of the media gateway shall be optional components that can be mixed and matched inside the media gateways.

## 5.7 DSP Resource

- (1) The system shall have built in digital signal processor (DSP) which encodes the audio using the selected codec. These resources shall be used dynamically on call-by-call basis. Adequate number of DSP resources shall be provided at each location. Necessary document support shall be provided for arriving at the number of resources at each location.
- (2) It shall use Real Time Protocol (RTP) and User datagram protocol (UDP) for communication over internet protocol (IP) over Ethernet transport stack (IEEE802.1).
- (3) The physical connection for the DSP to the Ethernet shall be standard 10/100/1000 base T.
- (4) It shall support dynamic jitter buffer. The delay across the dynamic jitter buffer shall automatically adjust to the behavior of the underlying IP network, providing the minimal latency needed to ensure a consistent audio stream.
- (5) Echo cancellation shall be performed on the DSP output.

- (6) It shall support the standard audio codes used in the industry:-G.711 (a-law and MU-LAW), G.723, and G.729 (Including G.729A, G.729B).
- (7) It shall also support the Real Time Control Protocol (RTCP), a companion to RTP which provides information about delay jitter, lost packets, and other data useful for analyzing voice quality. The offered IP telephony server shall have capability to monitor and display the above information on call by call basis. There shall be option of having historical data of such information to help administrator.
- (8) It shall also support standard quality of service (QoS) mechanisms defined in differentiated services (diffserv) and 802.1p required to prioritize audio traffic across the IP network by marking packet headers in Type of service (TOS) bits.
- (9) QoS tagging shall be possible for signaling as bearer traffic.
- (10) System shall be fully backward compatible with all SIP based voice and data international standards.
- (11) It is very important to note that no proprietary protocols or solutions or limitations will be accepted as part of this project.

## 5.8 Quality of Service

The offered solution shall provide a standard QoS implementation for voice and signaling traffic.

## 5.9 Handling Digits DTMF Tones

The system shall provide SIP/H.323 for transmitting tones out-of-band using either Q.931 INFO messages (keypad IE) or H.245 user input indication messages.

## 5.10 FAX Transmission over IP

The system shall provide H.323/SIP for FAX transmission using the T.38 or higher codec. The system shall be able to detect inbound fax tones and construct T.38 media stream automatically.

## 5.11 Interface Compatibility

The telephony server shall support following trunk interfaces/protocols.

- (1) **ISDN-PRI with QSIG:** The system shall be able to provide ISDN-PRI trunk with QSIG to support the private networking. The Multiple subscriber number (MSN) shall be fully compatible with ISDN standards as per ISO.
- (2) **SIP Trunk:** The system shall have integrated SIP trunk interface based on internet protocol (IP) technology for transmitting voice and fax over corporate intranet, or private local area network (LAN).
- (3) **H.323 Trunks:** The system shall have integrated H.323 trunk interface based on internet protocol (IP) technology to transmit voice and fax over the internet, corporate intranet or private local area network (LAN), routing certain direct, point -to- point communications over IP network.

## 5.12 Telephony System Features

The system shall provide following features and facilities.

- (1) **Call Converge:** Provides alternate answering point for calls that might otherwise go unanswered.
- (2) **Zonal Paging:** A phone user shall be able to simultaneously broadcast a message over traditional announcement systems.
- (3) **Authorization Codes:** Every user shall have his own authorization code to make outgoing calls thereby ensuring no misuse of the system.
  - (a) System shall give the user complete flexibility to dial his personal identification number or authorization code consisting of 4-7 digit from any location and thus to utilize all his facilities from there.
  - (b) Any call made from other location by dialing authorization code shall be billed against that authorization code and not against the extension number the call was made.
- (4) **Boss-secretary Feature:** The incoming call to the Boss shall ring on the secretary's phone and can be answered from both officer's as well as secretary's extension. For call origination, officer can contact secretary with one touch key. The system shall allow users to dial frequently called or emergency numbers both internal and external with fewer button presses. The number of secretaries may vary from one to three. Status of Boss instrument shall be indicated at secretary's instrument and vice versa. The incoming caller ID shall be displayed in all the secretary phones before answering the call, when there is more than one secretary.
- (5) Executive Override.
- (6) **Call forwarding/diversion:** Allows all calls to an extension number to be forwarded to a selected internal/extension number, a specific attendant, or to a voice terminal in the public network.

- (7) **Call waiting indication/off-hook queuing:** An extension engaged on a call may be given an audio/visual tone signal to indicate that there is an internal or external call waiting. There are two sources for this signal. Either an operator camps a call onto a busy extension or another extension wishing to make contact with the busy extension. System shall give different back tone to the caller whenever call waiting is activated.
- (8) Call pickup within the group and outside the group by punching a code and the ringing extension number.
- (9) **Integrated Directory:** It shall be possible to provide directory search on SIP/IP phones. The directory contains an alphanumeric listing of the names and extension numbers assigned to all voice terminals administered in the system.
- (10) System shall provide 'Do not disturb' facility for all users who do not want take incoming calls.
- (11) **Alternate Routing:** Facility to automatically re-route calls which encounter busy trunks on the initial route. Automatic digital translation shall be carried out by the system. Provides the possibility of reaching external destination via different routes.
- (12) **Call Detail Recording:**
  - (a) Records detailed Call information on all outgoing and incoming calls on specified trunk groups and extension, including extensions administered for intra-switch recording and sends this information to a CDR input device.
  - (b) Record formats shall be flexible to allow for customization of output.
- (13) **Class of Restriction:** Call origination and termination privileges like,
  - (a) Calling party restrictions
  - (b) Called party restrictions
  - (c) Forced entry of account codes
  - (d) Limiting certain users to access trunk line depending on time of day.
  - (e) Restricting list of users from accessing a list of numbers
  - (f) Restrict an extension to be "only incoming" or "only outgoing"
- (14) **Direct Inward Dialing:** The system shall support direct dialing to extensions from outside parties.
- (15) **Direct Outward Dialing (DOD):** The offered exchange shall have the facility for extension users to access public telephone network through "DOD" by dialing "0". Different access rights shall be available for different users (STD, ISD etc.). Route access codes shall not be displayed to the user.
- (16) **Centralized Attendant Service:** Enables private network attendant to be consolidated on one of the switches in the network.
- (17) **Configuration Data Changes:** The system shall allow selected configuration data to be upgraded from the system terminal. For system integrity certain commands shall be protected by way of password and are unable to be changed from the customer administration terminal unless a high level password is entered. The commands that shall be protected are those that could affect traffic if entered incorrectly or could be used to perform telephone fraud (i.e. Direct Inward Subscriber Access feature). These commands will be reserved for selected maintenance staff.
- (18) **Day /Night Trunk control:** To reduces costs and improve system security the call of service programming shall define the permitted access to trunk lines under normal/night switched conditions.
- (19) **Distinctive ringing:** The system shall provide audibly different station ringing patterns to distinguish between internal, external, and special feature calls, senior officer calls, emergency calls etc.
- (20) **Intercept calls:** Rerouting of Calls to vacant/selected extension number or to a recorded announcement.
- (21) **Forced authorization code:** EPABX Admin must be able to assign codes to individuals, projects, or customers. Implementing these codes will enable management to charge expenses directly to the appropriate departments and to control access to long-distance facilities, beyond normal class of service restrictions. Call detail recorder must collect and report the information permitting complete tracking of calls.
- (22) **Flexible number plan :**
  - (a) The system shall have not direct correlation between the permanent positions in the switch and the extension directory numbers. The dialed extension directory number is translated into the line number appearance by the processor.
  - (b) A user must be able to be assigned an extension number and keep the same number regardless of their location within the campus.
- (23) **Fully Restricted Extensions:** Extensions must be able to be barred from all forms of outgoing access, except calls to emergency services, through-enhance programming. This will restrict the extension to receiving incoming calls only.
- (24) **Music-On Hold:** The system shall provide music and/or recorded/announcement information to callers on hold.
- (25) **Least Cost Routing (LCR):** System shall support LCR to analyze outgoing calls and to route them through the available network on the most efficient and, cost effective route. The LCR patterns can be changed on a Time- of-Day basis.
- (26) **Multiple Operator Positions:** Multiple operator positions shall be provided, and exchange lines and functions may be grouped to be handled by one or more operator positions.
- (27) **System Traffic Reports:** Traffic statistics shall be provided on incoming and outgoing trunk groups, attendant console, station hunt groups, and individual stations. The information reported shall include the number of calls and call duration. Bidders must describe the proposed system's traffic reporting capabilities.

- (28) **Night Service Facilities:** Night service support shall be available to route incoming calls are to pre-program answering positions.
- (29) **Recorded Announcement:** Provides a recorded announcement to various types of calls, including that receiving intercept treatment, those waiting to be answered by a group or department. The announcement board shall be able to connect 500multiple callers at a time.
- (30) **Loop resistance:** The offered system shall support loop resistance as per standards. It shall be possible to connect external ringing units, It shall support ability to provide Parallel phone.
- (31) **Security Violation Notification:** Notifies a designed attendant console or display equipped voice terminal of an invalid attempt to access the system. The system administrator may also print a security violations status report.
- (32) **System abbreviated dialing:** The proposed system must have the ability to list of frequently called numbers available on a system. Wide basis to station users. Bidders must state the capacity limitations of the proposed system, including the maximum digits per entry.
- (33) **Tenant Partitioning:** Provides telecommunications service to multiple independent groups of users through a single PABX. Most commonly, this is used to provide telecommunications service from a single provider to multiple tenants of an office complex. The features can be used to provide group services, such as departmental attended or multiple music sources, on a single customer system.
- (34) **Uniform Numbering Plan:** The system must be able to implement a uniform numbering plan for BHEL Trichy, if required it shall also be possible to accommodate all the units of BHEL at a later stage.
- (35) **Voice Mail/integrated Voice Response:** Vender shall provide system integral/system add-on capabilities for voice mail and IVR.
- (36) **Meet-Meet conferencing:** The system shall provide meet-me multi-party conference from any communication device internal or external. The meet-me conference system shall be of same OEM make. It shall be possible to assign personal meet-me bridge numbers to end users, or to conference rooms allowing conferencing on demand.
  - (a) It shall allow user to display each conference party's name & number.
  - (b) It shall allow the Conference Lead to mute or disconnect a particular party.
  - (c) It shall allow user to swap between someone on soft hold and the talking party to prepare to set up conference.
  - (d) It shall provide users with display phones to see help message that will guide the user through conference and transfer procedures for traditional conferencing.
  - (e) It shall be possible to schedule meetings from MS Outlook.
  - (f) Facility shall be provided to record conferences concurrently. The recording shall be done on a common hard disk storage. Storage shall be provisioned for total conference duration of 40 hours.
- (37) **Adhoc Conferencing:** The system shall allow a minimum of3 party adhoc conference of at least 100 groups.
- (38) **Station lock:** The system must allow users to lock their phones, locally or remotely, to prevent unauthorized outgoing calls. It must provide visual or audible indication when the phone is locked. Activation/deactivation of station must be easy and user friendly.
- (39) **Software programmable parameters:** The system shall have user friendly GUI for configuring the extension and the exchange.
- (40) **Internal Automatic Answer (IAA):** Allows specific voice terminals to answer incoming internal calls automatically. IAA is intended for use with selected voice terminals that have a built in speaker phone or the headset option enabled.
- (41) **FCTs for least cost routing (LCR):** The system must have the capability to integrate with FCT for least cost routing for all CUG enabled mobile calls. It shall be possible to restrict the users who can be called using this service.

**5.13 Software requirements:** Software updates and patches shall be made available free of cost throughout the lease period.

**Call billing software:** The system shall have call billing software that shall be able to log all calls made and received by an extension either internal or external. Automatic emails shall be sent to the users indicating the details of call made by him for the month. Customized reports on usage shall also be generated. Separate call billing software shall be installed at Thirumayam.

#### **5.14 Unified Messaging Specifications:**

- (1) The offered UM platform shall be from the same OEM vendor and it shall be appliance / server based.
- (2) The offered UM voice mail system shall have the capability to support both voice and fax.
- (3) Native Fax server support shall be available in the UM. Users shall be able to send fax from their PC and receive fax on their e-mails. It shall also be possible to map a fax number to a group of users.(Implementation details shall be given.)
- (4) The voice mail system shall be capable of being deployed in a networked or a centralized configuration.

- (5) The offered voice mail platform shall be in a highly available and redundant architecture capable of providing LAN backup. Necessary hardware for voice mailboxes is in the scope of supply of the bidder.
- (6) The offered voice mail system shall be accessed by a variety of clients including PC email clients, web browser clients etc.
- (7) The offered UM platform shall support standards like SMTP/MIME, LDAP, SNMP, SIP, H.323, QSIG, and G.711
- (8) The offered UM platform shall be capable of supporting applications like caller applications and subscriber options for enabling customizations and personalization of the standard TUIs.
- (9) The offered UM platform shall integrate with MS Exchange e-mail platform
- (10) The offered platform shall support role based access control support to define administrative roles and privileges

#### **5.15 Unified Communication**

Software and hardware (including any intermediate server) shall be provided to integrate the Enterprise Telephone System with MS Lync Server (50 users), to provide unified communication features like Instant Messaging, Presence, Video conferencing and Click to dial.

OEM shall have their own Unified Communication products.

#### **5.16 Soft Client on Desktop:**

- (1) SIP based soft phone telephony access shall be possible for Windows 7 / Windows XP with compatibility for latest Windows OS
- (2) Single soft client shall be provided for H.323 and SIP environments
- (3) Multiple line appearances
- (4) Usage Modes (Office Phone, PC, Any Phone)
- (5) Lookup/Dial Enterprise Contacts via LDAP
- (6) Local soft phone Call Log
- (7) Shall be possible to have video call and conference using standard web cam
- (8) Use of LDAP directories shall be supported through the use of corporate address books, Outlook contacts, etc. to simplify searches.
- (9) Soft Client shall be capable of providing presence information for the other users within directory / contacts list.
- (10) Soft client shall be capable of providing instant messaging (IM) capabilities with others users in the directory.

#### **5.17 Mobile based soft client:**

- (1) PBX features available for hard phone shall be available on the GSM based mobile phone client.
- (2) Intuitive GUI gives access to "office phone" functionality from mobile device
  - (a) Dial by Extension
  - (b) Multi-party conference
  - (c) Transfer
  - (d) Outbound dialing via PBX
- (3) Corporate directory integration
- (4) The soft phone shall also have simultaneous ringing.
- (5) Ability to provide/deny access to enterprise EPABX outward dialing feature.
- (6) Support for leading platforms like Symbian, iPhone, Bada and Android platforms.

#### **5.18 Mobility:**

- (1) Parallel ringing of both desk phone and GSM mobile phone.
- (2) Call answering in any of the two phones. Call shall not be in conference mode. That is, it shall not be possible to overhear the conversation in the other device.

#### **5.19 Extension Facilities:** The system shall comply with each of the following:-

- (1) **Abbreviated Dialing:** It shall be possible to create 50 groups, each with 500 numbers (Local, STD, ISD, Mobile) and allow access of these numbers, only to desired extensions without actually providing them outward dialing-facility.

- (2) **Automatic call back:** An extension may initiate supervision on a busy extension by processing one key or dialing an access code. The extension will automatically ring when the wanted (busy) extension becomes free. The calling party can cancel the supervision.
- (3) **Call Hold:** Allows voice terminal users to disconnect from a call temporarily, use the voice terminal for other purposes, and then return to the original call.
- (4) **Call Park:** Provides the ability to place a call on hold and then transfer the call to an answer back channel. The call can then be answered on any other voice terminal within the switch.
- (5) **Call pick-up:** Allows anyone within a specified call pickup group to answer at his/her own voice terminal a call that is ringing at another extension within the group.
- (6) **Distinctive ringing:** Help voice terminal users and attendants distinguish between various types of incoming calls by providing several distinctive burst patterns.
- (7) **Hot line service:** Provides automatic dialing of a predetermined number by going off-hook.
- (8) **Speed dialing:** Provides single key access to frequently dialed numbers. Any programmable key can be used. The user or system administrator programs the number the key. When the key is pressed, the programmed number is dialed.
- (9) **Caller ID** for all extensions

## 5.20 System administration and maintenance facilities:

### (1) System Features:

- (a) System shall support single point maintenance at central location with just one terminal available for entire system management to provide for effective and easy system management.
- (b) System management shall automatically do health check of the system.
- (c) System shall have the provision of instant fault information.
- (d) System shall support remote maintenance facility.
- (e) System shall have the provision of automatically identifying and isolating faulty trunks.
- (f) System shall have the capability for malicious call tracing.
- (g) System shall convey fault information on the system terminal, mobiles and e-mails.
- (h) System shall allow multiple log-in either locally or from remote.
- (i) It shall be possible to integrate the servers with existing Syslog server.

### (2) System administration & maintenance terminal:

- (a) Telephony server shall provide Graphical user interface with 'Help' menus.
- (b) The remote administration shall have SSL access and be secured by way of password protection.

### (3) Login requirements:

- (a) The system shall be able to automatically block user logins that have not been used for a prolonged period of time.
- (b) The capability to restrict logins to certain processes shall be provided if multiple processes are accessible.
- (c) The capability to restrict logins to one level of access shall be provided if multiple levels of access are provided.
- (d) The capability to assign user privileged based on the roles and functions shall be provided.
- (e) Login activity shall be recorded in a historical record.
- (f) A capability to lockout users shall be implemented after successive failed login attempts.
- (g) Successive failed login attempts (due to incorrect username or password) shall trigger a security notification.
- (h) Failed login or access attempts shall not reveal the presence or absence of login IDs or accounts.
- (i) Any pre-defined accounts that are not used shall be disabled.

## 5.21 Emergency Notification Services:

- (1) The Notification Services shall deliver real-time multimodal notification to a wide variety of communications devices, including analog phones, cell phones, enterprise communications devices and SIP/IP phones. Pre-recorded audio messages shall be sent to analog phones and text message to cell phones.
- (2) The Notification Services shall automatically announce the emergency in all speaker phones in the emergency zone.
- (3) The Notification Services shall broadcast messages in either text or audio format to any device generally accessible over the telephony (Enterprise, PSTN and Cellular) or IP (LAN, WAN) network.

- (4) The Notification Services shall include a web-based management interface for creating and broadcasting messages, administering and managing user and group profiles and for real-time and post event broadcast reporting and analysis.
- (5) The solution shall entail detailed reporting in order to view who has responded to a notification broadcast, how and when they responded.
- (6) The management interface shall support role definition. Roles can be dynamically defined and restrict what a user or class of users (group) can view or do with the system.
- (7) A message broadcast shall be able to be initiated through either the management interface, an inbound phone call or a third party system using the open web services API (XML).
- (8) The number of end-points to be notified in each notification shall be at least 10 (Blast dialing to internal, external and GSM).
- (9) The Notification Services shall provide an open web service API, such that third party systems can be integrated and use the Notification Services as a communications-based multimodal broadcast engine.
- (10) The recipient list may also exist external to the Notification Services with a third party system, such that at broadcast time, the list of recipients to notify is passed to the Notification Services Solution through the open web services API, by the calling third party system.
- (11) The architecture shall support a highly available, geo-redundant, horizontally scalable architecture
- (12) It shall integrate with third party communications infrastructure using industry standard SIP protocol and web services.
- (13) The Management interface shall provide summary of real-time and historical reporting.
- (14) The Notification Service shall integrate with the existing IP based Fire alarm modules.

## 5.22 Telephone Instrument:

The requirements of the end points are as follows.

### (1) Analog instrument:

- Pulse/tone switchable
- Modular connection plugs for line and handsets
- Electronic ringer with adjustable volume
- Flash, Redial, Caller ID, Call history, Call log functions
- No local battery for caller ID (system energized)
- Desktop model
- Hands free dialing

### (2) SIP/IP terminals:

SIP/IP telephone types given below shall be of OEM make.

#### SIP/IP Telephone – Type1

- Graphical display, minimum 1 line
- Dual 10/100 Mbps switched Ethernet ports (LAN and PC ports) - Power over Ethernet IEEE 802.3af
- Hard key for Speaker, Mute, Volume Up and Volume Down
- Call list with 10 latest incoming, outgoing and missed calls
- Different ring signals for different calling lines (internal / external)
- Hands-free operation with full-duplex voice support
- Media and signaling encryption via TLS and SRTP
- IEEE 802.1x

#### SIP/IP Telephone – Type2

- Graphical display, minimum 2 lines
- Minimum 2 dedicated line/call appearance Keys
- Hard key for Speaker, Mute, Volume Up and Volume Down
- Boss/Secretary busy status indication
- Dual 10/100 Mbps switched Ethernet ports (LAN and PC ports) - Power over Ethernet IEEE 802.3af
- Call list with 10 latest incoming, outgoing and missed calls
- Different ring signals for different calling lines (internal / external)
- Distinct LEDs for voicemail indication
- Hands-free operation with full-duplex voice support
- 2 No. context-sensitive programmable keys
- Media and signaling encryption via TLS and SRTP

- XML support
- IEEE 802.1x
- Power save mode

### **SIP/IP Telephone – Type3**

- Graphical colour display, minimum 4 lines or 5"
- Minimum 2 dedicated line/call appearance Keys
- Dual 10/100 Mbps switched Ethernet ports (LAN and PC ports) - Power over Ethernet IEEE 802.3af
- Hard key for Speaker, Mute, Volume Up and Volume Down
- 4 No. context-sensitive programmable keys
- Boss/Secretary busy status indication
- Call list with 10 latest incoming, outgoing and missed calls
- Distinct LEDs for voicemail indication
- Different ring signals for different calling lines (internal / external)
- Hands-free operation with full-duplex voice support
- Media and signaling encryption via TLS and SRTP
- Bluetooth headset support
- XML support
- IEEE 802.1x
- Power save mode

### **SIP/IP Telephone – Type4**

- Min 7 inch Color Touch Screen LCD Video phone
- Intuitive graphical user interface and navigation menus
- Dual 10/100 Mbps switched Ethernet ports (LAN and PC ports) - Power over Ethernet IEEE 802.3af
- Hard key for Speaker, Mute, Volume Up and Volume Down
- Bluetooth headset support
- XML support
- Minimum 2 dedicated line/call appearance keys with LEDs.
- Boss/Secretary busy status indication
- Minimum 10 programmable soft keys
- Different ring signals for different calling lines (internal / external)
- Personal directory and Redial list with Picture support
- One-touch call transfer, conference or call park
- Call list with 10 latest incoming, outgoing and missed calls
- IEEE 802.1x
- Power save mode

### **SIP/IP Conference Phone – Type 5**

- Omni-directional microphone with 360 deg coverage
- Coverage of not less than 30 m<sup>2</sup>
- Illuminated graphics LCD, minimum 3 lines
- Minimum 2 dedicated line/call appearance keys with LEDs.
- Dual 10/100Mbps switched Ethernet ports (LAN and PC ports) - Power over Ethernet IEEE 802.3af
- IEEE 802.1x
- Call list with 10 latest incoming, outgoing and missed calls
- Acoustic echo cancellation
- Background noise suppression

Bidder shall ensure that the extension facilities mentioned in this specification shall be available in all the type of the phones offered. There shall be no loss of features while making calls from one type of extension to another type.

In case the OEM does not have a product to meet the requirement of Type-4 SIP/IP telephone, then Polycom VVX1500 or Grand stream GXV 3175 is acceptable. (Bidder shall give a declaration from the OEM that the OEM does not have a product to meet the requirement.)

Signature of the Bidder

In case the OEM does not have a product to meet the requirement of Type-5 SIP/IP Telephone Polycom Sound Station IP 6000 is acceptable. (Bidder shall give a declaration from the OEM that the OEM does not have a product to meet the requirement.)

Type-1, Type-2 and Type-3 shall necessarily be OEM make.

**(3) Operator console minimum requirements:**

- (1) System shall have two PC based operator consoles. The software shall operate on Windows 7, 64 bit OS. BHEL will provide the PC. System shall support different console groups.
- (2) Console shall be configured as principle, day mode, day and night mode capabilities.
- (3) Console shall have alarm indication information.
- (4) Console shall have capability to verify status of trunk.

**5.23 Training:**

Administration Training shall be provided to at least 5 engineers of BHEL.

Training on XML application development shall be provided to at least 5 engineers of BHEL.

**5.24 Physical dimension and operating ambient environment condition:**

- (1) The physical dimension of the entire system, comprising of the exchange, ancillaries and subscriber-end equipment, shall be kept as small as possible.
- (2) The system shall operate in the ambient temperature ranges from 10 to 45 degree centigrade and relative humidity of about 60% to 85%R.H non-condensing.

**5.25 Power supply:**

- (1) The offered UPS/FCBC and battery banks shall be of reputed make and the necessary technical details shall be submitted along with the tender.
- (2) The offered system shall be provided with back-up batteries, for a standby time of 3 hours at all Gateway locations. (BHEL will provide UPS power for the servers located at Bldg 78, Bldg 2&4 and Thirumayam. The bidder shall give the power ratings of the servers.)

**5.26 Main Distribution frame:**

Krone modules shall be installed in the existing main distribution frames and interconnections between gateways and MDF shall be done.

**5.27 Earthing:**

Earthing (Including Earth pits) as per standards shall be provided by the bidder at each location of active devices.

## **6. SERVICE LEVEL AGREEMENT (SLA)**

The Enterprise telephone system shall fully meet the voice requirement of BHEL Trichy and BHEL Thirumayam.

Bidder shall be responsible for continuous and smooth operation of the Enterprise communication system for the entire lease period.

Maintenance and services shall cover services, repairs and replacements necessary to keep the hardware and software in good working condition.

Bidder shall post maintenance engineers along with required spares, in BHEL Trichy and Thirumayam, to ensure immediate attention in case of breakdown and maintain 99.95% availability of the system as a whole.

If the availability of the system, or part thereof, is below 95% on monthly basis, continuously over a period of 3 months, BHEL reserves the right to terminate the contract in full, without any cost implication to BHEL.

Signature of the Bidder

### **Penalty for SLA Non-Conformance:**

At the end of each quarter, downtime shall be calculated for all the hardware and software failure which affects the functionality of the Communication system or partial functioning of the system. Downtime will be calculated on monthly basis. In the following calculations, availability percentage is calculated as below:

$$\text{Availability percentage} = ((720 - \text{downtime in hours in a month}) / 720) * 100$$

### **Deduction for downtime:**

#### **Server cluster:**

Availability of 99.999% shall be ensured for the communication servers, working as a cluster. In case the server cluster uptime is less than 99.999% then it will be considered as the entire system has failed and deduction will be made from the total rental. If the uptime is less than 99.999 % then

$$\text{Deduction for the month} = (99.999 - \text{availability percentage}) / 100 \times \text{total rental per month} \times \text{multiplication factor (f)}$$

will be levied from the total quarterly lease rental.

Multiplication factor for the same will be calculated as below:

For Uptime $\geq$ 99.999%	Multiplication Factor is 0
For Uptime $<$ 99.999% and $\geq$ 99.99%	Multiplication Factor is 1
For Uptime $<$ 99.99% and $\geq$ 99.9%	Multiplication Factor is 2
For Uptime $<$ 99.9% and $\geq$ 99.0%	Multiplication Factor is 3
For Uptime $<$ 99.0%	Multiplication Factor is 4

#### **Server:**

Availability of 96.5% shall be ensured for each communication server. In case the server uptime is less than 96.5% then it will be considered as the entire system has failed and deduction will be made from the total rental. If the uptime is less than 96.5 % then

$$\text{Deduction for the month} = (96.5 - \text{availability percentage}) / 100 \times \text{total rental per month} \times \text{multiplication factor (f)}$$

will be levied from the total quarterly lease rental.

Multiplication factor for the same will be calculated as below:

For Uptime $\geq$ 96.5%	Multiplication Factor is 0
For Uptime $<$ 96.5% and $\geq$ 95%	Multiplication Factor is 1
For Uptime $<$ 95% and $\geq$ 93%	Multiplication Factor is 2
For Uptime $<$ 93% and $\geq$ 91%	Multiplication Factor is 3
For Uptime $<$ 91%	Multiplication Factor is 4

#### **Port hour:**

Availability of 99.95% port hours shall be ensured for the whole system. This will be calculated as below, over a period of one month.

- Working port hours= Number of working ports x 24 hours x 30 days
- Available port hours = Working port hours - Non-available port hours
- Availability percentage = Available port hours x 100 / Working port hours

Any port failure due to the failure of hardware, software supplied by the bidder as part of tender will be taken for downtime calculation. Non-availability of endpoint supplied by the bidder shall be treated as non-availability of port.

If the uptime is less than 99.95 % then

$$\text{Deduction for the month} = (99.95 - \text{availability percentage}) / 100 \times \text{total rental per month} \times \text{multiplication factor (f)}$$

will be levied from the total quarterly lease rental.

Multiplication factor for the same will be calculated as below:

Signature of the Bidder

For Uptime >= 99.95%	Multiplication Factor is 0
For Uptime < 99.95% and >= 99.9%,	Multiplication Factor is 1
For Uptime < 99.9% and >= 99.0%,	Multiplication Factor is 2
For Uptime < 99.0% and >= 98.0%,	Multiplication Factor is 3
For Uptime < 98.0%	Multiplication Factor is 4

Failure of ports due to hardware or software supplied as per the bidder's scope of items alone will be taken into consideration and other agencies like BSNL will not be taken into consideration.

**Note:**

1. Deduction calculation will be done based on the three categories given above. If the downtime occurs in more than one category, then the deduction from the quarterly rental charges will be the sum of the deductions in each category.
2. Deduction for each of the months in a quarter will be added and the sum will be deducted from the quarterly rental.
3. The deduction in rental will be subject to a maximum of the quarterly rental charges, per quarter.

## 7. OTHER TERMS AND CONDITIONS

- (1) Maintenance during the lease period shall not be sub-contracted. The maintenance engineers posted at site shall be direct employees of the bidder.
- (2) In case a service engineer leaves the bidder organization, a suitable substitute resource shall be provided, with the approval of BHEL, within a week.
- (3) Bidder shall arrange for a visit of BHEL Team to a site where a similar system has been installed by the bidder.
- (4) SIP/IP phones supplied by the bidder shall be cleaned once in a month at the user location, with polish and freshener.
- (5) During the period of lease rental/AMC all defective parts/modules shall be replaced/rectified free of cost without any cost implication on BHEL.
- (6) Any part/module that becomes faulty shall not be blamed to be the fault of BHEL. The faulty parts/modules shall be repaired within the scope of AMC.
- (7) BHEL reserves the right to opt for continuation of maintenance support for the hardware and software at end of 6<sup>th</sup> year lease period by way of awarding AMC contract to bidder at the rate equal to maintenance charges paid per quarter during the original lease contract. Bidder shall agree to provide the AMC service for at least two years after the expiry of the six year lease period. The Technical terms of AMC shall be same that of maintenance support during the lease period. The payment for AMC will be made quarterly at the end of the each quarter.
- (8) BHEL reserves the right to retain the hardware, software and other items supplied in this procurement at the end of the lease period on payment of Re. 1/- (Rupee One only).

### I. Documents to be submitted after completion of commissioning/migration

- (1) Installation procedure
- (2) Configuration details of the deployed Enterprise Telecommunication system.
- (3) Software license documents for all software supplied.
- (4) A detailed restoration plan for servers.
- (5) Details of backup solution and backup/restore procedure.
- (6) Server administration guide
- (7) Manuals in duplicate, soft copy.
- (8) Daily monitoring procedure

### II. Business Continuity Test

The bidder shall demonstrate the functionality of the Enterprise Telecommunication system during the following events. These tests shall be carried out prior to the performance guarantee test.

- (1) Shutdown of one Communication server at BHEL-Trichy and takeover by the other server without dropping any ongoing calls.

Signature of the Bidder

- (2) Shutdown of Communication server at BHEL-Thirumayam and takeover by server at Trichy without dropping any ongoing calls.

### **III. Performance Guarantee test**

Bidder shall demonstrate the uninterrupted service of the Enterprise Communication system performance for 30 days continuously after migration of all users without any performance issues to achieve the uptime given in the SLA. All Business continuity plan tests shall be carried out prior to the PG test. If the PG test is not done successfully within 3 attempts, the equipment is liable for rejection.

### **IV. Commissioning certificate**

BHEL Trichy will issue a Commissioning Certificate on successful completion of Performance Guarantee Test.

### **V. Amendment of bidding documents**

BHEL Trichy may at its sole discretion amend the Bidding Documents at any time prior to the deadline for submission of bids. However in case of such amendment, the bid submission date may be extended at the discretion of BHEL Trichy.

Amendments made prior to submission of bid will be provided in the form of addenda / corrigendum to the bidding documents and will be posted only in the websites (<http://www.bhel.com> & <http://www.tenders.gov.in>) in tender notification section. Bidders are requested to visit the website regularly for updates.



**No Deviation Certificate**  
(To be given in bidder's letter head)

**Ref:** BHEL's Enquiry No. \_\_\_\_\_ Dated \_\_\_\_\_

It is Certified that the offered solution vide Enquiry No. \_\_\_\_\_ dated \_\_\_\_\_  
\_\_\_\_\_ in response to BHEL's enquiry mentioned under reference has no Technical deviation  
from the requirement of BHEL, Trichy given vide the Technical Specification (Requirement).

Date:

Bidder's Signature with seal

 BHEL - TRICHY	<b>THIRD PARTY NON-DISCLOSURE AGREEMENT</b>	Doc.No. : ISMS-04/TP/011	
		Ver. No: 2.0	Rev. No: 00
		Date : 01 - 10 - 09	

Annexure-III

## THIRD PARTY NON-DISCLOSURE AGREEMENT

I, \_\_\_\_\_, on behalf of the \_\_\_\_\_ (Name of Company), acknowledge that the information received or generated, directly or indirectly, while working with BHEL, Trichy on contract is confidential and that the nature of the business of the BHEL, Trichy is such that the following conditions are reasonable, and therefore:

I warrant and agree as follows:

I, or any other personnel employed or engaged by our company, agree not to disclose, directly or indirectly, any information related to the BHEL, Trichy Without restricting the generality of the foregoing, it is agreed that we will not disclose such information consisting but not necessarily limited to:

- Technical information: Methods, drawings, processes, formulae, compositions, systems, techniques, inventions, computer programs/data/configuration and research projects.
- Business information: Customer lists, project schedules, pricing data, estimates, financial or marketing data,

On conclusion of contract, I, or any other personnel employed or engaged by our company shall return to BHEL, Trichy all documents and property of BHEL, Trichy, including: drawings, blueprints, reports, manuals, computer programs/data/configuration, and all other materials and all copies thereof relating in any way to BHEL, Trichy's business, or in any way obtained by me during the course of contract. I further agree that I, or any others employed or engaged by our company shall not retain copies, notes or abstracts of the foregoing.

This obligation of confidence shall continue after the conclusion of the contract also.

I acknowledge that the aforesaid restrictions are necessary and fundamental to the business of the BHEL, Trichy and are reasonable given the nature of the business carried on by the BHEL, Trichy I agree that this agreement shall be governed by and construed in accordance with the laws of country.

I enter into this agreement totally voluntarily, with full knowledge of its meaning, and without duress.

Dated at \_\_\_\_\_, this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

Name

Company

Signature

Signature of the Bidder

**PAST EXPERIENCE OF SIMILAR EXECUTED PROJECTS**

SL NO	DESCRIPTION OF WORK	POSTAL ADDRESS OF CLIENT & NAME OF OFFICER IN CHARGE	CONTRACT VALUE	STARTING DATE	E-mail	Fax Number

**SIGNATURE OF BIDDER** : \_\_\_\_\_

**NAME OF BIDDER** : \_\_\_\_\_

**COMPANY SEAL** : \_\_\_\_\_

**BHARAT HEAVY ELECTRICALS LIMITED TIRUCHIRAPALLI**  
**CAPITAL PURCHASE**

Annexure-A

**ACCEPTANCE OF COMMERCIAL TERMS AND CONDITIONS BY THE BIDDERS.**

(This should be essentially filled in and sent along with the techno-commercial offer without fail. If this check list is not filled and submitted along with techno-commercial offer (Part I) or if the bidder does not confirm acceptance to the terms and conditions proposed, BHEL reserves the right to reject such offer)

**CHECK-LIST FOR BIDDERS**

SI No	DESCRIPTION
1.	<p>The Bidders shall submit the offer in single stage with <b>TWO INNER ENVELOPES</b> as indicated below which shall be sealed in one outer envelope.</p> <p style="text-align: center;"><b><u>ENVELOPE-I: "PART-I: TECHNO - COMMERCIAL PART"</u></b></p> <p>The following details are to be written on the top of the envelope:</p> <p>NAME OF WORK:</p> <p>Enq. NO.:</p> <p>Due Dt:</p> <p>FROM : [ NAME &amp; ADDRESS OF BIDDER]</p> <p>This envelope shall contain (i) Techno-Commercial (Part-I) of Bidding Document in original duly stamped and signed on each page along with un priced bid with indicating applicable taxes &amp; duties, (ii) Techno-Commercial details including all supporting documents in "Original" as per check list included in Annexure - A and duly signed and stamped in each page.</p> <p style="text-align: center;"><b><u>ENVELOPE-II: "PART- II: PRICE PART"</u></b></p> <p>This part should contain the schedule of price particulars and must be co-related to the technical details provided in Part I</p> <p>The following details are to be written on the top of the envelope:</p> <p>NAME OF WORK:</p> <p>BIDDING DOC. NO.:</p> <p>PRICE PART (DO NOT OPEN)</p> <p>FROM: [NAME &amp; ADDRESS OF BIDDER]</p> <p>The Bidder shall submit only price/ Rates as per Schedule of Rates without any condition. Condition indicated, if any, in the Price part shall not be taken cognizance of and such bid may be rejected without assigning any reasons thereof.</p> <p>The prices shall be filled up both in figure and in words and rounded off to the nearest rupee. No overwriting or use of correction fluid shall be accepted. Any correction shall be signed by the authorized signatory.</p> <p>All the two envelopes ( Part I&amp;II ) shall be put in one cover, duly sealed, super scribing as Part I and Part II of Enquiry No., due date of opening and the address and reference of the Bidder.</p> <p>The above offer should reach this office on or before the due date by 14.00 Hrs (IST). Late offers will not be considered.</p> <p>Tender should not be addressed to any Individual's name but only by designation to:</p> <p style="text-align: center;"><b>DGM / CAPITAL PURCHASE / MFG BHARAT HEAVY ELECTRICALS LIMITED HIGH PRESSURE BOILER PLANT TIRUCHIRAPALLI - 620 014 TAMIL NADU, INDIA</b></p> <p>Tenders should be free from <b>CORRECTION AND ERASURES</b>, Corrections if any, must be attested. All amounts shall be indicated both in words as well as in figures. In case of any difference between amount quoted in words and figures, amount quoted in words shall prevail.</p> <p>Offers should be in <b>ENGLISH</b> and accompanied by detailed technical literature, catalogue and detailed dimensional drawings in <b>ENGLISH</b> or otherwise, the offers will not be considered.</p> <p><b><i>Bidder's Confirmation:</i></b></p>

2.	<p><b><u>OPENING OF TENDERS</u></b></p> <p>The Part I- Technical &amp; commercial bid would be opened on the Tender opening date.                  The Part II - Price bid of Technically suitable Bidders alone would be opened. The Technically suitable Bidders would be informed about the tender opening date.                  Clarifications if any required by BHEL for Technical evaluation would be sought from bidders before opening of Part II - price bid.</p>
<p><b><i>Bidder's Confirmation:</i></b></p>	
3.	<p><b><u>Stage-I: Evaluation of Technical &amp; Un-priced Commercial Bids</u></b></p> <ul style="list-style-type: none"> <li>• Only those Bidders who meet all the requirements as per Eligibility Criteria for Bidders will be considered for further evaluation.</li> <li>• Technical and un-priced commercial bid of the bidder shall be opened and evaluated for acceptability of Technical offer, deviations and their acceptability, technical suitability, acceptance of technical and commercial terms. BHEL Trichy will evaluate the Technical bid submitted by the Bidders.</li> <li>• During the Technical Evaluation of the bid, BHEL Trichy may ask for additional information / resources to validate the bid. These may include technical documents / white papers from OEM or third party, references, demonstration of a proof of concept or solution, visit to OEM's lab or their clients reference site, etc. Failure to furnish all/part of information as required or to submit a bid not substantially responsive to the bidding documents may result in rejection of the bid.</li> <li>• If there are any deviations in the technical solution offered, without affecting the functional requirement, they shall be filled-in the Deviation format issued with the tender document and submitted along with the bid. In case of no deviations, "<b>No Deviation Certificate</b>" shall be submitted. The deviations from the tender specification shall be clearly indicated giving the reference of the specification, if any, as per format for declaring deviations. If deviation other than what is specified in the list is found, the bid will be liable for rejection. BHEL Trichy reserves the right to accept or reject any deviation. Bids meeting BHEL Trichy's technical and commercial requirements only will be considered for Stage-II price evaluation.</li> <li>• Prior to price opening of bids, BHEL will determine whether each bid is accompanied by required commercial terms &amp; conditions, fulfils the qualifying requirement stated in Bidding Document and compliance to the requirement of the Bidding Document.</li> </ul> <p><b><u>Stage –II: Evaluation of the Price Bid:</u></b></p> <ul style="list-style-type: none"> <li>• Price part of only those bidders, whose bids are considered techno-commercially acceptable, shall be opened. The Rates(s)/Prices(s) quoted by the Bidders shall be arithmetically checked and contract shall be awarded to bidders quoted lowest (L1) rates.</li> <li>• If some discrepancies are found between the rate given in words and figures, the rate in words shall be taken as correct.</li> <li>• Bidder shall quote the quarterly rental charges (including principal repayment, tax, interest, support charges, etc.) for 6 years, for exchange-implementation, migration and support during the lease period of the IP based Enterprise communication system at BHEL, Trichy and Thirumayam.</li> <li>• BHEL reserves the right to go for a Reverse Auction (RA) instead of Opening the submitted sealed price bid, which will be decided after techno-commercial evaluation. Information and general terms and conditions governing RA as per point 17.</li> </ul>
<p><b><i>Bidder's Confirmation:</i></b></p>	
4.	<p><b><u>Sub Contracting</u></b></p> <p>Maintenance during the lease period shall not be sub-contracted. The maintenance engineers posted at site shall be direct employees of the bidder.</p>
<p><b><i>Bidder's Confirmation:</i></b></p>	
5.	<p><b><u>Validity:</u></b> Validity of the offer should be 180 days from the date of tender opening.</p> <p>BHEL reserves the right not to consider offers from bidders with validity less than 180 days from the date of tender opening.</p>
<p><b><i>Bidder's Confirmation:</i></b></p>	
6.	<p><b><u>Terms of Payment:</u></b></p> <ul style="list-style-type: none"> <li>➤ Purchase Orders will be released on the successful bidder.</li> <li>➤ Lease period will start after issue of Commissioning Certificate by BHEL Trichy.</li> <li>➤ Quarterly lease rental charges become payable at the end of each quarter after certification by BHEL Trichy.</li> <li>➤ Bidder shall submit the invoice in triplicate for processing the bills.</li> <li>➤ Deduction for non-availability as per SLA will be made from the quarterly rental.</li> <li>➤ <b><u>Payment terms for:</u></b> 100% quarterly payment will be made after 45 days from the date of certification by informatics centre against submission of 10% PBG for total order value.</li> </ul>
<p><b><i>Bidder's Confirmation:</i></b></p>	

<p>7.</p>	<p><b>Taxes and Duties :</b>                  All Taxes and Duties payable as extra to the quoted price should be specifically stated in offers along with CST &amp; TIN No / Tariff No. etc., failing which the purchaser will not be liable for payment of such Taxes and Duties. Our TIN No. 33243560005, TNGST No. 3560005, CST. No. 239383 Dt. 11-06-1991 &amp; BHEL ECC No. AAACB4146PXM012, Service Tax Reg No (STC)- AAACB4146PST006. Assessment circle Tiruverambur.</p> <p><b>Cenvat credit &amp; VAT credit</b> If any Excise Duty is payable, the chapter head / sub-head reference and the rate of the duty should be quoted. If the tenderer is availing <b>CENVAT</b> credit for his input materials, the effect of proforma credit should be passed on to the purchaser</p> <p><b>Income Tax applicable</b>                  Any service charges payable towards supervision of E&amp;C, training, performance prove-out etc., will be released after deduction of Income Tax as per Indian Income Tax Act / as per the Govt. of India rules and TDS certificate will be issued by BHEL for such deductions. Applicable service tax on E&amp;C charges will be payable extra. The liability of depositing the same to the Govt. will be of the bidder.                  Income tax depreciation will be claimed by BHEL</p> <p><b>Bidder's Confirmation:</b></p>
<p>8.</p>	<p><b>Performance Bank Guarantee (PBG):</b> The Bidder, in the event of an order, should furnish a bank Guarantee from an Indian Bank approved by BHEL, at no extra cost in a proforma prescribed by BHEL, along with the order, for an amount equivalent to <b>10% (Ten percent)</b> of the value of the contract. The PBG shall be valid for throughout the contract period of six years from the date of receipt / acceptance / commissioning of the equipment at BHEL, Tiruchi.</p> <p>The Performance Bank Guarantee shall be obtained from any one of the following banks which is a member bank in our consortium of banks.  <b>LIST OF CONSORTIUM BANKS</b>                  1.DEUTSCHE BANK 2.HDFC BANK 3.ANZ GRINDLAYS BANK 4.CITI BANK 5.STANDARD CHARTERED BANK 6.BANK OF AMERICA 7.ABN AMRO BANK 8.IDBI LTD 9.ICICI BANK LTD 10.THE HONGKONG AND SHANGHAI BANKING .CORPORATION LTD.  <b>LIST OF NATIONALISED BANKS</b>                  1.ALLAHABAD BANK 2.ANDHRA BANK 3.BANK OF INDIA 4.BANK OF BARODA 5.BANK OF MAHARASTRA 6.BHARATH OVERSEAS BANK 7.CANARA BANK 8.CENTRAL BANK OF INDIA 9.CORPORATION BANK 10.DENA BANK 11.INDIAN OVERSEAS BANK 13.OREINTAL BANK OF COMMERCE 14.PUNJAB NATIONAL BANK 15.PUNJAB &amp; SIND BANK 16.STATE BANK OF INDIA 17.STATE BANK OF TRAVANCORE 18.STATE BANK OF MYSORE 19.STATE BANK OF BIKANER &amp; JAIPUR 20.STATE BANK OF HYDERABAD 21.STATE BANK OF PATIALA 22.STATE BANK OF MAHARASTRA 23.STATE BANK OF SOURASTRA(SBI-13.09.08) 24.SYNDICATE BANK 25.UCO BANK 26.UNION BANK OF INDIA 27.UNITED BANK OF INDIA 28.VIJAYA BANK</p> <p>If PBG is issued by a Foreign counter part of the BHEL consortium Indian Bank, in case of claim against the PBG , it will be lodged in any one of the Indian counters of the Foreign Bank which issued the PBG.</p> <p><b>Bidder's Confirmation:</b></p>
<p>9.</p>	<p><b>Liquidated damages (LD):</b>                  It is clearly understood among the parties to the contract that “ <b>Time is the essence of the contract</b> ”. Therefore, the delivery/commissioning of the goods specified in the purchase order should be made within the time prescribed. Where the seller supplies or despatches the goods, beyond the delivery period specified the purchaser will have no obligation to accept the goods. If accepted liquidated damages at the rate of 1/2% of the value of goods delayed for each week of delay subject to a maximum of 15% of the order value will be levied.                  Liquidated damages @ ½% per week subject to a maximum of 15% shall be applicable for delay in the Period for completion of the Installation &amp; Commissioning work</p> <p>For the purpose of Imposing LD, the FOB delivery (B/L date) shall be considered. <u>BHEL reserves the right to reject offers from bidders not accepting the above LD clause, with maximum LD as 15%.</u></p> <p><b>Bidder's Confirmation:</b></p>
<p>10.</p>	<p><b>Risk Purchase:</b>                  Alternatively the purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the bidder has failed to deliver or despatch within the time stipulated as aforesaid or if the same were not available from the best and the nearest available substitute. The bidder shall be liable for any loss which the Purchaser may sustain by reason of such risk purchases.</p> <p><b>Bidder's Confirmation:</b></p>
<p>11.</p>	<p><b>Force Majeure clause:</b> If at any time during the continuance of this contract the performance in whole or in part by either party of any obligations under this contract shall be prevented or delayed by reason, of any war, hostilities, acts of the public enemy, civil commotion, sabotage, fires, explosions, epidemics, quarantine, restrictions or acts of GOD (hereinafter referred to as events) then provided notice of happening of any such events is given by either party to other within twenty one days from the date of occurrence thereof neither party shall reason of such events be entitled to terminate this contract nor shall either party have any such non performance and delay is resumed as soon as practicable after such events has come to an end or ceased to exist. If the performance in whole or part of any obligation under this contract is prevented or delayed by reason or any such event claims for extension of time shall be granted for period considered reasonable by the purchaser subject to prompt notification by the seller to the purchaser of the particulars of the events and supply to the purchaser if required of any supporting evidence. Any waiver of time in respect of partial installment shall not be deemed to be a waiver of time in respect of remaining deliveries.</p> <p><b>Bidder's Confirmation:</b></p>
<p>12.</p>	<p><b>Delivery terms and evaluation process:</b>                  Bidders should submit their offer for <b>FOR Destination basis</b>. Packing &amp; Forwarding and Freight &amp; Insurance charges from works to BHEL, Destination to be inclusive of basic rate. Applicable % of taxes&amp; duties should be clearly indicated.  <b>Evaluation of offers shall be on the basis of delivered cost (Net cash outflow to BHEL)</b></p>

	<b>Bidder's Confirmation:</b>
13.	<p><b>Delivery Schedule</b> The System (All the items) shall be supplied within 45 days after placement of order or issue of letter of intent/work order/Fax order and successfully installed/commissioned within 30 days as per scope of work in all respect from the date of supply of system</p>
	<b>Bidder's Confirmation:</b>
14.	<p><b>Guarantee:</b></p> <ol style="list-style-type: none"> <li>(1) During the period of lease rental/AMC all defective parts/ modules shall be replaced/rectified free of cost without any cost implication on BHEL.</li> <li>(2) Any part / module that becomes faulty shall not be blamed to be the fault of BHEL. The faulty parts/modules shall be repaired within the scope of AMC.</li> </ol> <p>Offers from bidders not accepting the requested guarantee will be rejected.</p>
	<b>Bidder's Confirmation:</b>
15.	<p><b>Short shipment / Warranty replacement:</b> In case of any short shipment in the main equipment / spares, customs duty levied on such supplies, shall be borne by the bidder. Any warranty replacement during the lease period shall be on FOR/ BHEL-Destination basis.</p>
	<b>Bidder's Confirmation:</b>
16.	<p><b>Inspection &amp; Testing:</b> All goods shall be subject to inspection by BHEL or its authorized representatives at bidder's works (or) at BHEL destination or at any other place in India indicated by BHEL as the case may be. The bidder will not charge for the facilities provided for inspection of goods. The final inspection and acceptance of the project will be carried after installation of the equipment at BHEL, Destination.</p>
	<b>Bidder's Confirmation:</b>
17.	<p><b>Test certificates / Operating and Maintenance manuals :</b> The Bidders shall clearly mention in their offer, that Test Certificates and Operating Maintenance Manuals, etc., as called for in the Technical Specification, in the required number of copies will be provided at no extra cost</p>
	<b>Bidder's Confirmation:</b>
18.	<p><b>Reverse Auction (RA):</b></p> <p>BHEL reserves the right to conduct on-line internet Reverse Auction for finalizing the Tender. This decision will be communicated to the technically qualified bidders after technical evaluation. Details / General terms / guidelines for conduct of RA are shown below Bidders are requested to confirm their acceptance for BHEL proceeding with RA route for finalization of the enquiry.</p> <ol style="list-style-type: none"> <li>1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.</li> <li>2. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.</li> <li>3. BHEL will inform the bidder in writing in case of reverse auction, the details of Service Provider to enable them to contact &amp; get trained.</li> <li>4. Business rules like event date, time, Start price, bid decrement, extensions etc. also will be communicated through service provider for compliance.</li> <li>5. Bidders have to fax the Compliance form in the prescribed format (provided by Service provider) before start of Reverse auction. Without this, the bidder will not be eligible to Participate in the event.</li> <li>6. BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Cost to BHEL" like Packing &amp; forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for non-compliance to BHEL standard Commercial terms &amp; conditions) for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.</li> <li>7. Reverse auction will be conducted on scheduled date &amp; time.</li> <li>8. At the end of Reverse Auction event, the lowest bidder value will be known on the network.</li> <li>9. The lowest bidder has to Fax the duly signed Filled-in prescribed format as provided on case-to-case basis to BHEL through Service provider within 24 hours of Auction without fail.</li> <li>10. Any variation between the on-line bid value and the signed document will be considered as sabotaging the tender process and will invite disqualification of bidder to conduct business with BHEL as per prevailing procedure.</li> <li>11. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL's standard practice.</li> <li>12. BHEL reserves the right to negotiate if need be, with the "L1" bidder of the Reverse Auction</li> </ol> <p><u>BHEL reserves the right not to consider offers from bidders not complying with the RA process for finalization of the enquiry.</u></p>
	<b>Bidder's Confirmation:</b>
19.	<p><b>Ethical Standard</b></p> <p>Bidders are expected to observe the highest standard of ethics during the procurement and execution of this contract. Pursuance of this policy, BHEL will reject a proposal for award if it determines that the bidder being considered for award has engaged in corrupt or fraudulent practices in competing for the contract. For the purposes of this provision, the terms set forth below are defined as follows:</p>

	<p>a) "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action in the procurement process or in contract execution; and</p> <p>b) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process including collusive practices designed to establish bid prices at artificial, non-competitive levels to deprive the benefits of competition to BHEL.</p> <p>By signing the bid forwarding letter, the bidder represents that for the system it supplies, it is the owner of the intellectual property rights/ Authorised partner of the OEM. Willful misrepresentation of these facts shall be considered a fraudulent practice without prejudice to other remedies that BHEL take.</p>
	<b>Bidder's Confirmation:</b>
20.	<p><b>Integrity Pact:</b></p> <p>The bidder shall sign an Integrity Pact, to comply with the requirements of the Transparency International Limited (TIL) and the Central Vigilance Commission (CVC) guidelines to ensure an ethical and corruption-free business environment. The proforma format for the Integrity Pact is attached as Annexure-C.</p>
	<b>Bidder's Confirmation:</b>
21.	<p><b>Non Disclosure Agreement</b></p> <p>The bidder shall sign a Non Disclosure Agreement (NDA) with BHEL. By signing the NDA, the bidder agrees not to disclose any confidential information, business or proprietary, as covered by the agreement. The proforma format for the Non Disclosure Agreement is attached as Annexure-III.</p>
	<b>Bidder's Confirmation:</b>
22.	<p><b>Delivery &amp; Project Implementation Schedule</b></p> <p>The Bidder shall be responsible for timely delivery, installation &amp; commissioning of all the Hardware/software given in the scope of supply/work at the BHEL's premises. All the Hardware/software shall be delivered within 45 days from the date of placement of order and successfully installed and commissioned within 30 days from the date of delivery of Hardware/software.</p>
	<b>Bidder's Confirmation:</b>
23.	<p><b>INDEMNITY</b></p> <p>The bidder hereby undertakes to indemnify BHEL against all actions, suits, proceedings, claims, losses, damages etc., which may arise under Minimum Wages Act, Fatal Accident Act, Workmen Compensation Act, shops &amp; Establishment Act, Family pension &amp; Deposit Linked Insurance scheme or any other Act or statutes not herein specifically mentioned but having any direct or indirect application for the person(s) engaged under this contract by him.</p> <p>The Contractor shall defend, indemnify and hold BHEL harmless from any liability, which may be imposed by the Central, State or local authorities and also from all claims, suits arising out of or by reason of the work provided by this contract including any liability that may arise out of accident, whether brought by the employees/ labourers of the Contractor or by the third parties or by the Central or State Government authority or any sub-division thereof. BHEL shall not be responsible for any claim/compensation that may arise due to damages/injuries/pilferage to the contractor's employee(s)/ staff/labourers under any circumstances while an employee(s) / labourer is engaged in the BHEL 's duty under the contract.</p> <p>The contractor shall make regular and full payment of wages/salaries including overtime/night halt allowance etc. as applicable as per rules in force and any other payments due to his employees/labourers and furnish necessary proof whenever required by BHEL.</p>
	<b>Bidder's Confirmation:</b>
24.	<p><b>INSURANCE POLICIES</b></p> <p>The Contractor shall at his own cost take insurance and maintain at all times until the close out of the Contract, insurance policies in respect of equipment and workmen engaged by him for providing services under this Contract</p>
	<b>Bidder's Confirmation:</b>
25.	<p><b>TERMINATION OF THE CONTRACT</b></p> <p>BHEL reserves the right to terminate the Contract, at any stage during the period of the Contract based on the contractor's performance, by giving 30 days notice in writing.</p> <p>BHEL shall have the right to terminate this contract if:</p> <ol style="list-style-type: none"> <li>1.The Service Provider fails to provide services or contractual obligations in accordance with the SLA</li> <li>2.The Service Provider suspends the performance of all or part of the services, or</li> <li>3.The Service Provider abandons the services, or</li> <li>4. The Service Provider becomes bankrupt or goes into receivership ( or)liquidation or makes an assignment for the benefit of his creditors.</li> </ol> <p>In the event of termination of contract, the amount due to the Contractor as per contractual provisions after recovery of dues (from Contractor's pending invoices/ Security Deposit, as the case may be), shall be released to them</p>
	<b>Bidder's Confirmation:</b>
26.	<p><b>ARBITRATION</b></p> <p>All disputes or differences whatsoever which may arise at any time during execution of the Contract shall be mutually settled by BHEL and Contractor as per provision of the Contract. However, in the event such disputes</p>

	<p>cannot be settled mutually, such disputes shall be settled as per the Arbitration and reconciliation Act, 1996 of the Govt. of India and it's subsequent amendments. In case of disputes with the Central PSUs, the same shall be settled as per the Guidelines of the Govt. of India.</p> <p>However, during the period such disputes are settled either by mutual discussions between the parties or by legal means, Contractor shall continue to do the work as per terms &amp; conditions of Contract.</p>
	<p><b>Bidder's Confirmation:</b></p>
<p>27.</p>	<p><b>Amendment of bidding documents</b></p> <p>BHEL Trichy may at its sole discretion amend the Bidding Documents at any time prior to the deadline for submission of bids. However in case of such amendment, the bid submission date may be extended at the discretion of BHEL Trichy.</p> <p>Amendments made prior to submission of bid will be provided in the form of addenda / corrigendum to the bidding documents and will be posted only in websites (<a href="http://www.bhel.com">http://www.bhel.com</a>&amp;<a href="http://www.tenders.gov.in">http://www.tenders.gov.in</a>) in tender notification section. Hence the bidders are requested to visit the web pages regularly for updates.</p>
<p>28.</p>	<p><b>General Conditions</b></p> <ul style="list-style-type: none"> <li>➤ Point by point confirmation for the Technical Specification enclosed to be provided. If there are any deviation, the same should be clearly specified. Offers received without confirmation to our specification will be liable for rejection. If needed additional sheets shall be used.</li> <li>➤ Relevant catalogues to be attached</li> <li>➤ Prices shall be quoted item wise only as per the model format enclosed. An unpriced copy shall be submitted along with technical bid where in the applicable Taxes and Duties Shall be clearly specified</li> <li>➤ Equipment offered shall be "New". Re-built / Re-conditioned / Used equipments will not be accepted. "Newness" certificate from OEM shall be furnished for all items.</li> <li>➤ Insurance documents for all the items.</li> <li>➤ Make, Model, Product No and Details of each Item must be mentioned clearly</li> <li>➤ All the Items must be supplied in full and complete</li> <li>➤ Proper documentation, labeling and tagging shall be carried out for all the equipments used in the entire landscape for easy management and maintenance</li> <li>➤ Incomplete offers will not be considered for further processing</li> <li>➤ <b>Fixed price:</b> Prices quoted by the bidder shall be fixed and not subject to any escalation whatsoever during the period of bid validity and execution of the Purchase Order. A bid submitted with an adjustable price will be treated as non - responsive and rejected. Prices shall be written in words and figures. In the event of difference, the price in words shall be valid and binding. Unit prices shall be considered correct in the event of any discrepancy with regard to total price.</li> <li>➤ The Bidder shall arrange for securely protecting and packing the stores to avoid loss or damages during transit.</li> <li>➤ Evaluation of offers shall be on the basis of delivered cost (Net cash outflow to BHEL).</li> <li>➤ BHEL reserves its right to reject a tender due to unsatisfactory past performance in the execution of a contract at any of BHEL projects / units.</li> <li>➤ BHEL shall be at liberty to reject or accept any tender, part or in full, at their own discretion and any such action is not liable for any question or claim against BHEL.</li> <li>➤ All Equipments / Services including Personnel for carrying out the installation and commissioning of the Equipment shall be arranged by the bidder. If any Services is availed from BHEL, it is only on chargeable basis unless otherwise specified.</li> <li>➤ The bidder shall provide necessary drawings, Test Certificates and Operating Maintenance Manuals etc., as called for in the Technical Specification, in the required number of copies at no extra cost.</li> <li>➤ Vendor shall arrange for boarding, lodging and logistics of onsite commissioning engineer and operations engineers.</li> <li>➤ Successful bidder shall sign the <b>Bipartite Lease Agreement</b> as per BHEL format &amp; same will be freeze by before the price bid opening.</li> </ul> <p>Any replacement during lease period shall be supplied free of charge on <b>FOR</b> BHEL, Trichy/ BHEL-Thirumayam basis</p> <p><b>Bidder's Confirmation:</b></p>

<b>29. Company Details &amp; Contact</b>	
Full Address of the company:	
Company Email ID:	
Phone No.:	
Fax No	
Pan No	
CST /TIN No	
Service Tax No.	
Name of the contact person:	
Mobile No.:	
e-mail ID	
<b>For any queries / clarifications the bidders may contact us through our FAX NO. +91 431 2520719 or through e-mail &lt;<a href="mailto:srchandran@bheltry.co.in">srchandran@bheltry.co.in</a>&gt;</b>	

NOTE:-

- a) Your specific acceptance to our Payment terms, LD, Risk Purchase Clause & Submission of PBG for 10% of the order value are essential for consideration of your offer. Otherwise your offer is liable for rejection.
- b) **No row shall be left blank. Please indicate NA, in case the item is “not applicable”**

**Declaration:-**

We have gone through and understood the ‘General guidelines & instructions to bidders for submitting offer’ enclosed as a part of the Tender and confirm that our offer has been made in line with the same.

(AFFIX OFFICIAL SEAL HERE)

Signature with date:

Name:

Designation:

Department:

(PLEASE AFFIX YOUR SIGNATURE WITH SEAL ON EACH PAGE)



**Format for Submitting the Price details of Supply of Enterprise Telecommunication System under outright purchase at  
BHEL, Tiruchy-14**

<b>Outright Purchase (including AMC upto 6th year) (All rate in Indian Rupees)</b>										
Slno	Item Description	Item Qty	Price for total qty. with standard warranty excluding taxes <b>A</b>	Std.Warranty period in no. of years <b>B</b>	Specify % of Tax & Duties <b>C</b>	Tax Value for total quantity <b>D=AxC</b>	AMC value for total qty. after warranty period upto end of sixth year including taxes <b>E</b>	Service Tax <b>F</b>	Total AMC value with Tax <b>G=FxE</b>	Total Price including Taxes, Duties and AMC for total qty <b>H=(A+D+E+G)</b>
1	Enterprise Telecommunication system	1								
2	SIP/IP Video Phones with Touch screen	25								
3	SIP/IP Phones with 4 Line Display	350								
4	SIP/IP Phones with 2 Line Display	1200								
5	SIP/IP Phones with 1 line Display	1300								
6	AC Adapter for SIP/IP phones	250								
7	System energised analog phone with caller ID	500								
8	Audio Conferencing Endpoint	10								
	<b>Total</b>	xxx		xxx	xxx			xxx		
<b>Sl.no.</b>	<b>Quarterly AMC charges from 7th year valid for 2 years</b>		Amount(Rs.)							

**INTEGRITY PACT**

ANNEXURE-C

**Between**

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at “BHEL House”, Siri Fort, New Delhi – 110049 (India) hereinafter referred to as “The Principal”, which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

**and**

\_\_\_\_\_, (description of the party along with address), hereinafter referred to as “The Bidder/ Contractor” which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

**Preamble**

The Principal intends to award, under laid-down organizational procedures, contract/s for

\_\_\_\_\_  
\_\_\_\_\_. The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor(s), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

## **Section 1 – Commitments of the Principal**

ANNEXURE-C

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-
  - 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
  - 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
  - 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

## **Section 2 – Commitments of the Bidder(s)/ Contractor(s)**

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
  - 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he / she is not legally entitled to, in

order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant IPC/ PC Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4 The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

### **Section 3 – Disqualification from tender process and exclusion from future contracts**

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidders(s)/ Contractor(s) from the tender process or take action as per the separate “Guidelines on Banning of Business dealings with Suppliers/ Contractors” framed by the Principal.

## **Section 4 – Compensation for Damages**

ANNEXURE-C

- 4.1 If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/Performance Bank Guarantee, whichever is higher.

## **Section 5 – Previous Transgression**

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

## **Section 6 – Equal treatment of all Bidders/ Contractors/ Sub-contractors**

- 6.1 The Bidder(s)/ Contractor(s) undertake(s) to obtain from all sub-contractors a commitment consistent with this Integrity Pact and report Compliance to the Principal. This commitment shall be taken only from those sub-contractors whose contract value is more than 20% of Bidder's/ Contractor's contract value with the Principal. The Bidder(s)/ Contractor(s) shall continue to remain responsible for any default by his Sub-contractor(s).
- 6.2 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
- 6.3 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

## **Section 7 – Criminal Charges against violating Bidders/ Contractors /Sub-contractors**

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

## **Section 8 –Independent External Monitor(s)**

- 8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- 8.5 As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or

take corrective action, or heal the situation, or to take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

8.6 The Monitor will submit a written report to the CMD, BHEL within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.

8.7 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.

8.8 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant IPC / PC Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

8.9 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.

8.10 The word 'Monitor' would include both singular and plural.

## **Section 9 – Pact Duration**

9.1 This Pact begins and shall be binding on and from the submission of bid(s) by bidder(s). It expires for the Contractor 12 months after the last payment under the respective contract and for all other Bidders 6 months after the contract has been awarded.

9.2 If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified as above, unless it is discharged/ determined by the CMD, BHEL.

**Section 10 – Other Provisions**

**ANNEXURE-C**

- 10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.
- 10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- 10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those bidders/ contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

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 For & On behalf of the Principal  
 (Office Seal)

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 For & On behalf of the Bidder/ Contractor  
 (Office Seal)

Place-----

Date-----

Witness: \_\_\_\_\_  
 (Name & Address) \_\_\_\_\_

Witness: \_\_\_\_\_  
 (Name & Address) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_