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**Sub: Invitation of online bid for “Upgradation of existing NEC IP based EPABX system (Hardware & Software) with the latest technology of NEC - IP based EPABX System, in Parivesh Bhawan, Central Pollution Control Board, Delhi”.**

Sir,

Online bids in two bid system i.e. Technical and Financial bids separately are invited on behalf of Central Pollution Control Board(CPCB) from the manufacturer or its authorised service partner/dealer for **“Upgradation of existing NEC IP based EPABX system (Hardware & Software) with the latest technology of NEC- IP based EPABX System, in Parivesh Bhawan, Central Pollution Control Board, Delhi”**. The bid shall be submitted online only at CPP Portal website: <https://eprocure.gov.in/eprocure/app> latest by 15.00 Hrs. on 29.06.2020. Late submission of bids will be rejected. The same will be opened at 15.30 Hrs. on 30.06.2020. Bidders are advised to follow the “Instructions to Bidder for Online Bid Submission” provided in the Annexure **“A”**. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.

## 1. SCOPE OF WORK

Up gradation of existing NEC EPABX System (Hardware and Software) to Latest NEC IP based EPABX System as per the Technical Specification placed at Annexure – I, in Parivesh Bhawan CPCB, Delhi.

## 2. ELIGIBILITY CRITERIA

The firm should have to submit the following documents from A to D in the technical bid:-

### (A)

- i. The bidder should be Original Equipment Manufacturer (OEM) or its authorized partner for offered latest NEC – IP based EPABX System. Letter of authorization specific to this tender is to be submitted along with the bid from OEM.
- ii. Average annual financial turnover during the last 3 year, ending 31<sup>st</sup> March of the previous financial year, should be at least 30% of the estimated cost along with documentary evidence.
- iii. Experience of having successfully completed similar nature of works during last 07 years ending last day of the month previous to the one in which bids are invited should be either of the following :-
  - a) Three similar completed work costing not less than the amount equal to 40% of the estimated cost i.e. Rs. 6.0 lakhs.  
Or,
  - b) Two similar completed works costing not less than the amount equal to 50% of the estimated cost i.e. Rs. 7.5 lakhs.  
Or,
  - c) One similar completed work costing not less than the amount equal to 80% of the estimated cost i.e. Rs. 12.0 lakhs.

**(B)**

- i. Bid document duly signed and seal on every page as an acceptance to the tendered specifications and terms & conditions.
- ii. Signed and scanned copy of Certificates like PAN No., GST No., etc. These documents shall not expire during the course of agreement.
- iii. The Compliance statement of technical specifications duly signed and stamped as per Annexure-I.

**(C)**

- i. Signed as per of bid document and scanned copy of proof for payment of Earnest Money Deposit (EMD).
- ii. An undertaking (self-certificate) that the agency hasn't been blacklisted by a Central/State/UT Government institution and there has been no litigation with any Govt. Department on account of its services.

**(D)**

- i. The bidder should have their establishment in Delhi – NCR and also submit an undertaking regarding availability of spare parts of the system offered, for next 07 years from the date of installation of the system.
  - ii. Brochures, product catalogues for the product offered, as proof of compliance of technical specifications, wherever applicable.
3. The material supplied under the contract shall confirm to the standards mentioned in the technical specification.
  4. The bidder cannot assign or transfer and sub-contract its interest / obligations under the contract in any circumstances.
  5. The bidder shall provide 07 days training to the concerned CPCB officials for proper operation of EPBAX system.
  6. The financial bid will be opened for only those firms, who will qualify technically. The prices may be quoted only in the financial bid format in Excel (Annexure-II) and submitted online only. No other format is acceptable. The price bid format has been given as a standard BOQ format (Annexure-III) with the bid document. The technically qualified bidders shall be notified with date and time of the opening of price bid in advance. The representative of the qualified bidders may attend the online price bid opening.
  7. In the event of more than one bidder becomes L1, the Competent Authority in CPCB reserves the right to select one of the L1 bidders based upon various norms i.e. work experience, number of years in operation, work completion certificate of any Central Government / State Government/ Government Undertaking /Organization etc.

**8. VALIDITY OF OFFER: -**

The bid validity will be 90 days from the date of opening of the bids.

**9. EMD deposit**

An EMD of Rs. 30,000/- (Rupees Thirty Thousand only) is to be submitted as demand draft in favour of Central Pollution Control Board, Delhi. The EMD has to be submitted in original in the tender box kept at ground floor (near Reception) in Parivesh Bhawan Central Pollution Control Board on or before the due date of submission of tender and a scanned copy to be uploaded with bid document. The EMD of successful bidder

will be deposited in CPCB account and will be released after submission of Performance Bank Guarantee (PBG), but without any interest. The EMD of unsuccessful bidder will return after award of work.

**10. PERFORMANCE SECURITY:**

The successful bidder shall be required to furnish Performance Bank Guarantee (PBG) for a value equivalent to 10% of the awarded value, valid for a period of 16 months from the date of issuance of award letter, in the prescribed format from a Nationalised/Scheduled bank. The PBG will be discharged after completion of defect liability period of 01 year, subjects to verification of defects.

**11. PAYMENT TERMS**

- i. 60% payment will be released after receipt of materials in good and satisfactory condition at site / central store of CPCB.
- ii. 40% will be released after successful Installation, Commissioning, Testing of EPABX system and handover to CPCB.
- iii. The payment will be made after submission of bill/invoice along with receipt of the GST deposit challan for the bill submitted along with a copy of GSTR1 and certified copy of sale register for the month in which the bill has been raised. The successful bidder has to submit their Bank Account details in Mandate form, for online transfer of payment.
- iv. The GST No. of CPCB is 07AAALC0228L2ZD.
- v. Any change in the rate of tax (increase/decrease), quoted by the bidder would be account of and the payment will be made as per the rate applicable at the time of services. The taxes should be clearly specified in the price bid.
- vi. The bidder may visit site/system to understand the work before quoting the rates. The site/system will be made available on all working days except on Saturdays, Sundays and public holidays.
- vii. The payment will be made as per the actual quantity at the time of execution of work.

**12. WARRANTY**

The warranty of the system shall be started from the date of successful completion of work and handed over to CPCB for a period of 12 months. The warranty will be on-site warranty and will include all the spare part of the system.

13. The Insurance, safety and security of the system, till handover to CPCB shall be the responsibility of successful bidder.
14. The acceptance of a bid rests with the CPCB, which does not bind itself to accept the lowest bid and reserves itself the authority to reject any or all of the bids received without assigning any reason. All bids in whom any of the prescribed conditions are not fulfilled or are incomplete in any respect are liable to be rejected.
15. Canvassing in any form in connection with bid is strictly prohibited and the bids submitted by the bidders who resort to be canvassing will be liable to rejection.
16. All rates to be quoted in the proper form in the bid.
17. Any item rate bid containing percentage below/above will be summarily rejected. However, where a bidder voluntarily offers rebate or payment within a stipulated period, this may be considered.
18. On acceptance of the bid, the name of the authorised representative (s) of the bidder who would be responsible for taking instructions from CPCB shall be communicated to the CPCB.

19. GST or any other tax or liability in respect of this contract shall be payable by the bidder and CPCB will not entertain any claim whatsoever in this respect.
20. **The bid for works shall remain open for acceptance for a period of 03 months from the date of opening of bids. If any bidder withdraws his bid before the said period or makes any modifications in the terms and conditions of the bid which are not acceptable to CPCB, without prejudice to any other right or remedy, CPCB will be at liberty to go for forfeiting the earnest money absolutely of the bidder.**
21. After work is awarded, the bidder will have to enter into an agreement for each component or part with CPCB.
22. The bidder should see the site and understand the work requirements and in case of doubt, obtain required particulars, which may in any way influence his bid, from the CPCB as no claim whatsoever will be entertained for any alleged ignorance thereof.
23. If it is found that the bid is not submitted in proper manner or contains too many corrections or absurd rates or amounts, it would be summarily rejected by CPCB.
24. The bidder shall comply with the provision of the Apprentices Act, 1961, and the rules and orders issued there under from time to time. If fails to do so, his failure will be breach of the contract and the CPCB may in his discretion cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the Act.
25. **In case of any mishappening /accident during the execution of the work or any damage to the CPCB property, the bidder is liable to pay the damages to CPCB or compensation to the workers.**
26. The bidder's responsibility for the contract shall commence from the date of issue of orders of acceptance of bid.

#### **27. DEDUCTIONS OF INCOME TAX AT SOURCE**

The income tax shall be deducted at source as applicable.

#### **28. SAFETY CODE**

The firm shall take necessary safety arrangements to ensure safety of the persons deployed by them. CPCB shall not be responsible for any injury caused to their personnel while discharging of functions under this contract.

**Please note that CPCB Central laboratory is maintaining OH&SMS (IS18001:2007/2012), the deputed personal shall abide the required guidelines of safety while, working in CPCB.**

#### **29. TERMINATION OF CONTRACT BY EMPLOYER**

Termination of contract (being an individual or a firm) commit any "Act of insolvency" or shall be adjudged insolvent, shall make an assignment or composition for the benefit of the greater part in number or amount of his creditors or shall enter into a deed of assignment with his creditors or (being an incorporated company) shall have an order made against him or pass an effective resolution of winding up either compulsorily or subject to the supervision of the court or voluntarily or if the official assignee of the contractor shall repudiate the contractor if the official assignee or the days after notice to him requiring him to do so, to show to the reasonable satisfaction of the employer that he is able to carry out and fulfill the contract and if required by the employer to give security therefore or if the contractor (whether an individual, firm or incorporated company) shall suffer execution to be issued, or if the contractor shall suffer any payment contractor shall assign or sublet the contract, without the consent in writing of the Employer first obtained, or any payments due or which may become due to the contractor there under, or if the employer shall certify in writing that in their opinion the contractor;

- I. Has abandoned the contract.
  - II. Has failed to commence the work, or has without any lawful excuse under these conditions suspended the progress of the work for fourteen days after receiving from the employer written notice to proceed, or
  - III. Has failed to proceed with the works with such due diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or
  - IV. Has failed to remove materials from the site or to pull down and replace works within seven days after receiving from the employer written notice that the said materials or work were condemned and rejected by the employer under these conditions, or
  - V. Has neglected or failed persistently to observe and perform all or any of the acts, matters or things by this contract to be observed and performed by the contractor to observe perform the same, or
- Any other decision, opinion, direction, certificate or valuation of the employer to give any of the same shall be subject to the right of Arbitration and review in the same way in all respects (including the provision as to opening the reference) as if it were a decision of the employer.

### **30. DEPOSIT**

The EMD deposited by the bidder along with his tender shall be released after submission of PBG with the employer. The PBG shall be returned to the bidder on the successfully completion of defect liability period. In case of default in any of the foregoing conditions, the deposit amount shall be forfeited by the employer.

31. The employer shall not be responsible if any accident or death is caused during the execution of work, the bidder shall be responsible to pay the compensations.

### **32. SETTLEMENT OF DISPUTE AND ARBITRATION**

- I. All disputes and differences arising out of or in connection with the contract and works of any nature assigned under the same (whether during the progress of the works or after their completion), determination, abandonment or breach of the contract shall be referred to a team of three men arbitrator appointed by the Chairman, CPCB. The arbitrators shall elect an umpire among them. In case of conflicting findings by the arbitrators, the decision of the umpire shall be final and binding. It will not be an objection to any such appointment that the arbitrators are the government servants and had any interest in the board or the contract entered into directly or indirectly. In all cases, the arbitrators shall state their decision in writing and if amount of claims in dispute is Rs.50,000/- and above, the arbitrators shall give reasons for award.
- II. Subject as aforesaid the provisions of the arbitrations cancellation act or any statutory modification or re-enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceeding under this clause.
- III. It is a term of the contract that the party involving the arbitration shall specify the dispute or dispute to be referred to the arbitrator under this clause together with the amount or amounts claimed in respect of each such dispute.
- IV. It is also a term of the contract that if the bidders do not make any demand for arbitration in respect of any claims in writing within 90 days of receiving the intimation from the CPCB that final bill is ready for payment, the claim of the bidders will be deemed to have been waived and absolutely barred and the board will be discharged and released of all liabilities under the contract in respect of these claims.
- V. The decision of the employer regarding the quantum of reduction as well as justification thereof in respect of rates for sub-standard work which may be decided will be final and would not be open to arbitration. Provided always that no compensation shall be payable for any loss in always that no compensation shall be

payable for any loss in consequence of hostilities or war-like operation (a) unless the contractor had taken all such precautions against Air raid as are deemed necessary by A.R.P officers or the Engineers In Charge, (b) for any materials etc., not on the site of work or for any tools and plant, machinery, scaffolding temporary buildings and other things not intended for the work.

- VI. In the event of the bidder having to carry out reconstruction as aforesaid, he shall be allowed such extension of time for its completion as is considered reasonable by the employer compliance within such time as the employer may prescribe in that behalf and in the event of the bidder failing to effect such compliance within the time prescribed by the employer then the employer shall without prejudice to his other rights be entitled to withhold from the amount payable to the bidder any amount payable to the workmen under any such laws, regulations or rules and to make payment thereof to the workmen. The employer shall also have in that event the right to terminate the contract with immediate effect and to exercise powers reserved to their employer under the contract as a result of termination.

CPCB  
Witnesses

- 1.
- 2.

\_\_\_\_\_  
CONTRACTOR/BIDDER

### **33. DAMAGES**

Any damage caused to the property of CPCB due to the negligence and or use of substandard material on the part of the firm will be liable to be compensated by the firm.

### **34. PROHIBITION OF SUB CONTRACT**

The firm shall not appoint any subcontract for this work under any circumstances.

### **35. STATUTORY COMPLIANCE**

The firm shall be responsible for compliance with the provision of the following Labour laws, with amendment time to time.

- i. Contract Labour (Regulation & Abolition) Act, 1970.
- ii. Minimum Wage
- iii. Workmen's Compensation Act.
- iv. Any other rules, regulations and / or status as may be applicable to them from time to time.

The firm will responsible to discharge all the statutory requirements under the Labour Act or any other Act enforced from time to time without any liability on CPCB or without any statutory compliance by CPCB.

### **36. RESOLUTION OF DISPUTE**

In case of any dispute, the decisions of Chairman, CPCB shall be final and binding upon both the parties

### **37. GENERAL CONDITIONS**

- i. The bids can also be seen from CPCB website i.e. [www.cpcb.nic.in](http://www.cpcb.nic.in).
- ii. The agency has to clearly mention in the bid that the said Terms & Conditions are acceptable to them.
- iii. Central Pollution Control Board at its own discretion may accept or reject any bid without assigning any reason thereof.
- iv. Typographical and clerical errors are subject to correction.

Yours faithfully,

**(Dinabandhu Gouda)**  
**Divisional Head, Building Div.**

**Instructions for Online Bid Submission:**

The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal. More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>.

**REGISTRATION**

1. Bidders are required to enrol on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link "**Online bidder Enrolment**" on the CPP Portal which is free of charge.
2. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
5. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
6. Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

**SEARCHING FOR TENDER DOCUMENTS**

1. There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
2. Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
3. The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

**PREPARATION OF BIDS**

1. Bidder should take into account any corrigendum published for the tender document before submitting their bids.
2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
3. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.



4. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

## **SUBMISSION OF BIDS**

1. Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
2. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
3. Bidder has to select the payment option as "offline" to pay the tender fee / EMD as applicable and enter details of the instrument.
4. Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
5. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
6. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
7. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
8. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
9. Upon the successful and timely submission of bids (ie after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
10. The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

## **ASSISTANCE TO BIDDERS**

1. Any queries relating to the tender document and the terms and conditions contained

therein should be addressed to the Tender Inviting Authority for a tender or Dinabandhu Gouda, Div. Head, Building Div. upto 22.04.2020 on 011-43102420 or [dinabandhu.cpcb@nic.in](mailto:dinabandhu.cpcb@nic.in)

2. Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

**TECHNICAL SPECIFICATIONS**

| S. No. | Description of Item Specification  | Compliance Statement |
|--------|--|----------------------|
| I.     | <b>Technical Specification of IP Based EPABX System</b>  |                      |
| 1.     | <b>General Requirement:</b>  |                      |
| 1.1    | <ul style="list-style-type: none"> <li>• NEC IP based Communication Server should be a full-featured IP based communications system providing a rich feature set of the system, with pure Voice over IP (VoIP) communications, across corporate Local and Wide Area Networks (LAN and WAN) and expandable up to 1250 port</li> <li>• System Architecture should be latest pure IP and must be 19" Rack mount with 2U chassis based architecture</li> <li>• Should be ROHS complied as green product with power saving</li> <li>• System Architecture should have networking capability with (1+49) location with full feature enabled.</li> </ul> <p>Below optional features must be supported and should be available on Controller of the EPABX System:</p> <ul style="list-style-type: none"> <li>• In-skin video MCU (maximum 4 channel) feature over intranet.</li> <li>• Caller-Id (Name and Number)</li> <li>• Ad-hoc conference 32 party X 3</li> <li>• Meet-me conference 32 party X 2 or 8 party X 4.</li> <li>• Remote Conferencing 32 party X 3 with password protection</li> <li>• WEB based 4 party Video conference expandable up to 8 party and system should support 4 session of 8 party WEB based Video Conference</li> <li>• 4 Mobile Client user</li> </ul> |                      |
|        | <b>Environmental Conditions:</b>   |                      |
|        | The equipment offered shall be capable of maintaining its guaranteed performance when operating continuously for 24 hours a day and 365 days a year under the following environmental conditions.  |                      |
|        | Operational temperature: 0 to 45 Degree C.   |                      |
|        | Humidity: 10% to 95% RH (non-condensing)   |                      |
|        | Note: Offered product must be IS9000 Certified for Environmental conditions. Bidder must submit test report from Central Govt./ NABL approved / ILAC accredited lab to provide conformity to the specifications including Environmental Test Sequence. <ul style="list-style-type: none"> <li>i) Cold Test: At Zero degree C for 2 Hrs as per IS9000/ Pt 2/Sec 4</li> <li>ii) Dry Test: At 45 degree C for 16 Hrs as per IS9000/ Pt 3/Sec 5/1977</li> <li>iii) Damp Heat (Steady State) Test: At 40 degree C &amp; 95% RH for 2 cycles as per IS9000/ Pt 5/Sec 1/1977.</li> </ul>  |                      |
| 1.2    | The Centralized architecture will be based on use of a communication server to provide support for:  |                      |
| 1.3    | Peripheral shelf's to allow for legacy connectivity ( TDM)   |                      |

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| 1.4       | IP communication devices (IP desktop, IP soft phone, SIP phone, SIP trunks.)  |  |
| 1.5       | TDM communication devises (Analog Extensions, Digital Extensions, Analog Trunk, ISDN (PRI , BRI) Trunk , E&M Trunk.   |  |
| 1.6       | Local or remote network management system.  |  |
| 1.7       | <b>Central Processing Unit:</b> The system main software should be open architecture based. The CPU of main system shall be 32 bit processor. The system software shall be on flash memory of minimum 2 GB capacity. The system should be 19" rack mountable.   |  |
| a)        | Power supply, Control Processor and Common Control Units  |  |
| b)        | Highway Interface Cards in the peripheral shelf   |  |
| c)        | TDM and IP Highway Link   |  |
| d)        | Memory (Flash based)  |  |
| e)        | Power Supply for expansion cabinets/ Peripheral Shelf's   |  |
| 1.8       | The system should be able to use P2P video calling over intranet & internet if video end point installed. No additional hardware/software is required to use video phone.   |  |
| 1.9       | The system should be able to use SIP endpoints as extensions for the users and SIP trunks should able to be interconnected with any SIP based IP PBXs.  |  |
| 1.10      | The system must be capable of providing MCU feature for 4 party video conference.   |  |
| 1.11      | Walking Class of Service, Auto Call Back, CLI (Caller Line Identification) etc. under networking environment.   |  |
| 1.12      | The failure of any component / sub system in the exchange should not result in the failure of the complete exchange.  |  |
| 1.13      | Minimum 10 numbers of attendant/operator consoles should be supported by exchange.  |  |
| 1.14      | Provision for remote maintenance of the exchange from a remotely located operation & maintenance center shall exist in the system without addition of any extra hardware / software. Remote maintenance device / Interface should be built-in with the system.  |  |
| 1.15      | System proposed should be non-blocking and must able to handle 100% traffic.  |  |
|           | The exchange should support simultaneous transfer of voice, data & images without any degradation of service quality.   |  |
| 1.16      | <u>Bootling from Flash:</u> The system should boot from Flash Memory /Flash Disk for faster bootling. It should be possible to take back-up in Flash Memory /Flash Disk. The system should not use FDD drives, HDD and optical drives. The total software up-gradation of system should be possible by uploading the Flash Memory / Flash Disk with upgraded software. During any update & upgrade of the system software, there should be zero downtime. |  |
| 1.17      | It should be possible to virtually partition the EPABX system in required numbers of sub-systems and use them as different intercom exchanges. It should be possible to block dialling from one sub-system to another sub-system.   |  |
| <b>2.</b> | <b>Technical Requirements:</b>  |  |
| 2.1       | The system modularity shall be such that there is no requirement of traffic study or load study to configure the  |  |

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|           | system in case more numbers of lines of applications are added. The system shall be of completely Non-Blocking type & all the cards shall have equal access to any free available time slot, i.e. there shall be no segmentation of the time slots required for particular shelf of cards.  |  |
| 2.2       | Suitable marking shall be done for different types of cards to enable easy identification & replacement.  |  |
| 2.3       | The system offered must support Redundancy of Sensitive Elements as an optional feature so that same can be availed as and when required by user  |  |
| a.        | The system must have option to provide duplicity of main server/ controller. In case main server/ controller fails then secondary controller shall act as disaster recovery controller of main IP-PBX System  |  |
| b.        | The main and standby server should be in complete sync with main server.  |  |
| c.        | The system must have option to provide duplicity of power supply unit i.e. Main PSU & Standby PSU but should not be installed in same cabinet   |  |
| d.        | Media gateways should also provide distributed power supplies to ensure reliable gateway architecture and should support self-survivability in case of both main and secondary server/ controller fails.  |  |
| 2.4       | It should support following minimum Trunk Features:   |  |
| a.        | Support all signaling standards   |  |
| b.        | Transit calls   |  |
| c.        | CO to Tie line restriction  |  |
| d.        | Tie Line Tandem Restriction   |  |
| e.        | Trunk Camp ON   |  |
| f.        | Digital Tie Line  |  |
| h.        | CO to CO transfer   |  |
| j.        | Area code restriction   |  |
| k.        | Call Monitoring system/Call Billing   |  |
| l.        | Silent Monitoring   |  |
| m.        | Night Attendant Console   |  |
| n.        | SIP   |  |
| 2.5       | The system shall support Multi Party Video Telephony over IP Soft Phone Terminals, Multi-Media transportation by mere addition of customer premises ISDN / IP compatible terminal equipments, documentary proof of which is to be submitted.  |  |
| <b>3.</b> | <b>Hardware:</b>  |  |
| 3.1       | Hardware shall be modular in design with standardized modules. The modular design shall permit growth in small steps. The hardware shall be server based architecture and to be housed in 19" suitable cabinet with front & back door.  |  |
| 3.2       | The system shall have universal slots architecture.   |  |
| 3.3       | The system will have to permit a step-by-step details on IP evolution or migration of its architecture from a centralize PBX type to an architecture completely distributed on IP while reusing the existing material including the terminals, and without interruption of service. In a distributed IP architecture, Media-Gateways shall be 256 port configured with adequate resources (i.e., VoIP codec etc.) to support the expected traffic coming from the configured non-IP |  |

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|           | end points in the system, including those for Digital terminals, Analog terminals, Analog CO trunk, ISDN PRI, IP, Digital and Analog tie lines etc.  |  |
| 3.4       | The system shall be able to interoperate with other telephone systems and endpoints using following standards PRI/E1, SIP and 2/4 - wire E&M trunk.  |  |
| <b>4.</b> | <b>Number of Dialing Digits:</b>   |  |
| 4.1       | The minimum number of significant digits to be dialed for getting access to the distant end subscriber on STD shall be eight (8) (excluding the access code). It includes the number of digits in the trunk code for the local exchange and the subscribers' telephone number. The supplier shall indicate maximum number of significant digits, which can be dialed to get access to distant exchange.  |  |
| 4.2       | It should be possible to designate subscriber numbers with in exchange with variable numbers of digits from 2 digits to 8 digits.  |  |
| <b>5.</b> | <b>Architecture:</b>   |  |
| 5.1       | The system should be the state-of-art based, software controlled and should switch simultaneously Voice, Data & Images without any degradation of service quality. Architecture of the system should be 19" rack mountable communication server and it should allow media gateways to have both IP & TDM communication device (digital terminals, analog terminals, Digital/Analog/ISDN trunks).   |  |
| 5.2       | The system should have IP switching at CPU or VOIP daughter board connected to the CPU. Increase in IP/SIP extensions and trunks license should not include any external/internal media gateway cards, IP cards or signaling server. Increase in IP/SIP capacity should be through license only. DSP resources for conversion of IP to TDM and vice versa should be at CPU or VOIP daughter board at CPU and not through any media card inserted in any time slot of peripheral cabinet. |  |
| 5.3       | The system shall be IP enable switch. The switch should support Session Initiation Protocol (SIP) for transmission of voice over IP network. It should also support G.711, G.723, G.722 (Wide band) & G.729A/B encoding standards. The system should support IP Video Telephony and IP communication device (IP desktop, IP soft phone, SIP phones etc.) & Video MCU feature   |  |
| 5.4       | The system should support ISDN between premise equipment such as PBX's and desktop equipment such as voice terminals, data terminals and PCs. System should support ISDN BRI / PRI. Trunk limitations, if any regarding maximum number of ports / cards supported should be clearly specified.   |  |
| 5.5       | The system should be totally non-Blocking type and all the port cards should have equal access to any free available time slot and should have equal access time to TDM Bus.   |  |
| 5.6       | NEC System should be based on universal port architecture. Except for Common Control and Power supply card, system should not impose any restriction in terms of slots usage for a particular function.  |  |

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| 5.7       | Suitable protective measures shall be provided against surges, earthing, shielding of AC supply induced voltage to ensure normal operation of the exchange.  |  |
| <b>6.</b> | <b>Protocols:</b>  |  |
| 6.1       | The exchanges shall support Caller Line Identification for all ISDN & IP network subscribers including analog subscribers.   |  |
| 6.2       | Exchange shall support following signaling Protocols- (i). ISDN PRI, (ii). ISDN BRI, (iii). E&M (2/4 Wire), (iv). DTMF, (v). All the Common Signaling Standards adopted for ISDN / Non ISDN connections to PSTN, (vi). SIP   |  |
| 6.3       | Exchange should support Automatic Call Distribution (ACD) functionality.   |  |
| 6.4       | Exchange should be upgradeable to CTI with direct Ethernet Connectivity to LAN at CPU.   |  |
| <b>7.</b> | <b>System Facilities and Feature Transparency:</b>   |  |
| 7.1       | The PBXs shall be able to extend feature availability over the VOIP exchange network. The feature availability shall be applicable to at least the following:  |  |
| a.        | Audio Speech basic call  |  |
| b.        | Calling line Identification and Name Identification  |  |
| c.        | Call Forwarding (Busy, No Answer, All Calls)   |  |
| d.        | Camp ON (Call completion on no reply)  |  |
| e.        | Call Offer   |  |
| f.        | Re-routing (call forwarding across network)  |  |
| g.        | Camp ON (Call completion on busy)  |  |
| h.        | Calling and Answering party name and No. ID  |  |
| i.        | Uniform & non uniform Dialing Plan across network  |  |
| j.        | Do not Disturb   |  |
| k.        | Follow Me  |  |
| l.        | Voice Page over IP   |  |
| m.        | Hot line between two points with ring extended on lifting of the Handset to predefined destination.  |  |
| 7.2       | <u>Abbreviated Dialing:</u> The system shall be able to store at least 1000 lists of abbreviated dialing (AD). The AD list entry size & maximum AD entries per system shall be indicated by the manufacturer / supplier.   |  |
| 7.3       | <u>Integrated Announcement:</u> The system shall be able to store recorded announcements (messages). The announcements shall be digitized and stored in state of art electronic memory devices. These announcements shall be recorded or updated with the help of telephone instrument. The system supplied should be equipped with all necessary hardware & software to support this functionality. |  |
| 7.4       | Last Number Redial   |  |
| 7.5       | <u>Conference:</u> The system must have multiple conference options, at least 12 numbers of 8 parties, 6 numbers of 16 parties or 3 numbers of 32 party conferences.   |  |
| 7.6       | <u>Remote Conference/ Meet me Conference:</u> The system should support Meet me conference bridge facility with password protection for minimum 32 participants.   |  |
| 7.7       | <u>Flexible Station Move:</u> The system should give complete flexibility to dial a person his identification number from any location & thus utilize all the facilities from that point.  |  |
| 7.8       | <u>Authorization Codes:</u> Codes shall be of 4 to 7 digits length.  |  |

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| 7.9      | <u>Intercom Groups</u> : A minimum of 25 groups with 100 subscribers in each group shall be available. Dialing scheme within groups should be flexible. The supplier shall indicate the maximum number of groups and subscribers in each group the system can support.                           |  |
| 7.10     | <u>Malicious Call Tracing</u> : It shall be possible to identify malicious calls in case it is from within the exchange or from CO, Tie or other outstation exchanges.   |  |
| 7.11     | Following facilities shall be provided without dialing a code.   |  |
| a)       | Hot Line – The extension with this facility shall be automatically connected to the required subscriber as soon as it goes off hook.   |  |
| b)       | Outgoing only subscriber.  |  |
| c)       | Incoming only subscriber.  |  |
| d)       | Call Pick up – It should be possible for the subscriber of a predefined group to transfer incoming call / calls of the group at his extension.   |  |
|          | <u>Essential features</u> :  |  |
| 7.11.1   | Forced Release – Forced release shall be applicable for all type of calls under the following conditions.  |  |
| 7.11.1.1 | User exceeds a preset inter digit time interval.   |  |
| 7.11.1.2 | Calling user exceeds a preset time while listening to the ringing or busy tone.  |  |
| 7.11.1.3 | When any of the two users of a normal call terminates.   |  |
| 7.11.2   | Local calls within the exchange should be released by either party. For calls from other exchanges, it should release in case time out for release through calling party is provided.  |  |
| 7.11.3   | For the incoming circuits either from the exchanges or trunk, it shall be possible to insert any number of digits at the beginning of incoming digits.   |  |
| 7.11.4   | It shall be possible to suppress or add digits for outgoing junction.  |  |
| 7.11.5   | In case of more than one outgoing junction, the seizing of circuits should be in sequential order.   |  |
| 7.11.6   | It should be possible to specify maximum number of output digit for tie/ trunk lines. However, circuits shall function with less number of digits and with the receipt of reverse signaling, the speech path should be made through, else the speech path should be made through after time set. |  |
| 7.11.7   | Tie Line Facility  |  |
| 7.11.8.1 | STD Barring: Following STD barring feature should be available.-   |  |
| 7.11.8.2 | Selective STD barring and route wise STD barring.  |  |
| 7.11.8.3 | STD barring to any subscriber.   |  |
| 7.11.8.4 | STD barring and route wise barring to subscribers having STD facility.   |  |
| 7.11.9   | <u>Line Lock out</u> : The system shall provide line lockout when user does not start dialing after a preset time interval.  |  |
| 7.11.10  | <u>Group Hunting</u> : Automatic selection of a free / idle line from a group of lines.  |  |
| 7.12     | <u>Announcements &amp; Messaging</u> : Additional hardware & software are to be provided for voice guided DID (Direct Inward Dialing) facility for CO lines. It shall be possible for the subscribers of the DOT/BSNL any other external   |  |



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|           | exchange to dial and reach an extension without intervention of the attendant, if allowed.  |  |
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| <b>8.</b> | <b>Voicemail: System shall support voicemail feature</b>  |  |
| 8.1       | The system should support in-skin 16 port voice mail and auto attendant system with minimum of 40 Hrs. storage System should have capability to configure up to maximum of 800 mail boxes with increase storage capacity to 230 Hrs. depending on individual user requirements. |  |
| 8.2       | The Hardware/software required along with relevant authorized software shall be supplied.   |  |
| 8.3       | The cost shall include the license charges for required voicemail users.  |  |
| 8.4       | Message wait notification on normal Analog Phones should be through visible notifications.  |  |
| 8.5       | Different call treatment for Internal & External calls: The conditions on which particular call (either internal or external) should go to the voice mail should be specified. Typically the call should reach a voice mail on the following conditions:                        |  |
| 8.6       | Ring on no answer (Number of rings after which the call to be routed to voice mail is to be specified).   |  |
| 8.7       | Busy / do not disturb / on call forwarding to the respective user / time based transfer to voice mail.  |  |
| 8.8       | Personal Greetings: It should be possible to have different personal greetings for internal, external, and out of hours calls for the same voice mail- box.   |  |
| 8.9       | It should not use the same voice ports for different functions, thus reducing the actual number of ports effectively for the end user.  |  |
| <b>9.</b> | <b>Technical Specification of Digital Telephone Instrument: Type 1</b>  |  |
| 9.1       | Digital Key Telephones system display should have the following minimum specifications:   |  |
| 1.1       | LCD display   |  |
| 1.2       | 4 lines x 24 characters per line LCD display with adjustable angle  |  |
| 1.3       | Separate Visual Message Wait Indicator Lamp with multicolor option  |  |
| 1.4       | Minimum 24 flexible programmable keys & 4 soft keys support   |  |
| 1.5       | Dual color LED indication, Backlit Dial Pad   |  |
| 1.6       | Navigational Keys   |  |
| 1.7       | Incoming Speech Gain Control  |  |
| 1.8       | Ringer Volume Control   |  |
| 1.9       | Display of Incoming call/outgoing calls/ Missed call display  |  |
| 1.10      | Full Two Way Duplex speaker phone   |  |
| 1.11      | Hot dial form key pad   |  |
| 1.12      | Adjustable Handset and Monitor speaker volume   |  |
| 1.13      | Monitor Speaker / On-Hook dialing   |  |
| 1.14      | Expandable by additional Button Modules   |  |
| 1.15      | Must have provision for smart phone collaboration via blue tooth adopter  |  |
| 1.16      | Must support 8 Key DSS with Dual color LED and must not consume any additional digital port.  |  |

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| <b>10</b> | <b>Technical Specification of Digital Telephone Instrument: Type 2</b>                       |  |
| 10.1      | Digital Key Telephones system display should have the following minimum specifications:      |  |
| 1.1       | LCD display  |  |
| 1.2       | 4 lines x 24 characters per line LCD display with adjustable angle                           |  |
| 1.3       | Separate Visual Message Wait Indicator Lamp with multicolor option                           |  |
| 1.4       | Minimum 12 flexible programmable keys & 4 soft keys support                                  |  |
| 1.5       | Dual color LED indication, Backlit Dial Pad  |  |
| 1.6       | Navigational Keys  |  |
| 1.7       | Incoming Speech Gain Control   |  |
| 1.8       | Ringer Volume Control  |  |
| 1.9       | Display of Incoming call/outgoing calls/ Missed call display                                 |  |
| 1.10      | Full Two Way Duplex speaker phone  |  |
| 1.11      | Hot dial form key pad  |  |
| 1.12      | Adjustable Handset and Monitor speaker volume  |  |
| 1.13      | Monitor Speaker / On-Hook dialing  |  |
| 1.14      | Expandable by additional Button Modules  |  |
| 1.15      | Must have provision for smart phone collaboration via blue tooth adopter                     |  |
| 1.16      | Must support 8 Key DSS with Dual color LED and must not consume any additional digital port. |  |
|           |  |  |

**Note:** The firm has to submit the Compliance statement of above technical specifications, duly signed and stamped, in the technical bid.

## FINANCIAL BID FORMAT

| S.N. | Description of items  | Qty       | Rate (Rs.) | Amount (Rs.) |          |
|------|---|-----------|------------|--------------|----------|
|      |   |           |            | In figure    | In words |
| 1.   | Upgradation of existing NEC EPABX System (HW and SW) to NEC Latest IP based EPABX System with below items: <ul style="list-style-type: none"> <li>• Communication Server- 01</li> <li>• No. of Analog Extension- 512</li> <li>• No. of Digital Extension- 16</li> <li>• No of ISDN PRI Line – 03</li> <li>• No. of Analog Trunk- 08</li> <li>• Operator Console with 84 one touch access keys for Trunk &amp; Extensions- 01</li> <li>• 16 Port Auto Attendant</li> <li>• Self-Survivable Gateway</li> <li>• Universal Port Architecture</li> <li>• Flexible number plan</li> <li>• Inbuilt battery charger</li> <li>• In built caller ID</li> <li>• In built message lamp</li> <li>• Web Maintenance</li> <li>• In built LAN port</li> <li>• In built USB port</li> <li>• 32 Party in skin Audio Bridge with Password Protection (Support up-to 20 Groups)</li> <li>• Ad-Hoc/ Meet-me Conference (32 Party x 3 Group; or 16 Party x 6 Group; or 8 Party x12 Group)</li> <li>• 250 VOIP Resources</li> <li>• BYOD support</li> <li>• Standalone System Capacity up-to 1200 Ports</li> </ul> | 01        |            |              |          |
| 2.   | Type-1 NEC Digital Phone (as per specifications)  | 04        |            |              |          |
| 3.   | Type-2 NEC Digital Phone (as per specifications)  | 02        |            |              |          |
| 4.   | CAT6 Cable (in Meter) with Laying 305 meter   | 03        |            |              |          |
| 5.   | 19" 42U Server Rack   | 01        |            |              |          |
| 6.   | Installation & Commissioning Charges for IP Based EPABX system  | 01<br>Job |            |              |          |
|      | <b>Freight charges</b>  |           |            |              |          |
|      | <b>Total</b>  |           |            |              |          |

|  |                    |  |  |  |
|--|--------------------|--|--|--|
|  | <b>GST</b>         |  |  |  |
|  | <b>Grand Total</b> |  |  |  |

**Grand Total amount Rs. =**

**The rates quoted should be including of all taxes and freight charges. All the civil works as required for installation of EPBAX will be in the scope of bidder. Bidder is requested to kindly visit the site, before quoting the rates.**

**(Signature of authorised representative with stamp)**

**Annexure - III**

**BILL OF QUANTITY:-**

| <b>S. No.</b> | <b>Description</b>  | <b>Qty.</b> |
|---------------|---|-------------|
| 1             | Upgradation of existing NEC EPABX System (HW and SW) to NEC Latest IP based EPABX System with below items: <ul style="list-style-type: none"> <li>• Communication Server- 01</li> <li>• No. of Analog Extension- 512</li> <li>• No. of Digital Extension- 16</li> <li>• No of ISDN PRI Line – 03</li> <li>• No. of Analog Trunk- 08</li> <li>• Operator Console with 84 one touch access keys for Trunk &amp; Extensions- 01</li> <li>• 16 Port Auto Attendant</li> <li>• Self-Survivable Gateway</li> <li>• Universal Port Architecture</li> <li>• Flexible number plan</li> <li>• Inbuilt battery charger</li> <li>• In built caller ID</li> <li>• In built message lamp</li> <li>• Web Maintenance</li> <li>• In built LAN port</li> <li>• In built USB port</li> <li>• 32 Party in skin Audio Bridge with Password Protection (Support up-to 20 Groups)</li> <li>• Ad-Hoc/ Meet-me Conference (32 Party x 3 Group; or 16 Party x 6 Group; or 8 Party x12 Group)</li> <li>• 250 VOIP Resources</li> <li>• BYOD support</li> <li>• Standalone System Capacity up-to 1200 Ports</li> </ul> | 01Nos.      |
| 2             | Type-1 NEC Digital Phone (as per specifications)  | 04 Nos.     |
| 3             | Type-2 NEC Digital Phone (as per specifications)  | 02 Nos.     |
| 4             | CAT6 Cable (in Meter) with Laying 305 meter   | 03 Nos.     |
| 5             | 19" 42U Server Rack   | 01 Nos.     |
| 6             | Installation & Commissioning Charges for IP Based EPABX system  | 01 Job      |

## APPENDIX

|    |  |  |
|----|--|--|
| 1. | <b>Date of Commencement</b>                  | 10 <sup>th</sup> day from the date of issue of letter of award.  |
| 2. | <b>Date of completion</b>                    | 04 months from the date of commencement.   |
| 3. | <b>Insurance</b>                             | As directed.   |
| 4. | <b>Liquidated damages</b>                    | 1% of the contract value per week subject to a maximum of 10% of the contract value.   |
| 5. | <b>Period of final measurements</b>          | Within 01 months from the date of completion.  |
| 6. | <b>Value of work for Interim Certificate</b> | 60% after receipt of materials in good and satisfactory condition at site/Central store of CPCB.<br>30% on successful installation, commissioning, testing and handover to CPCB. |
| 7. | <b>Performance Security</b>                  | 10% of the contract amount /Awarded value.   |
| 8. | <b>Defects liability period</b>              | One year   |