

Name of work:-Comprehensive maintenance of 7TR HPAC plants working at various exchanges under Electrical Division III , CHTD (For the year 2021-23)



BHARAT SANCHAR NIGAM LIMITED

(A Govt of India Enterprise)
(Electrical Wing)

O/o The Executive Engineer (E)

BSNL Electrical Division-III

No.22, Kellys Road, Chennai - 600010.

Office: 044-26470123, 26448081

E-mail: eedn3@gmail.com

E-TENDER DOCUMENT

Name of work:-Comprehensive maintenance of 7TR HPAC plants working at various exchanges under Electrical Division III, CHTD (For the year 2021-23)

NIT No.24/ EE (E) /ED-III /CH/2021-22

This tender document contains 45 (**forty five**) pages only.

For E Tender Helpdesk Pls Contact M/s ITI LTD, Ph:91-80-40482000 &

Mail Id : twhelpdesk399@gmail.com, bsnlthelpdesk@gmail.com

Name of work:-Comprehensive maintenance of 7TR HPAC plants working at various exchanges under Electrical Division III , CHTD (For the year 2021-23)

INDEX
INDEX

	Description	Page no.
1	Front cover and Index	2
2	Notice Inviting Tender form - BSNL EW 6	5
3	General Instructions to the Bidders	9
4	Undertaking to abide by EW 6 & EW 8 (Form 'A') & EPF	11
5	Undertaking regarding ESI provisions (Form 'B')	12
6	Performance report of works (Form 'C') & No Near relative working certificate (Form 'D')	13
7	Model form of Bank Guarantee for EMD (Annexure-A)	14
8	Model form of Performance security Guarantee bond (Annexure-B)	15
9	Important Instructions to tenderer	16
10	Schedule of Quantities	20
11	Specification for work	22
13	List of Approved Makes	40
15	LIST OF INDIAN STANDARDS	42
16	Proforma Schedules	43
17	BSNL EW – 8 form	44

Name of work:-Comprehensive maintenance of 7TR HPAC plants working at various exchanges under Electrical Division III , CHTD (For the year 2021-23)

BSNL EW 6

INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR E-TENDERING FORMING PART OF NIT AND TO BE POSTED ON WEBSITE

Tender Notification

The Executive Engineer (Elect), BSNL, **Electrical Division-III, Chennai** on behalf of the CMD, Bharat Sanchar Nigam Limited, invites online Item rate bids from eligible bidders in Single bid system for the following work:

1	Name of work	Comprehensive maintenance of 7 TR HPAC plants working at various exchanges under Electrical Division III, CHTD (For the year 2021-23)
2	Estimated cost put to tender	Rs.34,23,336/- Excluding GST
3	Earnest Money	<i>Nil. However undertaking as per Annexure-IIA need to be submitted.</i>
4	Period of completion	Twenty Four months
5	Last date & time for downloading of tender document by bidder	Up to 14:55 Hrs. on 03-09-2021
6	Last date & time for online submission of tender	Up to 15:00 Hrs. on - 03-09-2021
7	Last date & time for submission of original EMD	Up to 15:00 Hrs. on - 03-09-2021
8	Date and time for opening of tender	15:30 Hrs. on - 03-09-2021
9	Tender cost (Non refundable)	Rs.1000/- + GST 18% = Rs.1180/-
10	E-tender Processing fee (Non refundable)	0.05% of estimate cost subject to the minimum of Rs.500 and Maximum of Rs. 5000 plus Service Tax

ELIGIBILITY CRITERIA

The bidders satisfying the following conditions:

(a) Financial Norms:

Average annual turnover during the last 3 years, ending 31st March of the previous financial year, should be at least 30% of the estimated cost put to tender.

AND

(b) Physical Norms:

The manufacturer or their authorized service dealer. The letter of authorization in original from the manufacturer will be produced by the dealer.

OR

Experience of having successfully completed **similar** works in BSNL during last 7 years ending last day of month previous to the one in which applications are invited, should be either of the following:

Name of work:-Comprehensive maintenance of 7TR HPAC plants working at various exchanges under Electrical Division III , CHTD (For the year 2021-23)

- ❖ Three **similar** successfully completed works costing not less than the amount equal to 40% of the estimated cost put to tender.

OR

- ❖ Two **similar** successfully completed works costing not less than the amount equal to 60% of the estimated cost put to tender.

OR

- ❖ One **similar** successfully completed work costing not less than the amount equal to 80% of the estimated cost put to tender.

Note: 1. "Similar work Means "**Comprehensive maintenance of High precision Package AC Plant**"

2. The **estimated cost of one year shall be considered to evaluate the eligibility criteria.**

IMPORTANT NOTE:

1. The self-attested copies of the following documents shall be scanned and uploaded to the e-tendering website within the period of tender submission. Online bid documents submitted by intending bidders shall be opened only of those bidders, who have scanned and uploaded the following documents (and whose uploaded documents are found to be in order), otherwise the bid will not be opened and shall lead to disqualification.
 - a. Tender Fee in the prescribed format
 - b. EMD in the prescribed format (**undertaking as per Annexure-IIA**)
 - c. Certificate of Financial Turnover from Chartered Accountant if applicable
 - d. Documents fulfilling Eligibility criteria (Please note that in case the bidder is authorised by the manufacturer, the original authorisation letter is to be scanned and uploaded)
 - e. Enlistment certificate issued by BSNL (for BSNL enlisted contractors)
 - f. Electrical license issued by TN Govt. if applicable
 - g. GST Registration Number details
 - h. PAN Card
 - i. EPF and ESI Registration certificate (if applicable)
 - j. Undertaking to abide by EW-6 and EW-8 (Form 'A')
 - k. Undertaking regarding EPF and ESI provisions (Form 'B')
 - l. Certificate of work experience issued by client department (Form 'C') if applicable
 - m. Undertaking regarding No Near relative working certificate (Form 'D')

Not uploading the above documents, (even if the documents are submitted physically) shall lead to disqualification.

2. The Physical Tender Fee, EMD, and if applicable the original authorisation letter by the manufacturer, shall be deposited in the tender box available in the office of tender opening authority, by all the bidders before 15.00Hrs on the tender opening date, failing which the tender shall not be opened

Name of work:-Comprehensive maintenance of 7TR HPAC plants working at various exchanges under Electrical Division III , CHTD (For the year 2021-23)

B S N L EW 6 (Incorporating modifications issued from time to time)

Bharat Sanchar Nigam Limited
(A Government of India Enterprise)
Electrical Wing

Electrical Division: **ED-III, Chennai**

Sub Divisions under ED III, **Chennai**

NIT No. DIVISION: 24/ED-III/CH/2021-22 DT 19.08.2021

Notice Inviting Tenders
(As per Tendering Procedure in BSNL revised up to date)

1. Item rate tenders on single bid system are invited on behalf of CMD, BSNL for the work **“Comprehensive maintenance of 7 TR HPAC plants working at various exchanges under Electrical Division III, CHTD (For the year 2021-23)”** from the eligible bidders as per NIT notification. The enlistment of the bidders should be valid on the opening date of tender. In case the date of opening of tender is extended, the enlistment of bidder should be valid on the original date of opening of tender.
2. Intending bidder is eligible to submit the bid, provided that he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority as per the eligibility conditions mentioned in the NIT notification page.
3. The work is estimated to cost **Rs.34,23,336/- Excluding GST**. This estimate, however, is given merely as a rough guide.
4. Agreement shall be drawn with the successful bidder on prescribed form as amended up to the date of opening of tender. Bidder shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
5. The time allowed for carrying out the work will be **Twenty four** month from the 10th day after the date of written order to commence the work.
6. The site for the work is available / or the site for the works shall be made available in parts. The successful bidder shall execute the work in coordination with other agencies working in the campus.
7. The bid documents consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website www.tenderwizard.com/BSNL at free of cost. The BSNL EW-8 document can be seen from the web site www.chennai.bsnl.co.in at free of cost.
8. After submission of the bid, the bidder can re-submit revised bid any number of times but before last time and date of submission of tender as notified. While submitting the revised bid, bidder can revise the rate of one or more item(s) any number of times (he need not re- enter rate of all the items) but before last time and date of submission of tender as notified.

Name of work:-Comprehensive maintenance of 7TR HPAC plants working at various exchanges under Electrical Division III , CHTD (For the year 2021-23)

9. The Tender Fee in the form of Demand Draft issued by the Nationalized / Scheduled bank authorized by the Reserve Bank of India, drawn in favour of **BSNL, CHENNAI TELEPHONES** payable at **CHENNAI** shall be scanned & uploaded in the e-tendering website within the period of tender submission. The validity of the tender cost in the form of DD shall be **60 days** from the date of opening.
10. The Earnest money deposit (EMD) in the form of Demand Draft / FDR / BG (BG is only for Air Conditioning, Diesel Engine Alternator, Lifts, and SubStation works wherever the amount of EMD is more than Rs.20,000)/ CDR of a nationalized / scheduled bank authorized by the Reserve Bank of India, drawn in favour of **BSNL, CHENNAI TELEPHONES payable at CHENNAI** shall be scanned & uploaded in the e-tendering website within the period of tender submission. The validity of the EMD in the form of DD shall be **60 days** from the date of opening. If the EMD is in the form of CDR/FDR/BG, the validity shall be **180 days** from the date of opening. In case of L1 bidder, the validity of CDR/FDR/BG is to be extended up to the observation period as that of the Performance guarantee / Security deposit. Exemption from payment of Tender Fee, Earnest Money and Security Deposit by any other unit/ department shall not hold good for BSNL.
11. Interested bidder who wishes to participate in the bid shall pay the e-tender processing fee to M/s. ITI Limited through their e-gateway by credit/debit card/ internet banking/ RTGS/NEFT facility.
12. All the documents as specified in the tender document shall be scanned and uploaded to the e-Tendering website within the period of bid submission.
13. The last date for online submission of bid is **03-09-2021** up to **1500Hrs** and the bid submitted shall be opened at 1530Hrs on the same day. If a holiday is declared on the tender opening day, the tender will be opened on the next working day.
14. The e-Tender processing fee and tender cost are non-refundable
- 15. Performance Guarantee:** The bidder is required to furnish Performance guarantee for an amount equal to 5% of the contract value in the form of bank guarantee/CDR/FDR/DD (of a Nationalized/ Scheduled Bank in a standard format) within two weeks from the date of issue of acceptance letter. This period can be further extended by the Engineer-in-charge up to a maximum period of two weeks on written request of Bidder. The validity period of the performance security in the form of performance bank guarantee shall be: Three Months from the date of actual completion of work, for AMC works; and One year from the date of actual completion of work for all other works. In case the bidder fails to deposit the said performance guarantee within the stipulated period, including the extended period if any, the Earnest Money deposited by the bidder shall be forfeited automatically without any notice to the bidder and the bidder will not be allowed to participate in the re tendering for the same work.
- 16. Security Deposit:** In addition to Performance guarantee stated above, a sum @ 10% of the gross amount of the bill shall be deducted from each running bill of the contractor till the sum be deducted with the sum already deposited as earnest money, will amount to security deposit of 5% of the contract value of the work. **The security deposit shall be released after an observation period as follows: Three Months from the date of actual completion of work, for AMC works; and One year from the date of actual completion of work for all other works.**
- 17. In case any discrepancy is noticed in the documents as uploaded at the time of submission of the bid online, then the bid submitted shall become invalid and the BSNL shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further, the bidder shall not be allowed to participate in the retendering process of the work.**

Name of work:-Comprehensive maintenance of 7TR HPAC plants working at various exchanges under Electrical Division III , CHTD (For the year 2021-23)

18. Intending bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders, the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidder shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the BSNL and local conditions and other factors having a bearing on the execution of the work.
19. The competent authority on behalf of the CMD does not bind himself to accept the lowest or any other tender and reserves to himself the authority to reject any or all the tenders received without the assignment of any reason. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected. The competent authority on behalf of CMD reserves to himself the right of accepting the whole or any part of the tender and the bidder shall be bound to perform the same at the rate quoted.
20. Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the bidders who resort to canvassing will be liable to rejection.
21. Agreement shall be drawn with the successful bidder on prescribed form. Bidder shall quote his rates as per various terms and conditions of the said form, which will form part of the agreement.
22. The bidder should give a certificate as per the following that none of his/her relative is employed in BSNL units as per **Form 'D'**. In case of a proprietorship firm, certificate will be given by the proprietor and for partnership firm certificate will be given by all the Directors of the company.
 - a. Near relatives of all BSNL employees either directly recruited or on deputation are prohibited from participation in tenders and execution of works in the different units of BSNL. The near relatives for this purpose are defined as:
 - i. Members of a Hindu Undivided family.
 - ii. They are husband and wife.
 - iii. The one is related to the other in the manner as father, mother, son(s) & son's wife(daughter-in-law), Daughter(s) & daughter's husband(son-in-law), brother(s) & brother's wife, sister(s) & sister's husband(brother -in-law).
 - b. The company or firm or any other person is not permitted to tender for works in BSNL unit in which his near relative(s) is (are) posted. The unit is defined as SSA/Circle/Chief Engineer/Chief Archt. /Corporate office for non-executive employees and all SSA in a circle including circle office/Chief Eng./Chief Archt./Corporate office for executive employees (including those called as Gazetted officers at present). The bidder should give a certificate that none of his/her such near relative is working in the units as defined above where he is going to apply for tender/work, for proprietorship, partnership firms and limited company certificate shall be given by the authorized

Name of work:-Comprehensive maintenance of 7TR HPAC plants working at various exchanges under Electrical Division III , CHTD (For the year 2021-23)

signatory of the firm. Any breach of these conditions by the company or firm or any other person, the tender/work will be cancelled and earnest money/performance guarantee will be forfeited at any stage whenever it is so noticed. BSNL will not pay any damages to the company or firm or the concerned person. The company or firm or the person will also be debarred for further participation in the concerned unit.

- C. No employee in BSNL/ Govt. of India is allowed to work as a contractor for a period of two years of his retirement from service without the prior permission. The contract is liable to be cancelled if either the bidder or any of his employees is found at any time to be such a person who had not obtained the permission as aforesaid before submission of tender and engagement in the bidders service.
23. The tender for the work shall remain open for acceptance for a period of ninety (90) days from the date of opening of tenders. If any bidder withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the BSNL, then the BSNL shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the tenderer shall not be allowed to participate in the retendering process of the work.
24. The agency has to comply with the provisions of EPF and miscellaneous provisions Act- 1952 and employees provident fund scheme-1952 as amended up to date in respect of labours/employees engaged by them for this work. Any consequence arising due to non- complying of provisions as specified above shall be the sole responsibility of the firm only. The agency shall give an undertaking to this effect as per **Form 'B'**.
25. **Extension of Validity of tender:** In case, where the letter of award of work cannot be placed within the validity period of the tender, the BSNL can request the bidder to extend the validity of their respective tenders and the Earnest Money deposit by a reasonable period. In such cases, extension of validity of Earnest Money deposit by 30 days beyond the extended validity date of tender should also be asked for. While BSNL can make the request for extension, the tenderer is free to either extend the validity or refuse the request to extend the validity.
26. Rates quoted by the contractor shall be firm and shall be valid for the currency of contract. No cost escalation shall be permitted during the currency of contract.
27. This notice inviting tender shall form a part of the contract document. The successful bidder, on acceptance of his tender by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:-
- a. The Notice Inviting Tender, all the documents including additional conditions, specifications and drawings, if any, forming part of the tender as uploaded at the time of invitation of tender, subsequent amendments issued and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
- b. Standard BSNL EW-8 form

Name of work:-Comprehensive maintenance of 7TR HPAC plants working at various exchanges under Electrical Division III , CHTD (For the year 2021-23)

General Instructions to the Bidders

1. The intending bidder must read the terms and conditions of BSNL-EW 6 carefully. He should only submit his bid, if he considers himself eligible and he is in possession of all the documents required.
2. Information and instructions for bidders posted on the website shall form part of bid document.
3. Applicants are advised to keep visiting the above mentioned website from time to time (till the deadline for bid submission) for any updates in respect of the tender documents, if any. Failure to do so shall not absolve the applicant of his liabilities to submit the applications complete in all respect including updates thereof, if any. An incomplete application may be liable for rejection.
4. Those bidders not registered on the website mentioned above, are required to get registered themselves beforehand. The intending bidder must have a valid class-III digital signature to submit the bid.
5. On opening date, the bidder can login and see the bid opening process. After opening of bids he will receive the competitor bid sheets.
6. Bidder can upload documents in the form of JPG format or / and PDF format.
7. Bidder must ensure to quote the rate of each item. The column meant for quoting rate in figures appears in yellow colour. In addition to this, while selecting any of the cells a warning appears that if any cell is left blank the same shall be treated as "0". Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "0" (ZERO)
8. Even though any bidder may satisfy the above requirements, he would be liable to disqualification if he has:
 - a. Made misleading or false representation or deliberately suppressed the information in the forms, statements and enclosures required in the eligibility criteria document.
 - b. Record of poor performance such as abandoning work, not properly completing the contract, or financial failures / weaknesses etc.
9. If any information furnished by the bidder is found incorrect at a later stage, he shall be liable to be debarred from tendering/taking up of works in BSNL. The BSNL reserves the right to verify the particulars furnished by the applicant independently.
10. GST and any other tax applicable in respect of this contract shall be borne by the bidder himself. The bidder shall quote his rates considering all such taxes. The TDS as per the Govt. regulations will be recovered from the contractor.
11. **Tender Evaluation :**
 - (a) The evaluation and comparison of responsive bids shall be done on the basis of Net cost to BSNL on the prices offered inclusive of packing, forwarding, freight and insurance charges etc., but excluding GST. The bid with lowest net cost as elaborated above will be the L1 bidder.
 - (b) Vendors should furnish the correct GST Rate in the price schedule. If the Input Tax Credit is found to be not admissible at any stage subsequently owing to wrong furnishing of GST Rate, then the vendors will be liable to refund such non-admissible amount, if already paid, along with penalty if charged by the concerned authority.

Name of work:-Comprehensive maintenance of 7TR HPAC plants working at various exchanges under Electrical Division III , CHTD (For the year 2021-23)

12. However, pursuant to the constitution (Forty-sixth amendment) act, 1982, if any further tax or levy is imposed by statute, after the last date of receipt of tenders, and the contractors there upon necessarily and properly pays such taxes/ levies, the contractor shall be reimbursed the amount so paid, provided such payment, if any, is not in the opinion of Superintending engineer (whose decision shall be final and binding) be attributable to delay in execution of work within the control of contractor.
13. The Contractor shall, within a period of 30 days of imposition of any further tax or levy in pursuant to the constitution of (Forty sixth amendment) act 1982 give a written notice thereof to the Engineer-in-charge that the same is given pursuant to this condition, together with all necessary information relating thereto.
14. **Bye laws Indemnity against liabilities:**
 - a. The bidder shall comply with all bylaws and regulations of the local and statutory authorities having jurisdiction over the works and shall be responsible for payment of all fees and other charges and giving and receiving all necessary notices and keep the Engineer –in-charge informed about the notices issued and received.
 - b. The bidder shall indemnify the department against all claims in respect of patent rights design, trademark or name of other protected rights in respect of any plant, machine, work or materials used for or in connection with the works or temporary works and from and against all claims demands, proceedings, costs, charges and expenses whatsoever in respect of or in relation thereto.
 - c. The bidder shall defend all actions arising from such claims and shall himself pay all royalties, License fees, damages, costs and charges of all and every sort that may be legally incurred in respect hereof shall be borne by the bidder.
 - d. All liabilities / penal recoveries on matters arising out of tax /levies such as incorrect deductions, discrepancies in the filing of returns, revised assessments by the concerned authorities etc., shall be borne by the bidder.
15. **Termination of contract on death of contractor :**

Without prejudice of any of the rights or remedies under this contract, if the contractor dies, the Engineer in charge on behalf of the BSNL shall have the option of terminating the contract without compensation to the contractor.
16. **Indulging of contractor in criminal /antisocial activities and cases under investigation/charge sheeted by CBI or any other government agencies etc. :**

If the CBI/Independent External Monitor (IEM) /Income tax/ Sales Tax /GST/ Central Excise/Custom Departments recommend such a course - Action will be taken as per the directions of CBI or concerned department.
17. As a general notion, the terms and conditions/instructions contained in various pages of this document are addressed assuming the bidder as 'Male'. However, the same shall remain and assumed to be addressed in case of 'Female' bidder also, except for the gender centric words, which shall be 'female' centric at appropriate places.

Name of work:-Comprehensive maintenance of 7TR HPAC plants working at various exchanges under Electrical Division III , CHTD (For the year 2021-23)

FORM 'A'

Undertaking to abide by EW 6 & EW 8

"I.....Son of
.....Resident of

hereby give an undertaking that I have read the complete bid document and I am aware of all the clauses and sub clauses of BSNL EW 6 & 8 forms and I confirm that I will abide by all the terms and conditions available in original standard BSNL EW 6 & 8 forms.

(Seal of the firm)

(Signature of Bidder)

FORM 'B'

Undertaking regarding EPF provisions

"I..... Son of
.....Resident of hereby give an
undertaking that

* I/We have employed only ----- persons in our establishment and hence the EPF and Miscellaneous provisions Act, 1952 is not applicable to my / our establishment.

* I/ We have registered as per the EPF and Miscellaneous provisions Act, 1952 and our registration no is --. We undertake to keep it valid during the currency of contract.

In case at any stage, it is found that the information given by me is false / incorrect, BSNL shall have the absolute right to take any action as deemed fit/without any prior intimation to me".

* strike out whichever is not applicable

**Attach a self-attested photo copy of the above said EPF registration certificate.

(Seal of the firm)

(Signature of Bidder)

Name of work:-Comprehensive maintenance of 7TR HPAC plants working at various exchanges under Electrical Division III , CHTD (For the year 2021-23)

Undertaking regarding ESI provisions

"I..... Son of
.....Resident of hereby give an undertaking
that

* I/We have employed only ----- persons in our establishment and hence the ESI and Miscellaneous provisions Act,1948 is not applicable to my / our establishment.

* I/ We have registered as per the ESI and Miscellaneous provisions Act, 1948 and our registration no is --. We undertake to keep it valid during the currency of contract.

In case at any stage, it is found that the information given by me is false / incorrect, BSNL shall have the absolute right to take any action as deemed fit/without any prior intimation to me".

* strike out whichever is not applicable

** Attach a self-attested photocopy of the above said ESI registration certificate.

(Seal of the firm)

(Signature of Bidder)

Name of work:-Comprehensive maintenance of 7TR HPAC plants working at various exchanges under Electrical Division III , CHTD (For the year 2021-23)

FORM 'C'

Performance report of works

1. Name of work
2. Agreement no.
3. Final Value of Work Done
4. Date of start
5. Actual date of completion
6. Performance: Satisfactory / Not Satisfactory

Dated:

Executive Engineer or Equivalent

FORM 'D'

No Near relative working certificate

I..... Son of Shri.....Resident of.....
hereby certify that none of my relative(s) as defined in the tender document is/are employed in BSNL unit as per details given in tender document. In case at any stage, it is found that the information given by me is false/incorrect, BSNL shall have the absolute right to take any action as deemed fit/without any prior intimation to me.

(Seal of the firm)

(Signature of Bidder)

MODEL FORM OF BANK GUARANTEE FOR EMD

(For submitting EMD for Air Conditioning, Diesel Engine Alternator, Lifts, and Sub Station Works wherever the amount of EMD is more than Rs.20,000/-)

Whereas _____ (hereinafter called "the bidder(s)") has submitted its Tender dated _____ for the work _____

KNOW ALL
MEN by these presents that WE _____ OF
_____ having our registered office at _____
(hereinafter called "the Bank") are bound unto _____ (hereinafter called "the BSNL") in the sum of _____ for which payment will and truly to be made of the said BSNL, the Bank binds itself, its successors and assigns by these presents.

THE CONDITIONS of the obligation are:

1. If the Bidder(s) withdraws its Tender during the period of Tender validity specified on the Tender Form: or
2. If the Bidder(s) having been notified of the acceptance of its Tender by the BSNL during the period of Tender validity.
 - (a) Fails or refuses to execute the Contract.
 - (b) Fails or refuses to furnish security Deposit in accordance with the conditions of Tender document.

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

This guarantee will remain in force as specified in the Tender Document up to and including Thirty (30) days after the period of the Tender validity and any demand in respect thereof should reach the Bank not later than the specified date/dates.

Signature of the Bank

Signature of the Witness

Name of Witness

Address of Witness:

ANNEXURE II
PERFORMANCE SECURITY GUARANTEE BOND

In consideration of the CMD, BSNL (hereinafter called 'BSNL') having agreed to exempt _____(hereinafter called 'the said bidder(s)') from the demand under the terms and conditions of an agreement/Advance Purchase Order No _____ dated _____ made between _____ and _____ for the supply of _____(hereinafter called "the said agreement "), of security deposit for the due fulfillment by the said bidder (s) of the terms and conditions contained in the said Agreement, on production of the bank guarantee for _____ we, (name of the bank) _____(hereinafter refer to as "the bank") at the request of _____(bidder(s)) do hereby undertake to pay to the BSNL an amount not exceeding _____ against any loss or damage caused to or suffered or would be caused to or suffered by BSNL by reason of any breach by the said Bidder(s) of any of the terms or conditions contained in the said Agreement.

2. We (name of the bank) _____ do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the BSNL by reason of breach by the said bidder(s)' of any of the terms or conditions contained in the said Agreement or by reason of the bidders(s)' failure to perform the said Agreement. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee where the decision of BSNL in these counts shall be final and binding on the bank. However, our liability under this guarantee shall be restricted to an amount not exceeding _____.

3. We under take to pay to the BSNL any money so demanded notwithstanding any dispute or disputes raised by the bidder(s)/supplier(s) in any suit or proceeding pending before any court or tribunal relating thereto our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be valid discharge of our liability for payment there under and the bidder(s)/supplier(s) shall have no claim against us for making such payment.

4. We(name of the bank) _____ further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the BSNL under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till _____

(office/BSNL) BSNL certifies that the terms and conditions of the said Agreement have been fully or properly carried out by the said bidder(s) and accordingly discharges this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the expiry of TWO/TWO AND HALF/THREE YEARS (as specified in P.O) from the date hereof, we shall be discharged from all liabilities under this guarantee thereafter.

5. We (name of the bank) _____ further agree with the BSNL that the BSNL shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said bidder(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the BSNL against the said Bidder(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Bidder(s) or for any forbearance, act or omission on the part of the BSNL or any indulgence by the BSNL to the said Bidder(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the Bidder(s)/supplier(s).

7. We (name of the bank) _____ lastly undertake not to revoke this guarantee during its currency except with the previous consent of the BSNL in writing.

Dated the _____ day of _____

for _____(indicate the name of bank)

Bid Security/EMD DECLARATION (As per the BSNL CO LtrNo.BSNLCO-MMT/12(15)/1/2020-MMT dated 05-12-2020)

BID SECURITY / EMD UNDERTAKING & DECLARATION

I / We R/o
And authorized signatory of the firm M/s.(Hereafter referred to as bidder) have read, understood and agree with all the terms and conditions included in the tender documents for participation in the tender of work/supply of

..... vide tender No..... do hereby undertake and declare that:

1. If I/We fail to enter in to the agreement & commence the work in time as per BSNL order.
2. If any loss or damage caused to or would be caused to or suffered by the BSNL by reason of breach by the bidder(s) of any of terms or conditions contained in the said tender document or by reason of the bidder(s) failure to perform the said agreement.
3. If anything is found false and / or incorrect and / or reveals any suppression of fact at any time.
4. if the bidder either registered with body specified by Ministry of Micro, Small & Medium Enterprise or Non MSE bidder claiming any concessional benefits is awarded work by BSNL and subsequently fails to obey any of the contractual obligations.

I hereby undertake that under any/all the above conditions, BSNL reserves the right to debar our tender offer / cancel the LOA/purchase/work order if issued, and to suspend/Debar/Ban for a period of one year from the date of such order/instance. BSNL can debar my/our firm from any further work/contract by BSNL for one year from the date of issue of such order.

In lieu of EMD/Bid Security, this declaration is submitting.

Date:..... Signature of the tenderer.....

Place : Name of tenderer.....
Along with date & Seal

IMPORTANT INSTRUCTIONS TO THE TENDERERS

The tenderers are required to read the following carefully before quoting the rates and submission of the tenders. In case of any doubt in the downloaded tender, the same shall be got clarified from the Engineer in charge calling the NIT before submission of tender. Please note that the offers, which do not comply with the following, will not be considered and will be totally rejected. These instructions supersede the BSNL/EW 8 clauses in case of any Disparity.

1(i) INCREASE /DECREASE OF TENDERED QUANTITY

a) BSNL will have the right to increase or decrease up to 25% of the Contract value depending upon the requirement of goods and services specified in the schedule of items without any change in the unit price or other terms and conditions at the time of award of contract.

b) In exceptional situation where the requirement is of an emergent nature and it is necessary to ensure continued supplies from the existing vendors, the purchaser reserves the right to place repeat orders up to 50% of the quantity of goods and services contained in the running tender/contract within a period of 12 months from date of award of work at the same rate or a rate negotiated (downwardly) with the existing vendors considering the reasonability of rates based on prevailing market conditions and the impact of reduction in duties and taxes etc.

c)

1(ii) CURTAILMENT OF QUANTITY:-

BSNL reserves the right to enforce curtailment in the assigned quantum of work for any contractor on the grounds of defaults/delay in regard to execution of the individual work assigned.

2) COMPLETION OF WORK:-

The time period will be reckoned from the 10th day after the date on which the order to commence the work issued to the contractor. The normal time of completion shall be 24 months

3) EXTENSION OF TIME:-

If the contractor shall desire an extension of time for completion of work on the grounds of his having been unavoidably hindered in its execution or on any other grounds, he shall apply in writing to the Engineer in charge within 30 days of the hindrance on the account on which he desires such extension as aforesaid, and the Engineer in charge shall if in his opinion reasonable grounds to be shown therefore, authorize such provisional extension of time, if any as in his opinion be necessary are proper.

4) COMPENSATION FOR DELAY :

If the contractor fails to maintain the required progress or complete the work and clear the site on or before the contract or extended date of completion, he has to pay the compensation for delay which is limited to 0.5% per week of the tendered value for the first 10 weeks and 0.7% per week for next 10 weeks and thereafter subject to a maximum of 12% of the tendered value for the location where the work is delayed and the firm is found responsible for the same. The clause 2 of BSNL - 8 forms stands modified accordingly. Flow chart of the Procurement process/ contract shall be supplied by the contractor and approved by Executive Engineer concerned.

5) **TERMS OF PAYMENT:**

Quarterly Payment shall be made after completion of maintenance period. With each bill, a certificate from the Contractor that maintenance has been carried out properly and testing / drills etc. required during the period have been performed in addition to the penalty explicitly indicated under penalty clauses.

6) **EPF PROVISIONS:-**

The agency has to comply with the provisions of EPF and miscellaneous provisions Act- 1952 and employees provident fund scheme-1952 as amended up to date in respect of labours /employees engaged by them for this work. Any consequence arising due to non- complying of provisions as specified above shall be the sole responsibility of the firm only.

Agency has to observe all the labour rules & regulations in force. Agency shall be fully responsible for any violation observed at any time.

7) **PROGRAMME FOR EXECUTION**

The firm shall supply a detailed programme to Engineer-in-Charge for execution of contract within fifteen days of award of work. The programme shall contain details about submission of drawing, supply of materials, tentative dates for installation and commissioning.

8) **STORES AND SAFETY**

All the stores and materials required for the satisfactory completion of the work shall be arranged at work site by the contractor from his own source. Space for storing the same materials may be provided on request from the contractor. However safe custody of the material stores at site will be responsibility of the contractor.

9) **CO-ORDINATION AT SITE**

10)

At the site of work more than one agency may be working. Full cooperation shall be extended to other agencies during the progress of work. Further work shall be carried out in such a way so that it may not cause abnormal noise and hindrance to the officers of the BSNL engaged in erection as well as to normal routine work.

11) **COMPLETION DRAWINGS**

The firm shall supply three sets of drawings/documents after completion of the work but before the proposed date of completion of work.

- ❖ Schematic diagram of control wiring.
- ❖ Operation and maintenance manual.

12) **CHANGES IN SPECIFICATIONS**

The BSNL reserves the right to make changes in respect of specifications of work if in its opinion same is found necessary. However such alterations shall be made after mutual discussions and agreement between the BSNL and the contractor. Any price implications in this regard shall be mutually discussed and agreed upon in terms of clause 12 of EW forms. The BSNL as matter of principle will not permit modifications by the contractor in design /specifications of any document /material. However the same can be agreed upon by the BSNL under exceptional circumstances where

- a) The same is necessitated due to non-availability of material/components of certain specifications/make.

Or

- b) Such alterations constitute an improvement in the opinion of BSNL.

Prior approval is necessary before undertaking any alteration/modification in the specifications of the equipment.

13) **I.S. Standards:**

The entire system shall conform to relevant BIS including safety standards as amended up to date. Where IS standards are not available the British standard(s) shall be followed. In case of conflict, the requirements of these specifications shall be given over-riding priority. The electrical and earthing work shall be carried out as per CPWD specifications for electrical works (internal) and electrical works (external) as amended up to date. A list of relevant standards, approved makes of equipment is furnished and forms part of the tender document.

14) **Operation of the contract:**

- (i) Upon acceptance of the tender by the tender accepting authority, EE(E) concerned shall form a master agreement and issue LOI to each of the site/work.
- (ii) Against the LOI a sub agreement shall be separately formed each site/work and work executed.
- (iii) The EMD, SD,PG shall be separately deduced for each work. EMD which has already been remitted along with tender, if any shall be adjusted against the sub agreements.

Name of work:-Comprehensive maintenance of 7 TR HPAC plants working at various exchanges under Electrical Division III, CHTD (For the year 2021-23)

Sl.no	Description of Items	Qty	Unit	Rate	Total Amount excl. GST	CGST		SGST		Total Amount including GST
						% Rate	Rate per unit	% Rate	Rate per unit	
1	2	3	4	5	6 = 3x5	7	8 = 6x7	9	10 = 6x9	11= (6+8+10)
1	Comprehensive maintenance of 7TR microprocessor based High precision package AC units including all items in the refrigeration cycle viz compressor, condenser coil, condenser fan, liquid receiver, Expansion valves, Evaporator coil, Blower fan, Refrigerant Drier, liquid sight glass, Thermostats, accumulator and all valves wherever applicable and all interconnecting copper refrigerant piping etc as per the specifications / conditions of the contract and as per details given in relevant sections by deploying required staff i/c specialized manpower and supplying and fixing required spares, refrigerant gas, tools and plants and other consumables viz lubrication oil and winding / pressure testing gases to be used in AC units and connected equipment and operational upto the required standard complete as reqd.									
	7TR High precision PAC Unit	41 Units	Unit / month							

UNPRICED SCHEDULE

Important Note:
The firm shall be responsible to ensure that GST shown in the above columns is correct & Input Tax Credit for the amount shown above is admissible as per GST Act as amended up to date.
Tax Invoice /Bill of supply should be pre-printed with all the details as per the requirement under 17A.
The evaluation and comparison of responsive bids shall be done on the basis of Net cost BSMIL on the prices offered inclusive of packing, forwarding, freight and insurance charges etc., but excluding GST .
The rates for all items of work shall, unless clearly specified otherwise, include cost of all labour, materials and other inputs involved in the execution of the terms as specified in the scope of work.
No advance payments can be made. Conditions like levy of interest if payment is not made in a specified time are also not acceptable and the payment is governed by the normal BSMIL price.
Bidder must mandatorily quote for all GST components (CGST, SGST, IGST) as applicable.
Bidder must mandatorily mention correct HSN/SAC codes.

Contractor

Executive Engineer (E)

Technical Specifications

A. GENERAL

1. SCOPE OF MAINTENANCE

- 1.1 HPAC Maintenance of the Technical/ Administrative/ Residential Building(s) as applicable in this contract means that all HPAC / Electro Mechanical Services included in the schedule of work are kept in healthy clean and working condition and wherever specified the operation of such of the electromechanical services are also carried out. Specific details of maintenance activities required with regard to each service are detailed under sections pertaining to that service / technical specifications.
- 1.2 Electrical maintenance shall be carried out as per instructions contained herein. However all other forms & instructions to be used shall be as per works instructions / forms & checklists etc., issued from time to time. Wherever the term maintenance appears in the technical specification, it refers to the service for which comprehensive maintenance is undertaken unless otherwise specified. However the services under operation shall be generally maintained clean.
- 1.3 ~~Watch and ward of the installation under Operation & Maintenance shall be the responsibility of the contractor during the contract period.~~
- 1.4 After the contract period is over the installation has to be duly handed over to the new agency along with the record of test results of equipment & associated items. Under supervision of SDE (E)/JTO (E) in charge. However installation is to be taken over by the new agency for O & M within 15 days of award of work.

All the spares required for the repairs are to be arranged by the contractor without any extra cost. In addition to these, all periodic maintenance as per tender document should be carried out. The schedule given in the tender document is only to give an idea of the services to be maintained. But maintenance of all the allied components and accessories of each system will be under the scope of work. All major repairs and periodical maintenance are to be got done through specialized agencies only

2.0 METHODOLOGY

- 2.1 It is presumed that contractor will provide minimum qualified staff at the site, which will be adequate to perform routine maintenance and operational functions. For optimum utilization one person can be responsible for number of services.
- 2.2 In case of faults beyond the capacity, contractor shall immediately provide extra-specialized work force so as to attend to the fault in minimum reasonable time without any extra cost.
- 2.3 At the start of work, firm shall prepare an inventory of service under maintenance jointly with J.T.O (E)/SDE (E), concerned.
- 2.4 Before start of the work complete equipments/services under scope of maintenance shall be thoroughly examined by the agency jointly with SDE(E)/JTO(E) concerned. All Defects/discrepancies should be brought to the notice of the SDE(E)/JTO(E) in writing within first 15 days of award of work. Defects/discrepancies agreed upon by BSNL shall be got attended by the outgoing agency before handing over the site to the new agency. If the outgoing agency fails to correct the defects/discrepancies within 15 days, the same shall be got done by BSNL at the risk and cost of the outgoing agency. However any defect pointed out beyond 15 days, the agency is responsible for attending to the defects/discrepancies. Where the maintenance is taken over, for the first time, the

defects / discrepancies shall be got attended by BSNL.

- 2.5 A complaint / fault Register as per annexure- III shall be kept up-to-date ~~at site~~ by the firm and the same shall be available for checking & verification.
- 2.6 ~~Firm shall maintain logbooks as per annexure -IV.~~
- 2.7 If during the period of contract, any of the PAC units/~~window/Split units~~ are added / altered, ,all inclusive comprehensive maintenance of the same shall be done by the firm, the rates will be regularized as per Clause -12 of EW 8. However in case of deletion of any PAC unit/~~window/split units~~, recovery shall be made from the bill of the contractor on similar lines.
- 2.8 The details in the annexure I are approximate to give an idea of services to be maintained. Any variation on higher or lower side shall deem to be included at the initial take over. However the tenderers are advised to inspect the site (s) and make them acquainted before quoting.

MAINTENANCE PERSONNEL

Since the firm will be doing the maintenance of critical services such as Air Conditioning responsible & trained person(s), should be able to take initial steps under emergency situation.

~~3.2 In the sites where operation is carried out, the firm shall maintain an attendance register which can be inspected at any time by the SDE/JTO. The workman shall not leave the duty point till his reliever has reported for duty. In addition to the attendance register, the firm shall abide by the attendance recording methods in vogue in the site of operation such as finger print scanning etc.~~

3.3 Agency shall issue identity cards to the workers and a list of personnel employed together with the copies of such identity cards should be submitted to SDE(E)/JTO(E) concerned.

3.4 The workers engaged by the firm should maintain proper discipline and good behavior with occupants. The firm shall remove such workers from the site whose behavior is found improper. Engineer – in – Charge’s decision shall be final and binding.

~~3.5 The firm has to supply details as per annexure -II of all the workers likely to be engaged by it before start of the work.~~

~~3.6 The workers engaged by the firm should wear a uniform of Navy blue color/ Coffee brown with detachable badge indicating the name of the person and firm’s name and printed “SAVE ENERGY” at the back of the shirt.~~

~~3.7 The sitting arrangement for the staff engaged by the agency, space, water, telephone and electricity shall be made available by BSNL free of cost.~~

3.8 Provision of Supervisor shall also be made as per standard form of contract (PWD8) which forms the part of this contract.

~~3.9 The firm and their personnel shall follow the attendance guidelines / practices such as finger print identification, punch card etc., which are available or will be installed by BSNL in a later date.~~

3.10 The firm and their personnel shall also co-ordinate, operate and feed information on automatic data collection services/automation devices that will be introduced by BSNL at any date during the tenor of contract.

At the start of each month, the firm in consultation with the SDE (E) concerned shall prepare a Program for preventive maintenance if any, to be carried out during the month. The actual maintenance carried out shall be recorded in **Annexure-VII** at the end of each month as per

maintenance schedule vide **Annexure-VIII**

Firm shall submit bills along with a Certificate as per **Annexure - IX**

Firm Shall Carry out Capacity test of Package AC unit every Month as per **Annexure- X**

~~If during the period of contract, any of the HPAC's are added/ reduced, all inclusive maintenance & comprehensive maintenance of the same shall be done by the firm, the rates will be regularized as per Clause 12 of EW-8. However in case of deletion of any major services similar recovery shall be made from the bill of the contractor.~~

COMMERCIAL

The maintenance personnel engaged by the firm should maintain proper discipline and good behavior with occupants.

The firm shall remove such workers from the site whose behavior is found improper. Executive Engineer's decision in this matter shall be final.

Any damage to the installation (s) / building during the maintenance period due to the carelessness on the part of maintenance staff shall be the responsibility of firm & be replaced / rectified without any extra cost.

Any accident or damage during maintenance will be the responsibility of agency & BSNL will not entertain any claim, compensation, penalty etc. on this account or on account of non-observance of law to the work.

The BSNL reserves the right to carry out any work at the risk and cost of the agency, if the agency fails to perform any duty as per the contract.

The tenderer must obtain himself at his own expense all the information necessary for the purpose of execution, before tendering.

The agency should inspect the site & acquaint itself with all the local condition, means of access to work & nature of work etc. No claim shall be entertained on these accounts.

The rate quoted must be full & final.

Nothing extra is payable other than quoted rates unless specified. The contractor shall not sublet the work or part thereof. However, services of specialised agencies for specified work can be obtained.

The firm shall maintain the installation(s) in such a way as to provide uninterrupted required conditions in air conditioned rooms.

The BSNL reserves the right to terminate the contract by giving show-cause notice of one month duration at any time during the currency of the contract.

The BSNL reserves the right to extend the contract as per the provisions of agreement at the same rate & conditions.

The staff engaged by the firm shall bear the identity card.

Once the installation is handed over to the contractor, it is the responsibility of the contractor to attend whatever defects / damages arising after the date of handing over i/c replacement of defective components etc.

After the contract period is over, the installation has to be duly handed over to the department with all the services in good, healthy, neat, working condition. The contractor shall be responsible for any discrepancies Vis-a-vis, the status of installation at the start of work plus any modification carried out during the currency of the contract.

Any defects, shortcomings brought to the notice of the BSNL within 15 days of award of work shall be the responsibility of the BSNL.

BSNL is having right to pre close the agreement in special cases with one month notice without assigning any reason.

BSNL is having the right to curtail the quantity according to the requirement.

The rate quoted must be full and final, it is inclusive of all taxes and duties. Nothing extra is payable other than quoted rates-

4.0 MATERIALS AND TOOLS & PLANTS

(A) Material

4.1 Wherever the scope of work includes comprehensive maintenance, such services, as per inventory shall be maintained on comprehensive basis i.e. no material will be supplied by the Department. Only replacement of major equipments as specified in Part-IV of relevant sections under technical specification which is required to be replaced as a whole after due scrapping shall be the responsibility of the BSNL. Till such time firm has to maintain the life expired equipment.

~~4.2 Contractor shall comply with any inclusion/exclusion in the above items and/or their quantity depending upon site requirements. The decision of the Engineer in charge shall be final in this regard.~~

4.3 The replacement of material shall be with the same rating and make as that of the original. The firm may also replace an item with energy efficient item wherever the same is available, upon intimation to JTO (E). However, in case of non-availability of a particular make, Engineer-in-charge will approve the alternate make.

4.4. Dismantled and unserviceable items for which a replacement is supplied, shall be removed from the site under intimation to the JTO(E).

4.5 All materials shall be of approved make, model and capacity and shall be matching to the system.

4.6 Supplier Invoice/Bill / Purchase particulars shall be produced in case of all major items such as compressor etc. as a proof of genuineness. For replacement compressor, the firm shall produce necessary documentary proof. Obsolete items not available in market can be repaired and re used. However efficiency of compressor shall be ensured to avoid penalty under relevant clauses.

~~4.7 The contractor shall maintain minimum inventories with them in addition to items/spares mentioned under specifications as section 4.1 above. However the items/ spares which are not relevant to particular site need not be maintained.~~

(B) TOOLS & PLANTS:

4.8. All tools and plants, testing & safety equipments required for carrying out various tasks relevant to operation and maintenance have to be arranged by firm at its own cost.

~~a. Wherever the firm is carrying out the Operation and maintenance of equipment, the firm shall possess the following minimum T&P at that site.~~

- ~~i. Insulated Screw Driver~~
- ~~ii. Line Tester~~
- ~~iii. Insulated Cutting Plier~~
- ~~iv. Torch Light~~
- ~~v. Waste Cloth~~
- ~~vi. Sling Psychrometer with 100 ml water can.~~
- ~~vii. Ring and adjustable spanner Set~~
- ~~viii. Insulated Hand gloves~~
- ~~ix. Test Lamps~~

b) In addition to the above, the firm shall generally possess the following T & P at their maintenance office according to the services covered under the scope.

a) Where Maintenance of PACKAGE AC PLANTS are forming scope of the contract, the firm shall possess the following,

- i. Halide leak detector
- ii. Anemometer
- iii. Gas charging kit
- iv. Empty cylinder with cap & valve
- v. Vacuum cleaner
- vi. Vacuum pump (1/4HP)-Two state Rotary pump
- vii. Oxy Acetylene torch & welding set
- viii. Swaging tools
- ix. Gas charging manifolds with discharge and suction gauge
- x. Vacuum gauge
- xi. Flaring Tool
- xii. Soldering Gun.
- xiii. Pressure Guage.

4.9 The above list is general and any other requirements for smooth maintenance of installation shall be contractor's responsibility and he shall not claim anything extra on this account.

4.10 The firm shall also coordinate with the JTO (E) / SDE (E) for carrying out energy audit/capacity test at site. With respect to AC package unit.

4.11 The Firm/Contractor will provide the maintenance personnel with necessary Testing and Safety Equipment.

5.0 COMMERCIAL.

5.1 The tender must obtain himself on his own expenses, all the information necessary for the purpose of tendering, inspect the site and acquaint himself with all the local conditions, means of access to work and nature of work etc. No claim shall be entertained on this account.

5.2 Payment shall be made on quarterly basis after completion of maintenance period and on submission of bill in printed letter head together with requisite certificate and documents as per Clause 14 of Important instructions to Contractors and annexure – VI & VII.

5.3 The rates quoted must be full & final. Nothing extra is payable other than quoted rates. Clause 10-CC shall not be applicable for this account.

6.0 DAMAGES TO BSNL INSTALLATION:

6.1 Any damage to the installation(s)/building during the maintenance period due to the carelessness on the part of maintenance staff shall be the responsibility of firm/contractor & shall be replaced/rectified by the firm without any extra cost.

6.2 Any accident or damage during maintenance will be the responsibility of the firm/contractor & the Department will not entertain any claim, compensation, penalty etc. on this account or on account of non observance of any other requirement of law relevant to his work.

7.0 CURRENCY OF CONTRACT:

7.1 The currency of contract shall be **24 months**. The Department reserves the right to terminate the contract by giving show cause notice of one-month duration at any time during the currency of the contract.

7.2 The Department reserves the right to extend the contract for a maximum period of six months (three months at a time) at the same rates & conditions, without the consent of the firm and beyond this period with mutual consent.

8.0 TERMINATION OF CONTRACT:

8.1 Right is reserved by BSNL for terminating the contract due to serious default. This includes major break down or accident or loss due to negligence on the part of firm, failure to attend breakdown in reasonable / prescribed time , disobedience and abandoning the site etc. In such a case, Full Performance Guarantee shall be forfeited to BSNL. The decision of Superintending Engineer (E) in this regard shall be final and binding.

8.2 Right is reserved by BSNL for closure of the contract at any time by giving one month's notice for reasons not attributed to the Contractor. The decision of Executive Engineer shall be final and binding on the contractor for closure of contract and for which BSNL shall not entertain any claim.

9 PENALTY FOR DEFICIENCY IN SERVICE:

SERVICE	SERVICE CONDITIONS	PENALTY FOR DEFICIENCY IN SERVICE
Package AC units maintenance	<p>i) Faults involving the following in the individual units shall be replaced within the time frame failing which penalty shall be imposed.</p> <ol style="list-style-type: none">1. Condenser coil & Evaporator coil – Beyond one month.2. Compressor replacement –Beyond 3 weeks3. Blower fan/ motor, Condenser fan/ motor, MCCB replacement – Beyond 15 days4. Others(Digital and Electronic components and control circuits) – Beyond one week.5. Failure to carryout monthly preventive maintenance activity (In addition to non-payment for the unit)6. Failure to respond to Emergency situation due to PAC failure leading to temperature rise	<p>Rs. 1000/- per day per unit</p> <p>Rs. 1000/- per day per unit</p> <p>Rs. 500/- per day per unit</p> <p>Rs. 250/- per day per unit</p> <p>Rs.500/- per unit per month</p> <p>Rs.2000/- upto 3 occasions beyond three occasions will lead to termination of contract and execution of work through risk and cost..</p>

Energy efficiency of AC (all types)	iii) Energy efficiency of AC: Shall be within benchmark value. Any reduction will lead to penalty	Penalty proportionate to additional energy expenditure incurred due to reduced efficiency.
-------------------------------------	--	--

1. In case a contractor fails to comply with preventive/ periodical maintenance schedules, a penalty of 25% of one month's bill amount shall be imposed.
2. In case of a major accident/loss on account of negligence on the part of the contractor, the contract shall be terminated and 10% of the estimated cost shall be recovered. Decision of Executive Engineer (E) shall be final and binding on the contractor.
3. Notwithstanding BSNL also reserves the right to carryout scheduled mtce activity, if not done by the main firm, at his risk & cost.

10.0 GENERAL CONDITIONS:

- 10.1 ~~The contractor has to keep all the equipments under operation & maintenance and site neat and clean to avoid any accident and or fire hazards.~~
- 10.2 Dates of weekly, monthly, biannual / annual tests / maintenance activity, (wherever applicable), shall be displayed / recoded in relevant columns.
- 10.3 Contractor shall have a round the clock communication landline/ Mobile telephone number at Chennai. ~~A complaint register shall be maintained as per annexure III. Whenever any complaint is received, it shall be recorded and complaint no. shall be given to the complaine.~~
- 10.4 Disposal of complaint shall be recorded and monthly report shall be submitted to the SDE (E) concerned.
- 10.5 The Contractor will display on a board in AC Plant room important telephone numbers.
- 10.6 The contractor shall not sublet the work or part thereof. However, services of specialized agencies for specific work can be obtained.
- 10.7 The contractor agrees that he shall at all times indemnify BSNL against all claims for compensation under the provisions of any law for the time being in force or in respect of any person employed by it in carrying out the contract. Further, such staff has no right to claim employment in BSNL.
- 10.8 The Contractor will provide the maintenance personnel ~~workers~~ with necessary T & P, Testing & safety equipments.
- 10.9 Contractor has to observe all the labour rules and regulations in force & BSNL shall not be liable for any default
- 10.10 ~~The agency has to supply details as per annexure II of all workers likely to be engaged by him before start of work and get it approved by Engineer in charge.~~
- 10.11 BSNL reserves the right to carry out any work at the risk and cost of the contractor, if the agency fails to perform any duty as per the contract.
- 10.12 Firm is responsible to keep workable spares and consumables for due performance of the contract. For critical spare parts, firm shall have arrangement with dealers for prompt supply.
- 10.13 The material used/replaced by the firm for the work shall have same specification. Alternate Make shall be allowed in case of immediate non availability / obsolescence.
- 10.14 As Air-conditioning services are of critical nature, the firm will ensure that the personnel engaged are

well trained to take responsibility and initial steps under emergency situation.

~~10.15 The Equipments specified in relevant sections of Annexure I shall be painted & sign written i/c preparing the surface, applying primer & two or more coats of synthetic enamel paint of approved colour as & when required. In case of outdoor installations, the painting shall be with weather proof paint.~~

~~10.16 Firm shall ensure energy conservation by switching on the air conditioner units /lights & fans etc only when required, wherever O & M is forming the scope of contract.~~

~~10.17 In case of Emergency, contractor and/or his authorized engineer or supervisor shall be available at site on short notice from Engineer-in- charge and make all efforts to make the situation normal at the earliest~~

~~11. DOCUMENTS TO BE MAINTAINED AT SITE/MAINTENANCE OFFICE~~

~~The contractor shall maintain following documents,~~

~~11.1 A complaint / fault register as per format given in annexure III.~~

~~11.2 Log Book: log book as per annexure [IV] for AC plant shall be maintained at site. The logbook shall be printed and spiral/bound, preferably with different color sheets. Coloring code shall as follows. (Preferred colour)~~

~~Daily : White~~

~~Weekly : Pink~~

~~Monthly: Yellow~~

~~Quarterly : Light blue etc.,~~

~~11.3 Report file: containing all the test reports in original Viz. A.C. package reports, monthly service report for HPAC/window/ split ac units, shall be maintained at site.~~

~~11.4 History register: The firm shall record all major breakdown maintenance carried out by the firm like rewinding of motor / replacement of compressor/E/A set overhauling done, if any etc.~~

~~11.5 Inspection notes: A file containing all inspection notes released by CE(E) / SE(E) / EE (E) / SDE (E) pertaining to the contract / type of work along with the action taken report on it shall be available.~~

~~11.6 The service/fault report card for Window/Split AC units shall be hanged near the AC units with the consent of the user. If otherwise the same shall be kept conspicuous location as desired by the user.~~

12 TEST CHECK BY THE FIELD ENGINEERS:

12.1 For the purpose of assessing the quality of service rendered by the firm against the above contract, the EE, SDE & JTO shall carryout inspection & test checks of the service/work under the contract periodically.

12.2 During these test checks they shall record any deficiency in the work. As per the principle of sampling, if service during sample test check is not found to be satisfactory, then penalty shall be imposed on the contractor as per the penalty clause no. 9.

13.0 Guarantee and Defect Liability

13.1 The guarantee for replaced components / equipments shall be valid for twelve months after successful commissioning. The contractor shall guarantee that all replaced components / equipments are free from any defects and also the equipments work with satisfactory performance and efficiency not less than the guaranteed values.

13.2 Any part found defective during Guarantee period shall be replaced free of cost by the contractor. The service of the contractor's personnel, if required during this period shall be made available free of cost to the BSNL.

13.3 In case the contractor fails to depute his representative to attend the fault within the time frame

stipulated in various clauses or fails to cause remedial measure within reasonable time as decided during joint inspection, the BSNL may proceed to do so at the contractor's risk and expenses and without prejudice to any right of the BSNL to recover such expenses.

14.0 ENERGY CONSERVATION

14.1 BSNL Electrical Wing, Chennai Telephones is committed to reduction in energy bills by the way of energy conservation over a year by 10%.

14.2 The contractors shall co-ordinate with the departmental SDEs / JTOs while conducting Energy auditing of the AC Plant under maintenance for effective Energy Conservation. The contractor shall facilitate energy conservation measures prescribed for the particular plant.

14.3 The contractors are responsible for display of Energy conservation slogan stickers at prominent locations in the area under maintenance.

14.4 Totally Burnt out motors shall not be repaired but replaced with higher efficiency motors of reputed make.

14.5 Energy efficiency of Package AC plants, shall be maintained within the benchmark value. The benchmark value shall be assigned by JTO(E)/SDE(E) after testing, with respect to the present conditions within 2 months from the date of handing over the services for maintenance. A 10% allowance shall be given for ageing while setting the benchmark itself. Energy efficiency test shall be done once in a month by the contractor. Reduction in Energy efficiency below the benchmark value shall result in suitable penalty as per the penalty clause.

15. List of Annexures

SL NO	Description of Annexure	Annexure
1	Size of services to be maintained	III
2	Details to be supplied before starting the work & Details to be displayed at site	IV
3	Complaint cum fault Register	V
4	Format of 'Abstract of actual periodical maintenance carried out in the quarter ending _____'	VI
5	Certificate to be submitted along with each bill	VII

SIZE OF SERVICE**ANNEXURE III**

LIST OF PAC PLANTS UNDER ED III as on 19.06.2021								
Name of the sub divn	Name of station	Exchange	Nos	Capacity (TR)	Total (TR)	Model/Make	Date of Installation	
ESD-II	TE Haddows Road	5ESS	4	7	28	Emersons	12.02.2013	
		NIB	5	7	35	Stulz	20.03.2014	
			3	7	7	Sidwal	31.12.2015	
		STR DTC	6	7	42	Emersons	07.09.2018	
		GSM MSC	7	7	56	Emersons	23.11.2017	
	TE Anna road	GSM ZTE GGSN		5	7	35	Stulz	10.01.2014
				2	7	14	Emersons	11.01.2017
				1	7	7	Emersons	23.11.2017
		TXM	4	7	28	Stulz	29.04.2016	
		ESD VII	St. Thomas Mount (OCB)	OCB	3	7	21	Emerson
ESD CANI	Mylapore		1	7	7	Stulz	12-11-2014	
			41 nos		280 TR			

I) PACKAGE TYPE AIR CONDITIONING

Note: (The Details in this section are approximate to give an idea of services to be maintained. Any variation on higher or lower side shall deem to be included. However the tenderers are advised to inspect the site(s) and make themselves acquainted with the type, make & condition of the inventory before quoting)

ANNEXURE -IV**DETAILS TO BE SUPPLIED BEFORE STARTING WORK WITHIN 15 DAYS**

a) The following information to be be pasted/displayed near the ac plant room .

The CAMC of HPAC Plant , in this building is carried out by

<u>1.</u>	<u>Name of the Agency</u>	
<u>2</u>	<u>Address (of maintenance office)</u>	

<u>3.</u>	<u>Person to contact</u>	
<u>4.</u>	<u>Telephone No.</u>	
<u>5.</u>	Name of JTO(E) incharge and his contact No.(landline & mobile)	
<u>6</u>	Name of the SDE(E) incharge and his contact no.(landline & mobile)	

■ In case of emergency please call:

■ In case of no response call JTO (E).

ANNEXURE – V

COMPLAINT / FAULT REGISTER

The following information shall be pasted in front cover of the register

Name of work:

Name of contractor:

Agreement No:

Name of Sub-Division:

Location:

Register Format:

Complaint No. (1)	Date & Time of complaint (FAULT) (2)	Service Whether HPAC	Complaint Lodged by / FAULT Observed by (3)	Nature of complaint reported / Fault Observed (4)	Proposed action to avoid future complaint / Fault (5)	Time & Date of attending complaint / Fault vide service report no. (6)	Date & Signature of Firm's Representative (7)	Test Check by SDE/JTO with date (8)	Remarks (9)

MAINTENANCE ACTIVITY DATA SHEET (QUARTERLY)

3.This monthly maintenance activity data sheet shall be available format of which is given below. The firm shall invariably carryout this activity every month and data recorded accordingly.

(A)Capacity Test of PAC unit

(One sheet shall be used for each PAC unit)

PAC UNIT NO _____ SL. No _____

DATE OF TESTING: _____

Evaporator & Compressor

S.No.	Parameter	Results	Remarks
1.	Area of the PAC air Inlet Grill of the evaporator in SFT		
2.	Air Velocity in FPM		
3.	Air Quantity in CFM		
4.	Required air Quantity as per Agreement		
5.	Inlet Air Temp DB °F		
	WB °F		
6.	Canvas air Temp DB °F		
	WB °F		
7	Internet Enthalpy		
8	Canvas Enthalpy		
9	Enthalpy Difference		
10	Specific Volume		
11	Total Capacity Cfm x Enthalpy diff 200 x Sp. Volume		
12	Observed Tonnage		
	a) Sensible Cooling Capacity 1.08 x Cfm x Temp. Diff ----- 1200		
	b) Latent cooling capacity (Total capacity – Sensible cooling)		
13.	Evaluated tonnage at design conditions		
	a) Sensible cooling capacity		
	b) Latent Cooling capacity		

Inside conditions during the tonnage test

Swith Room Temperature

DB F :

WB F :

RH %:

HP of the PAC unit being tested :

LP of the PAC unit being tested :

Signature of Contractor/representative

Signature of JTO(E)

with remarks.

B. Other monthly maintenance activity

WATER SERVICING OF CONDENSORS				
	UNIT 1	UNIT 2	UNIT 3	UNIT 4
Tick if done				
Condition of filter (OK/ Not OK)				
CHECK OF FIRE EXTINGUISHER				
CURRENT WEIGHT		PREVIOUS MONTH WEIGHT		
CALIBRATION OF THERMO METER/ PSYCHROMETER				
CALIBRATION RESULT	STANDARD:	TEST RESULT:		X

BIANNUAL MAINTENANCE ACTIVITY DATA SHEET

3. At the end of April & October the month's daily data sheet, the following maintenance activity data sheet shall be available. The firm shall invariably carryout this activity every month and data recorded accordingly.

(This data sheet is in addition to the monthly maintenance activity data sheet)

(i) Insulation test values:

Equipment	RN	YN	BN	RE	YE	BE	NE
Compressor							
Evaporator Fan motor							
Condensor fan motor							
Standby incoming cable							

Earth Continuity between Main LT panel to AC plant Panel	OK/ Not OK
Earth continuity from AC plant panel to PAC units	
VCD shut off on Fire Signal	

Signature of Contractor/representative

ANNUAL MAINTENANCE ACTIVITY DATA SHEET

1. At the end of one year the condenser unit and frame work shall be painted and the activity shall be recorded in the following format.

A.				
PAINTING OF CONDENSERS AND FRAMEWORK				
	UNIT 1	UNIT 2	UNIT 3	UNIT 4
DONE FOR				

(tick if done)

B.DETAILED TESTING OF THE INSTALLATION AS IS DONE FOR A/T (BUT WITHOUT INVOLVING A/T AUTHORITIES)			
DONE ON		RESULT:	SATISFACTORY/UNSATISFACTORY

The above data sheets show a model format which can be used to draw up data sheets based on actual site requirements.

ANNEXURE – VI

(To be submitted by the contractor along with the quarterly bill claim)

ABSTRACT OF ACTUAL PERIODICAL MAINTENANCE CARRIED OUT IN THE QUARTER ENDING

Name of contractor: _____.

Agreement No. : _____.

Month:

- iv. MONTHLY ACTIVITY:(Tick /fill relevant coloumn)

MONTHLY MAINTENANCE ACTIVITY	DONE FOR ALL THE DAYS	NOT DONE FOR _____ MONTHS
------------------------------	-----------------------	---------------------------

- v.

- BIANNUAL ACTIVITY:(Tick /fill relevant coloumn)

BIANNUAL MAINTENANCE ACTIVITY	DONE	NOT DONE
-------------------------------	------	----------

VI. ANNUAL ACTIVITY:(Tick /fill relevant coloumn)

YEARLY MAINTENANCE ACTIVITY	DONE	NOT DONE
--------------------------------	------	----------

CAPACITY TEST RESULTS OF PAC UNITS:

PAC UNITS				
MONTH	UNIT 1	UNIT 2	UNIT 3	UNIT 4
REASONS IF TONNAGE IS BELOW 75% OF INITIAL TESTED CAPAICITY				
ACTION PROPOSED				

VIII. FAULTS/ O & M DEFICIENCY DATA:

1. Certified that the data given above are true and is based on the periodical repair/ maintenance work done by us..
2. Certified that we have carried out maintenance properly as per schedule of work and as per terms and condition of the agreement and testing/drills etc. required during the period has been performed.

Contractor/ authorized representative

counter signed by

JTO(E)/ SDE(E)

ANNEXURE VII

CERTIFICATE TO BE SUBMITTED ALONG WITH EACH BILL

1. CERTIFIED THAT WE HAVE CARRIED OUT THE SCHEDULED MAINTENANCE COVERED IN THE ABOVE CONTRACT SATISFACTORILY AND THE SERVICES HAVE BEEN UNDER SATISFACTORY WORKING CONDITION EXCEPT THE FOLLOWING DUE TO THE REASONS MENTIONED AGAINST THE RESPECTIVE ITEM:

Sl.No	ITEM/SERVICES	REASONS FOR NON OPERATION

--	--	--

2. CERTIFIED THAT THE EQUIPMENTS FOR WHICH THE ENERGY EFFICIENCY PARAMETERS HAVE BEEN PRESCRIBED WERE MAINTAINED WITHIN THE PRESCRIBED BENCHMARK.
3. CERTIFIED THAT REQUIRED INVENTORY HAS BEEN REPLENISHED BY US.
4. ~~CERTIFIED THAT EPF FOR THE EMPLOYEES ARE REMITTED WHEREVER APPLICABLE.~~
5. ~~CERTIFIED THAT WE HAVE COMPLIED WITH PROVISIONS OF MINIMUM WAGES ACT 1948.~~

SIGNATURE OF CONTRACTOR

Counter signed by:

JTO (E)/SDE (E)

TECHNICAL SPECIFICATIONS

PART I: SCOPE OF WORK FOR EACH OF THE SERVICES

SECTION – I: AIR CONDITIONING PACKAGE SYSTEM

1. Comprehensive Maintenance (Routine, Preventive & Break Down) throughout the period of contract, as per the guidelines of BSNL/Engineer-in-charge.
2. When compressor needs replacement the same should be purchased from the manufacturer/authorized dealer and necessary documentary proof of replacement should be submitted to the BSNL.
3. ~~Monitoring and recording on continuous basis inside temp. / humidity conditions and ensuring that they are maintained within limits.~~
4. ~~Monitoring and recording on continuous basis important operational parameters.~~
5. ~~Providing necessary man Power (skilled, semi skilled and un skilled) as required for the above activities.~~
6. The maintenance activities are to be divided in such a manner that inside Temp. Conditions are maintained. The desired inside conditions are:
 - a. The temperature below the rack wherever bottom feed is provided of the switch room shall be 20+/- 3 Deg. C.
 - b. Required design condition for Electronic exchanges i/c E-10-B shall be 23+/- 3 Deg. C
 - c. Relative humidity within the limit of 40% to 60%.

PART II: TASKS TO BE PERFORMED WITHIN 15 DAYS

Following tasks should be carried out within 15 days.

1. Enquiry office shall be established and system shall be organized with the approval of Engineer-in-charge so that complaints can be received and attended properly.
2. All registers shall be opened as per proforma.

3. The agency will familiarize with the installation and inspect the complete system and understand the requirements of installation. Any other relevant aspect which will come in the way of maintenance shall also be brought to the notice of Engineer in Charge.
4. Shall carry out tests as per test schedule before taking over the maintenance.
5. Upon successful taking over of the maintenance the agency will be responsible for the equipment and hand over the installation to the new agency in healthy condition after completion of the maintenance. In case the same agency continues for AMC, the agency will carry out these activities as per the prescribed maintenance schedule and will be responsible for rectification of defects and replacements of parts..
6. Prepare an inventory of materials/tools to be kept at site or to be in possession of the maintenance personnel, for prompt maintenance in consultation with Engineer-in-charge. Materials for all the services are to be considered. A tentative requirement of materials that are to be possessed with the
7. Shall inspect and takeover the operation of the AC plant.
8. Shall collect information like the telephone numbers of the Exchange in charge, JTO(E), SDE(E),EE(E),Fire service, Supply Company, Local Hospitals, Emergency Services etc. and preserve it in the maintenance office.

Part III – MAINTENANCE SCHEDULE TO BE FOLLOWED

SECTION I: PACKAGED AC PLANTS.

DAILY

- ~~1. Check for general cleanliness of plant room and condenser area~~
- ~~2. Record various readings in the log book~~
- ~~3. Check for abnormal heating of Electrical contacts and Motor starter.~~
- ~~4. Check for any vibration in Package units (or in the floor)/suction/discharge pressure gauge.~~
- ~~5. Check discharge and suction pressure.~~
- ~~6. Check for any obstruction in the return air.~~
- ~~7. Check HP/LP cutouts.~~
- ~~8. Check V belt tension of blower Motor/ condenser motor.~~
- ~~9. Check for any frosting at cooling coil.~~
- ~~10. Check working of fresh air fan.~~
- ~~11. Ensure working of fresh air fan in combination with blower in winter nights so as to utilize the outside lower ambient.~~

MONTHLY

1. Micro filter cleaning.
2. Fresh air filter cleaning.
3. Check electrical contacts and tighten them.
4. Check for leakage of conditioned air.
5. Check of controls.

Quarterly.

1. Check opening closing of volume control Damper, and supply Air Dampers.(March, June, Sept, Dec)

2. Check electrical contacts and tighten them if required.(March, June, Sept, Dec)
3. Lubrication of all bearing etc.(Jan, April, July, Oct)

HALF YEARLY

1. Earth testing..... (April, Oct)
2. Meggering.....(April, Oct)
3. Inspection of pipe insulation / boxing) (May & Nov)

YEARLY

1. Complete servicing of A/C pkg. plant before onset of summer (i/c charge of compressor oil , de-scaling of all water lines , valves and condensers.)

Testing

Detailed Testing of the installation shall be done once in a year to find out capacity and efficiency of various equipment with respect to their rating. The testing procedure shall be same as adopted at the time of original testing (but without involving the T&D persons.)

PART IV: MATERIALS

SECTION 1: PAC PLANT:

All the materials required for carrying out routine maintenance with the exception of following shall be arranged by the contractor at his own cost.

1. Replacement of complete AC pkg unit, Complete Condenser and main MV Panel, filters, Annunciation panel.

However Refrigerant lost during the operation, oil, fan belt, & filter shall be firm's responsibility.

NOTE: - The replacement of material shall be with the same rating and make as that of the original. However, in case of non-availability of a particular make, the Engineer-in-charge will approve the alternate make.

LIST OF APPROVED MAKES - BSNL ELECTRICAL WING

S.No.	Item	Makes
1	Engine	Ashok Leyland /Cummins/ Cater pillar /KOEL/ Volvo Penta / Mahindra & Mahindra (up to 200 KVA) /Escorts (up to 30 KVA)/ Eicher (up to 35 KVA)
2	Alternator(Brushless)	Crompton Greaves (AL. series) / KEC / Leroy Somer / Stamford/Jyoti Ltd
3	Battery (Lead Acid / Mntc. Free)	Amara Raja / AMCO / Farukawa / Hitachi / Exide/ Prestolite / Standard
4	HV Switchgear (Vacuum Circuit Breaker/SF6)	BieccoLawrie / Crompton / Kirloskar / MEI / Jyoti Ltd
5	Transformer (Oil filled / Dry type) a)	ABB / Schneider Electric /Andrew Yule / Bharat Bijlee / Crompton / EMCO /Kirloskar / Siemens
	b) Up to 400 KVA	In addition to above makes, Uttam/ Patson /Rajasthan Transformer and Switchgear
6	Air Circuit Breaker	L&T/ Schneider Electric / Siemens
7	MCCB(Ics=Icu)	L&T/ Schneider Electric / Siemens
8	SDF units	L&T/ Schneider Electric / Siemens/HPL/Havells
9	Power Contactors	L&T/ Schneider Electric / Siemens/ Lakshmi(LECS)
10	Change Over Switch	HPL / Havells / H-H Elcon
11	Intelligent APFC Relay	L&T/EPCOS(Siemens)/ Schneider Electric / Neptune Ducati/Syntron/ABB
12	Bus Bar Trunking/ Sandwiched Bus Duct	Moeller/L&T/Schneider Electric/ABB/ Legrand /Zeta
13	Power Capacitors (MPP/APP)	L&T/EPCOS(Siemens)/ABB/Crompton/ Schneider Electric / Neptune Ducati
14	Digital/ KWHr meter	Schneider Electric/ AE/ Digitron / IMP/Meco / Rishabh /Universal/HPL/L&T/ABB/Yokins
15	Cold shrink HT/LT Cable Joint	Denson / 3M(M-Seal)/ Raychem
16	Rubber Matting	ISI mark
17	MCB/ Isolator /ELCB/RCCB/ Distribution Board	Crompton / Havells / Indokopp / MDS Legrand / L&T / Schneider Electric/ Siemens / Standard/ABB/HPL
18	MS/ PVC Conduit	ISI mark
19	Cable Tray	MEM/Bharti/Ratan/Slotco/Profab
20	HT/LT Cables	ISI mark
21	PVC insulated copper conductor wire	ISI mark
22	Centrifugal Pump	Amrut / BE / Beacon / Batliboi /Crompton / Jyoti / Kirloskar / KSB / Mather &platt / WASP/Grundfos
23	Submersible Pump	Crompton/Amrut / BE / Calama / Kirloskar / KSB
24	Motors	ABB/ Bharat Bijlee / Crompton Greaves / Schneider Electric / HBB / KEC / Siemens/Jyoti Ltd
25	Fresh Air Fans	GE / Khaitan/Almonard/Crompton
26	Starter	ABB / BCH / Schneider Electric / L&T / Siemens /
27	Single Phase Preventer	L&T / Minilec / Siemens / Zerotrip

28	GI/MS Pipe	ATC / ATL / BST / GSI / ITC / ITS / IIA / JST / Jindal / TTA / Tata/Zenith
29	Foot Valve	ISI mark
30	Gate Valve	Advance/Audco/Johnson Controls / Zoloto /Annapurna / Fountain /Kirloskar / Leader / Sant / Trishul
31	Compressors	Carrier/Emerson copeland/York/Danfoss (for chillers only)
32	Resin Bonded Glass wool	Fibre Glass / Pilkington / UP Twiga
33	Expanded Polystyrene	BASF(India) Ltd.
34	Gauge	Feibig / H.Guru / Pricol
35	Controls	FLICA / Honeywell / Indfoss / Penn- Danfoss / Ranco / Ranutrol / Sporland
36	Fine Filters	Anfiltra Effluent / ARW / Athlete/ Airtake / Dyna / Kirsloskar/ Puromatic/ Purafill/ Purolator / Tenacity
37	GI Sheet	HSU Jindal / National / Nippon Denro / Sail / Tata
38	Heat Detector	Appollo / Chemtron/ Edward / Fenwal/ Hochiki / Nitton /System Sensor/ Wormald/Honeywell Essar/Notifier
39	Ionization Detector	Appollo / Cerebrus / Edward/ /Fenwal / Hochiki / Nitton / System Sensor /Wormald
40	Photo Electric Smoke Detector	Appollo / Cerebrus / Edward / Fenwal/ Hochiki / Nitton / Wormald /System Sensor
41	Fire Panel (Microprocessor based)	Agni Instruments / Agni Devices/ Aruna Agencies / Carmel Sensor / Ravel Elect. / Honeywell Essar / Notifier / Navin Systems
42	Sprinkler/ Hose Reel & Hose Pipe	ISI mark
43	Fire Extinguisher	ISI mark
44	Lift	OTIS, Kone, Mitsubishi , Schindler, Johnson, Thyssenkrupp Elevator(India)

NOTE:

1. The accessories such as CT/PT/measuring instrument/relays provided by approved make in respect of Transformer/HT Panel/DG /AC Package Units as supplied by approved manufacturer along with the equipments are also acceptable in addition.
2. Any other makes which are approved by BSNL CO up to the last date of sale of tender can also be used in this contract.

LIST OF INDIAN STANDARDS

- I.S.277 Galvanized steel sheets.
- I.S.325 Three Phase Induction Motors
- I.S.655 Metal Air Ducts
- I.S.732 Code of Practice for Electrical Wiring and fittings for Buildings.
- I.S.778 Gun Metal Gate, Globe and Check Valves for general purposes.
- I.S.900 Code of Practice for Installation and Maintenance of Induction Motors.
- I.S.996 Single Phase small AC and Universal Motors.
- I.S.1239 Mild Steel Tubes, G.I. Pipes, Tubular and other wrought steel fittings.
- I.S.1248 Direct Acting Electrical Indicating Instruments.
- I.S.1520 Horizontal Centrifugal Pumps for clear, cold and fresh water.
- I.S.1554 PVC Insulated (heavy duty) Electrical Cables (Part-I) for working voltages upto and including 110 volts.
- I.S.2372 Timber for cooling towers.
- I.S.2516 AC Circuit Breakers.
- I.S.2592 Recommendation for Methods of Measurements of Fluid flow by means of Orifice Plates and Nozzles.
- I.S.1822 Motor Starters of Voltage not exceeding 1000 volts.
- I.S.2208 HRC Cartridge Fuse – Links upto 650 volts.
- I.S.3589 Electrically welded steel pipes for water, gas and sewage.
- I.S.3624 Bourden Tube Pressure and Vacuum Gauges.

- I.S.4047 Heavy Duty air break switches and composite units of air break switches and fuses for voltage not exceeding 1000 volts.
- I.S.6392 Steel Pipe Flanges.
- I.S.7403 Code of Practice for Selection of Standard Worm and Helical Gear Boxes.
- I.S.8148 Specification for packaged air conditioning.
CPWD General Specifications for Heating, Ventilation & Air conditioning (HVAC)-2004

IMPORTANT NOTE

All references to I.S.I. appearing in this specification may be read as Bureau of Indian Standards, Latest amended versions.

LIST OF SAFETY STANDARDS

- I.S.618 Code of Practice for safety and health requirements in Electrical and Gas Welding and Cutting Operations.
- I.S.659 Safety code for Air Conditioning.
- I.S.660 Safety code for Mechanical Refrigeration.
- I.S.3016 Code of Practice for Fire precautions in welding and cutting operations.
- I.S.3210 Code for Safety procedures and practices in Electrical works.
- I.S.3696 Safety for Scaffolds and Ladde

PROFORMA OF SCHEDULES

(Operative Schedules to be supplied separately to each intending tenderer)

SCHEDULE 'A'

Schedule of quantities : Attached

SCHEDULE 'B'

Schedule of materials to be issued to the bidder: **Nil**

SCHEDULE 'C'

Tools and plants to be hired to the bidder: **Nil**

SCHEDULE 'D'

Extra schedule for specific requirements/documents for the work, if any: Nil

SCHEDULE 'E'

Schedule of components of Materials, Labour etc. for escalation: Nil

SCHEDULE 'F'

Reference to General Conditions of contract :

Name of work:	As per NIT notification page
Estimated cost of work:	
Earnest money:	
Security Deposit and performance Guarantee	

General Rules & Directions: Officer inviting tender: **Executive Engineer (E)
Electrical Division-III
Chennai**

Definitions:

2(v) Engineer-in-Charge **Executive Engineer (E), ED-III,
Chennai**

2(vi) Accepting Authority **SE (E), Electrical Circle -II,
Chennai**

2(x) Percentage on cost of materials and labour to cover all over heads and profits **10% (TEN)**

CLAUSE 5

Time allowed for execution **Twenty Four Months**

Authority to give fair and reasonable extension of time for completion of work: **SE (E), EC-II, Chennai**

Competent Authority for deciding reduced rates: **SE (E), EC-II, Chennai**

Clause 25

Competent authority for conciliation: **SE (E) not in-charge of the work.**

**Bharat Sanchar Nigam Limited Electrical
Wing**

Electrical Division: III, Chennai

Sub Divisions of ED III, **Chennai**

1. I/we have read and examined the notice inviting tender, schedule, specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, special conditions, Schedule of Rates and other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.
2. I/We hereby tender for the execution of the work specified for BSNL within the time specified, schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions and other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.
3. I/We agree to keep the tender open for ninety (90) days from the due date of submission thereof and not to make any modifications in its terms and conditions.
4. If I/We, fail to commence the work specified, I/We agree that the said BSNL shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely and the same may at the option of the competent authority on behalf of BSNL be recovered without prejudice to any other right or remedy available in law out of the deposit in so far as the same may extend in terms of the said bond and in the event of deficiency out of any other money due to me/us under this contract or otherwise.
5. Should this tender be accepted, I/We agree to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered up to maximum of percentage mentioned in clause 12.3 of the tender form and those in excess of that limit at rates to be determined in accordance with provisions contained in clause 12.2.
6. I/we agree to furnish to BSNL, Deposit at Call receipt/FDR/ Bank guarantee of a Nationalized/ Scheduled Bank for an amount equal to 5% of the of the contract value in a standard format within two weeks from the date of issue of award letter. I/We agree to keep the performance bank guarantee valid as per the BSNL terms and conditions.
7. I/We hereby declare that I/We shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived there from to any person other than to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety or interest of BSNL.

<p>Signature of Witness (required in the case of bidder's thumb impression is given by the bidder in place of signature) Occupation of Witness :</p>	<p>(Signature of bidder) (Name & Postal address)</p> <p style="text-align: center;">Seal of Bidder</p> <p>Date:</p>
--	--

Acceptance of Tender

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted
by me for and on behalf of BSNL for a sum of Rs.
_____ Rupees _____)

The letters referred to below shall form part of this contract Agreement a)

b)

Dated

Signature : Designation :