

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)



Bharat Sanchar Nigam Limited

(Electrical Wing)

Office of
Executive Engineer (E)
BSNL Electrical Division I,
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TENDER DOCUMENT

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)

NIT No. : 08 /EEE/ED-I/BSNL/CH/2020-21
Date of opening:02-07-2020

This tender document contains 42 pages only

(To be filled in by the Contractor)

Name of the Agency

Address

.....

.....

Telephone No. of agency:

E-mail ID :

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@ Sunguvarchatram .(SW Pdg EI fans and AFD system)

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INFORMATION AND INSTRUCTIONS FOR BIDDERS

The Executive Engineer (Elect), BSNL,ED-I, Chennai on behalf of the CMD,BSNL invites Item rate bids from eligible bidders in Single bid system for the following work:

1	Name of work	Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)
2	Estimated cost put to tender	Rs. 148752/-(Excl. GST)
3	Earnest Money	Rs.2975/-
4	Period of completion	One Month
5	Tender Fee(Non-refundable)	Rs.500 (+) 18% GST=Rs 590/-
6	Last date & time for submission of tender	Up to 15:00 Hrs. on 02.07.2020
7	Date and time for opening of tender	15:30 Hrs. on 02.07.2020

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ELIGIBILITY CRITERIA

The bidders satisfying the following conditions:

BSNL enlisted contractors in Electrical category of respective class as per their tendering limits

**IMPORTANT INSTRUCTIONS TO BIDDERS DOWN LOADING THE TENDER DOCUMENT FROM
WEB SITE**

The bidders, who have down loaded the tenders from the web site, shall read the following important instructions carefully before quoting the rates and submitting the tender documents.

1. The tenderer should see carefully and ensure that the tender document containing all the pages as per the index has been down loaded for making required entries. The balance pages of Standard BSNL EW8 form will be attached with the agreement after the award of work.
2. A clear print out of tender document shall be taken on good quality A4 size paper and the printer settings, etc., shall be such that the document is printed as appearing in the web and without any change in format, number of pages, etc., and shall also ensure that no page is missing. Only original computer printout of the document shall be used. Photocopy shall not be accepted.
3. 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.
4. The name of the bidder shall be filled on the relevant pages of tender document and all the pages shall be invariably signed. (With stamp)
5. The tenderer shall ensure that the downloaded tender document is properly stitched before submitting the document.
6. There shall be no correction / addition / alteration / omission made in the text of the downloaded tender document. If found otherwise, the same shall be treated as non-responsive and rejected.
7. The tenderer shall sign the declaration enclosed before submitting the tender.
8. The tenderer shall submit the tenders in 2 covers marked as No.1 and No.2. The tenderer shall submit the credentials for meeting the eligibility conditions along with the cost of the tender fee and EMD in the prescribed format as detailed in NIT, along with a covering letter on his printed letter head stating the details of enclosures in the **first cover**. The credentials shall be self-attested. The **second cover** shall contain the price bid. The rates and amounts should be filled in the schedule of work attached thereto.
9. The **cover-1** shall contain the following.
 - a. Tender Fee in the prescribed format
 - b. EMD in the prescribed format
 - 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 if applicable
 - 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. Certificate of work experience issued by client department (Form 'C') if applicable

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Not submitting the above documents in Cover-1, the Cover-2 will not opened

2. The **Cover-1 and 2** shall be deposited in the tender box available in the office of tender opening authority, by all the bidders before **3:00 PM** on the tender opening date, failing which the tender shall not be opened.

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BSNL EW-6

Bharat Sanchar Nigam Limited
Electrical Wing

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

Sub Division: **ESD-III,Chennai**

Item rate tenders on single bid system are invited on behalf of CMD,BSNL for the work **Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)**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.

1. Tenders which should always be placed in sealed covers with the name of the work written on the envelope will be received and opened by the tender opening authority as per the date and time mentioned in **INFORMATION AND INSTRUCTIONS FOR BIDDERS**. **Unsealed tenders will be summarily rejected.**
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.148752/- (Excl.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 **one 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 **Chennai.bsnl.co.in** at free of cost. The BSNL EW-8 document can be seen from the web site **Chennai.bsnl.co.in** at free of cost.
8. 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**. The validity of the tender cost in the form of DD shall be **60 days** from the date of opening.
9. The Earnest money deposit (EMD) in the form of Demand Draft / FDR / BG (BG is only for Air Conditioning, Diesel Engine Alternator, Lifts, and Sub Station 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**. 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

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payment of Tender Fee, Earnest Money and Security Deposit by any other unit/ department shall not hold good for BSNL.

10. **The last date for submission of bid is 02/07/2020 up to 3:00 PM** and the bid submitted shall be opened at 03:30 PM on the day. If a holiday is declared on the tender opening day, the tender will be opened on the next working day.
11. **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.**
12. **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.**
13. If it is found at any stage of tender scrutiny after submission of tender that the bidder has made any correction/addition/alteration/omission in tender documents vis-à-vis tender documents available on the website /original Draft NIT in office, the bid shall be treated as non-responsive and shall be summarily rejected 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.
14. The Tender documents shall not be sent through the Courier/Post. Tender documents received through Courier/post shall not be opened/ considered at all. All communication with the bidders shall be in writing. Fax / E-mail shall be covered under this category and considered as adequate means of communication.
15. 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.
16. 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

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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.

17. 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.
18. 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.
19. 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 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 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.
20. 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

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aforesaid. Further the tenderer shall not be allowed to participate in the retendering process of the work.

21. The bidder 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'**.
22. **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.
23. 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.
24. 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 at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
 - b. Standard BSNL EW-8 form

c. 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 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. 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.
5. 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.
6. 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.
7. **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.
8. 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.
9. 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.

10. 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.

11. 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.

12. 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.

13. 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.

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FORM 'A'

Undertaking to abide by EW 6 & EW 8

"I.....Son/Daughter 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 BSNL EW 6 & 8 forms.

(Seal of the firm)

(Signature of Bidder)

FORM 'B'

Undertaking regarding EPF provisions

"I..... Son /Daughter 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)

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 photo copy of the above said ESI registration certificate.

(Seal of the firm)

(Signature of Bidder)

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FORM 'C'

Performance report of works

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

Dated:

Executive Engineer or Equivalent

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FORM 'D'

No Near relative working certificate

I..... Son /Daughter 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)

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Annexure I

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 fulfilment 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 undertake 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).

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU
@ Sunguvarchatram .(SW Pdg EI fans and AFD system)

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)

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)													
Sl.no	Description of Item	Qty	Unit	Rate per Unit excluding GST	Total Amount Excluding GST (Net cost)	CGS T		SGS T		IG ST		Total Amount including GST	HSN/SAC code
						%	Amount in Rs	%	Amount in Rs	%	Amount in Rs		
							Rs.		Rs.		Rs.	Rs.	
1	2	3	4	5	6	7	8=Col. (6 x 7)	9	10=col. (6x 9)	11	12=col. (6*11)	13=col. (6+8+10+12)	14
SUB HEAD (EI & FANS)													
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with piano type switch, phenolic laminated sheet, suitable	12 pts	Point										

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)

	size M.S. box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.(Group B)												
2	Wiring for circuit/ submain wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/recessed medium class PVC conduit as required												
a)	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	30Mtrs	Mtr										
3	Wiring for light/ power plug with 2X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit alongwith 1 No 4 sq. mm FRLS PVC insulated copper conductor	20Mtrs	Mtr										

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)

	single core cable for loop earthing as required.												
4	Wiring for light/ power plug with 4X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit along with 2 Nos 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	20Mtrs	Mtr										
5	Supplying and fixing metal box of 150mm X 75mm X 60mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated	2Nos	Each										

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)

	sheet cover in front including providing and fixing 3 pin 5/6 amps socket outlet and 5/6 amps piano type switch, connection, painting etc. as required.												
6	Supplying and fixing metal box of 180mm X 100mm X 60mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including providing and fixing 6 pin 5/6 & 15/16 amps socket outlet and 15/16 amps piano type switch, connection, painting etc. as required.	4Nos	Each										

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)

7	Supplying and fixing metal box made up of 16 SWG MS sheet of 350mm X 100mm X 60mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including providing and fixing 4Nos, 3 pin 5/6 amps socket outlet and 4Nos, 5/6 amps piano type switch, connection, painting etc. as required.	2Nos	Each										
8	S/F 20W LED Battern type fitting with 20 W LED tube on surface of wall i/c connections etc as reqd (Make:Philips SlimLine 20-Watt 4 feet Cool Day Light or ss make)	6Nos	Each										

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)

9	supply and Installation, testing and commissioning of 48" 5 star rating ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq.mm FRLS PVC insulated, copper conductor, single core cable etc. as required.	2Nos	Each										
10	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's (but without MCB's and incomer) as required .												
	8way (4 + 24), Double door	1No	Each										
11	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/ Isolator)												
a)	4way (4 + 12), Double door	1No	Each										

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)

12	Supplying and fixing following rating, 240/415 V, 10 kA, "C"curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.												
a)	Single pole (6-32 A)	30Nos	Each										
b)	Triple pole 32 A	2Nos	Each										
13	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.												
	63 amps	2Nos	Each										
14	SITC of following types of fans on wall etc. as reqd.												
a)	16" Wall mounting fan (Domestic)(make: Crompton or ss make)	2Nos	Each										
b)	18" Air circulator wall mounting (make: Almonard or ss make)	1Nos	Each										
15(a)	Refilling of fire Extinguisher i/c pressure testing etc as required	1Nos	Each										

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b)	S/F of 4kg precahrged DCP type fire extinguisher on surface of wall etc. as reqd. (ISI marked)	1No	Each										
16	S/F 63 A TPN Switch Disconnecter Fuse Unit with 63 A HRC fuses in sheet steel enclosure i/c making inter connection connections etc. as reqd.(make: L&T / HPL / approved make)	1No	Each										
17	S/F 100A FP Changeover Switch in sheet steel enclosure i/c making inter connection connections etc. as reqd.(make: approved make)	1No	Each										

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18	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.												
a)	20 mm	40Mtrs	Mtr										
b)	25 mm	40Mtrs	Mtr										
19	Supplying and drawing following sizes of FRLS PVC insulatedcopper conductor, single core cable in the existing surface/recessed steel/ PVC conduit as required.												
a)	1x 1.5 sq. mm	15Mtrs	Mtr										
b)	3 x 1.5 sq. mm	25Mtrs	Mtr										
c)	6 x 1.5 sq. mm	30Mtrs	Mtr										
20	Supplying and drawing 6X16 sqmm of FRLS PVC insulated copper conductor, single core cable in the existing PVC conduit as required.	10Mtr	Mtr										
21	Supplying and fixing of MS adaptor box made up of 16 SWG MS sheet i/c cutting, welding,	1.0Sqm tr	sqmt r										

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)

	painting etc. as reqd.												
	SH-II; AFD System												
1	SITC of Microprocessor based fire alarm panel with build in charger circuit with LCD display and suitable 12volts, 7AH SMF Battery and complete set. a) 4-zone panel	1	job										
2	S/F of 4 x 4 MS Junction box with base plate and necessary gland cut out etc (For detector fixing)	8	Each										
3	S/L of 2 x 1.5sq.mm FRLS armoured	60	Mtr										

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)

	copper cable with ISI including inter connection, gland termination etc as req.												
4	SITC of Electronic Hooter 4W with suitable speaker and as per specification etc as req.	2	Each										
5	SITC of photo electric detector with base including inter connection and testing etc.	4	Each										
6	SITC of Manual call point with hammer and chain as per specification etc as req.	1	Each										
Total													

Contractor

Executive Engineer(E)

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)

IMPORTANT NOTES:-

1	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”.
2	Invoice /Bill should be pre-printed as per the GST format.
3	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
4	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.
5	No advance payments can be made. Stipulations 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 BSNL practice.

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)

SPECIFICATIONS FOR EI & FANS

The work shall be done as per current CPWD Specification. For Electrical works amended from time to time & Indian Electricity Rules as attended up to date.

The work shall be supervised by qualified technical staff of the Contractor.

The layout of the work will be given by the Engineer in charge or his duly authorized representative at the site of work.

The following wiring shall be done in separate conduits:-

- A) Power plug wiring.
- B) Light & Fan point wiring.
- C) Emergency Light point wiring (AC Supply/DC Supply)
- D) Telephone wiring.
- E) Clock wiring.
- F) AC Unit wiring.

The number of power plug points, and emergency light points fed from DC supply shall not exceed two per circuit in any of the cases.

The earthing sets shall be provided in presence of engineer in charge or his authorized representative.

Sample of all the materials, fittings, accessories, IC switch gears etc., shall be got approved from the Engineer in-charge before using the same on work. The rejected materials shall be removed immediately from the site of work.

The Contractor will have to carry out the following tests at his cost and intimate test results before final bills are paid. Nothing extra will be paid to him on this account.

- A) Earth Test b) Polarity test c) Insulation test
- d) Earth continuity test of the surface/recessed conduits.

Any damage done to the building, by the Contractor during the execution of work shall have to be made good at his cost and risk. If he does not do it himself within a reasonable time determined by the Engineer In-charge the same will be got done at his cost departmentally after notice given to him.

The outlet boxes, IC BOXES for Switches and end of conduits etc. of different types of electrical wiring as mentioned in clauses above shall be painted inside/outside with different colours each signifying the different categories mentioned so as to avoid mixing of various circuits and their wiring and nothing extra will be paid for this.

At the time of laying conduit pipe in the slab in recess, the contractor should keep fish wire of 16 SWG GI wire throughout conduit pipe and will have to take special care so that the conduit do not cross through AC ducts, grills, etc.

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The contractor should recess the conduits in the walls before they are plastered and in coordination with progress of building works. The conduit should be mechanically and Electrically continues.

All the Switch board, SDB and DB shall be clearly sign written indicating the number/type of load/Circuit Nos. etc.

Under ground cables of both 1.1 KV and 11 KV should be subject to pressure/insulation tests before and after laying the same.

While making end connections of wire, no strand shall be cut and termination of wire shall be done with necessary lugs without any extra cost.

The termination of conduits etc. in the junction box should be done by making proper holes instead of cutting the box.

Rs.1/- per empty box for the ceiling fans, fittings and other items supplied by the Department will be recovered from Contractor irrespective of the size of box.

The Contractor will have to make arrangements to take the materials to site of work at his own risk and cost.

If any conduits are laid before the award of work, the same shall be recovered at rate mentioned in SR-94 (Internal) enhanced by abatement of similar items in the tender.

ALL MATERIALS SHALL BE "ISI" MARKED OR APPROVED BY THE BSNL.

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)

SPECIFICATIONS FOR AUTOMATIC FIRE DETECTION AND ALARM SYSTEM

Automatic smoke detector system should send an alarm signal the moment the smoke density rise in the area where it is installed. The alarm shall be visual as well as audible. As soon as the detector detects the smoke, the control panel shall give audio and visual alarm indications that there is a fire in the particular zone. It should automatically stop the working of air handling unit of that floor. The control panel shall have the facility for cutting of supply to the AHU room by automatic closing of dampers in case of fire, by means of solenoid valve.

Installation Testing:-

The detectors shall be subjected to smoke detector, aerosol tester or the standard fire test, as given in UL / FDC standards. Only those detectors which pass the test shall be installed.

Testing Procedure / Functional Test:-

Trigger a smoke detector from any one zone to ensure correct functioning of control panel.

Operate alarm silencing control to ensure correct functioning.

Trigger another detector from another zone to ensure correct functioning in control panel.

Operate "Reset" control to ensure correct functioning.

Check the audible and visible warnings for AC / DC power supplies.

Restore normal supply and check audible/visible Alarms.

Restore quiescent conditions.

Final acceptance testing:- Final acceptance testing will be done by the Engineer-in-charge or any other BSNL inspection authority.

MICROPROCESSOR BASED CONTROL PANEL

The purpose of introducing Microprocessor based Control Panel in Fire Detection System is to make the panel more compact by reducing the number of components, minimizing false alarms and the quantity of cable required, better reliability and making it more user friendly. However this panel is intended for use mainly in small buildings with a maximum of 8 zones. Hence the concept of Public Address System and local control panel has been discarded. However the essential features of Local Control Panel have been included in the Microprocessor based panel.

GUIDELINES FOR DESIGN:-

1. (i) The transistors used in the circuits shall be derated by as much as 50% and shall operate at only 25% of their wattage to safeguard against thermal run-away.
2. (ii) No resistance shall be working at more than 1/3rd of its rated wattage and shall give good stability and resistance to moisture, vibration, temperature and dust.

2. The Stand by power supply should be capable of maintaining the system in normal operation for a period less than 48 hours after the failure of normal mains supply after which sufficient capacity would remain to provide full load operation for at least 1 hour. The full load would be defined as that caused by the operation of all the alarm sounders operating simultaneously, operation of a detector in at least 25 percent of zones (with a minimum of two zones) and the operation of the fault indicator. The operation of the fault indicator. The operation of trigger devices in further zones should not result in cancellation of fire alarms existing at that time.

3. The Power supply unit shall have solid state battery charger circuit for charging of sealed maintenance free battery whenever the battery is discharged below the predetermined level. The rate of battery charging should be such that, having discharged to its final voltage, the battery can comply with the recommendations of para 2 above after a charging period of 24 hours. The charger shall sufficiently charge the battery in 8 hours so as to supply the maximum system load at an adequate voltage of at least 2 hours.

4. All the components in the panel shall be suitably protected against atmospheric corrosion.

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)

5. Circuit and design of the panel shall be such that the operation (or) failure of one indicator does not prevent the proper and independent operation of other indications.

Additional design features (Optional)

All the devices in a zone via detectors, sounders, manual call points shall be operated on the same two wires of the zone. Where the panel is used with conventional systems, the Microprocessor based control panel must be compatible with the conventional main control panel as well as local control panel and detectors of approved makes.

GENERAL:- The Panel shall be fabricated from 16 gauge (1.6 mm) CRCA sheet, completely dust and vermin proof with neoprene gasket, wall mounting and front openable type with hinged door. The Panel shall have glass door enclosure with lock and key arrangement. Suitable knockouts shall be provided for terminations of conduits and cable glands. The Panel shall be powder coated with Siemens Gray finish (Paint code: RAL 7032) The components and their wiring shall be arranged so as to be conveniently attended to from the front of the panels.

All indicating lamps shall be LED type and of the following colours:

The zone indicator indicating FIRE should consist of two LEDs. FIRE warning indicator should be clearly labelled and colored red. FAULT warning indicator should be clearly labelled and coloured amber with provision for identifying open/short separately. The feather touch switches and indicating lamps shall be located in the front fascia or the panel and shall be unambiguously labelled. The primary alarm circuit shall be solid state. The PCB's shall be easily, removable. The connections to the PCBs shall be through interface cord of plug-in-type. An audible signal along with its silencing switch shall be provided on the control panel. The earthing terminal shall be provided on the frame of control panel. The Panel shall have ventilating louvers with wire mesh. Laminated wiring diagram shall be pasted at a suitable place inside the panel.

FEATURES:- The control panel shall continuously monitor OPEN, SHORT leads in each zone Fire detectors / Manual call point with audio alarm distinct for FIRE and FAULT and shall visually indicate FIRE / FAULT in corresponding zone. For multi storied building separate panels may be installed on each floor with individual power supply and batteries to reduce the interdependence of one panel over the other panel. However a repeater panel may be provided at the ground floor with sounder to indicate the FIRE / FAULT condition at various floors. The panel shall be available in 2, 4 and 8 zone versions. The manual controls for switching OFF / ON, MAINS / STANDBY power provided shall not be accessible to outsiders. The panel shall have the following visual indications for

- (a) System ON – Green
- (b) Stand by ON – Green
- (c) Charger ON – Green
- (d) Isolation of a zone for testing purpose.

6. Audio-visual indication shall be provided for the following

- (i) The operation of Fire detector in any zone.
- (ii) Short circuit or disconnection of leads in any zone
- (iii) Failure or disconnection of normal power supply.
- (iv) Failure or disconnection of standby power supply.
- (v) Failure or disconnection of battery charging equipment.
- (vi) Battery voltage low.
- (vii) Common indication for Earth fault in the panel / zone.

7. The panel shall have the following supervisory facilities:-

- (i) Switch for acknowledgement.
- (ii) Switch for manual reset of panel after normal of Fire condition.

8. Means shall be provided in the panel to prevent battery from discharging through the charging equipment to have event of its breakdown or mains.

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(i) Facilities shall be provided to test the zones manually by simulating Fire and Fault condition on test move the panel shall automatically reset after a predetermined time, once the fault (or) fire is cleared. The testing authority shall be able to test continuously all the zones without the necessity of resume the panel every time.

(ii) Each zone system capable of isolation for maintenance (or) test purpose leaving the renaming zones in healthy condition so that fire and fault detection in other zones is not affected.

(iii) Facility for testing all the LEDs shall also be available.

9. Fuses shall be provided for AC, DC and charger circuit as close to the source of supply in an easily accessible place.

10. The user shall be able to acknowledge the Fire/Fault audio visual alarm and reset the panel directly without the use of any password or key.

11. Only on test condition, Fire and Fault shall reset automatically. On actual conditions also, Fault shall reset after clearance automatically. The FIRE alarm should not be silenced automatically. The operation of the silencing switch should automatically result in an audible/visual signal being given in the panel until the FIRE alarm is reset.

12. Silencing the sounder shall not prevent fire alarm being activated in any other zone simultaneously.

13. Any fault signal including fault testing which the panel might be experiencing shall not prevent the fire alarm being given if any detector activates at the same time in other zones. When Fire is detected, the corresponding zone LEDs shall flash when the alarm is first signaled and will glow steadily after the silence button is pressed.

14. Three 'NO' and 'NC' contacts shall be provided for panels monitoring.

15. When a Fire is detected, all alarms in all zones will give continuous dual tone for Evacuate condition.

16. It shall be possible to program on the panel for isolating the power supply to zones for maintenance purpose.

POWER SUPPLY:-

1. The entire system shall be suitable to operate on $230 \pm 10\%$ 50 HZ single phase AC supply with 12 / 24 V DC sealed maintenance free battery as secondary source.

2) The power supply and shall consist of solid state power rectifier of adequate capacity so as to provide 12/24 V stabilized DC power as output while reducing $230 \text{ V} \pm 10\%$, 50 Hz single phase AC supply.

3) Battery Voltage shall be activated at 10.5 V for 12 V battery and 21 V for 24 V battery.

4) The unit shall have automatic change over facility from Mains to battery and vice versa.

5) The Battery shall be housed inside the control panel itself.

6) Battery charging voltage shall not be greater than 13.6 V for 12 V battery and 27.2 V for 24 V battery.

7) The Battery shall be isolated from MS sheet enclosure by means of rubber pad.

AMENDMENT FOR MICROPROCESSOR BASED FIRE ALARM PANELS

By the Joint DDG (EW-QC), New Delhi vide amendment letter No. 3-2-3 / EW / MCFP / 2005 dated 20-06-2005

Sl. No.	Existing	Amendment
1.	Any audio alarm in the panel due to fault conditions will keep on giving alarm unless acknowledged manually.	Any audio alarm in the panel due to fault conditions (except fire), if not acknowledged within 2 minutes, should be made to stop automatically by providing a timer.
2	-----	There should be a alpha numeric 2 x 16 LCD Screen displaying all the parameters / faults as being displayed on LEDs

IONISATION TYPE SMOKE DETECTOR

It should respond to smoke due to smouldering and open fire. It should have response indicator for quick identification of the fire location. Protection against reverse polarity and voltage surges and provisions for connecting remote response indicator shall also be available. The Detector shall not contain any moving part. It shall consist of two ionization chambers containing Americium 241 or equivalent with circuit

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connection contacts to base so as to clean detector housing. The Detector shall be capable to work with photo electric / electronic detector with inter-changeable base. The Detector shall be grouped in

zones and connected to the control unit by twin wires. The Detector shall be vibration and shock proof. The Detector used shall be ensured by the tenderer for reliability and fire performance as per site environments. The Detector electronic circuit shall maintain the alarm signal until the system is reset at the control unit. The Detector shall be operated at 24 V (max) and shall not be more than 1micro curie. The Detector shall be 100% solid state. The Detector shall have dual chamber dual source and shall ensure stability during variation in temperature, humidity and air velocity. The make of the base assembly of the detectors shall be the same of that of the head assembly of the detectors. The Detector shall be of the rotary plug in type facilitating easy removal and mounting with hand. It shall be listed in the DOT / BSNL approved makes list. The coverage area of each detector shall be approx 80 Sq. m.\

PHOTO ELECTRIC / ELECTRONIC TYPE DETECTOR

It shall be based on light scattering principle. It shall comprise a solid state LED & High speed light sensing photodiode (PD) with a sensing chamber etc. Upon triggering alarm, the detector circuit should latch and the external LED shall glow continuously. The Detector shall be sensitive to detect the fire in the smouldering stages also and shall be compatible to work with Ionisation type detector and shall have interchangeable bases. The Detector shall be grouped in zones and connected to the control unit by twin wires. The Detector shall be vibration and shock proof. The Detectors used shall be ensured by the tenderer for reliability, stability and fine performance as per environments. The Detector shall be of non polarized type. The Detector shall have no moving part and shall be 100% solid state. It shall be operated at 24 V (max) and shall be rotary plug-in type facilitating easy removal and mounting with hand. The coverage area of each detector shall be 80 Sq. m. Protection against reverse polarity and voltage surges and provision for connecting remote response indicator shall also be available. The make of the base assembly of the detectors shall be the same that of the head assembly.

HOOTER / SOUNDER

The hooter shall be totally solid state electronic type, 4 Watts output. The audible range of hooter shall be 80 db above any loud noise likely to persist more than 30 seconds and having frequency range of 500 Hz to 1000 Hz. The operating voltage shall be 24Volts DC. The hooter shall be mounted inside a metallic cover and shall be wall mounting type. The hooter shall be suitable for dual tone audible alarm. The hooter control shall be actuated by the control panel. The hooter shall be of dual tone. The intermittent tone with one second 'ON' and one second 'OFF' is for alert and the continuous tone is for evacuating signals.

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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 40 KVA) /Escorts (up to 30 KVA)/ Eicher (up to 20 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)	Biecco Lawrie / Crompton / Kirloskar / MEI / Jyoti Ltd
5	Transformer (Oil filled / Dry type)	ABB / Schneider Electric /Andrew Yule / Bharat Bijlee / Crompton / EMCO / Kirloskar / Siemens
	a) Above 400 KVA	
	b) Up to 400 KVA	
		In addition to above makes, Uttam/Automatic Electric Gear(AEG)/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
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/ C&S/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

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)

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
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

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)

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: Sub Divisional Engineer (E)
Electrical Sub Division-III, Chennai

Definitions:

- 2(v) Engineer-in-Charge Executive Engineer (E), ED-I, Chennai
2(vi) Accepting Authority EE (E), BSNL Electrical Division -I, Chennai
2(x) Percentage on cost of materials and labour to cover all overheads and profits 10%(TEN)

CLAUSE 5

Time allowed for execution Two 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.

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU @ Sunguvarchatram .(SW Pdg EI fans and AFD system)

BSNL EW-8

Bharat Sanchar Nigam Limited
Electrical Wing

Electrical Division: ED-I, Chennai

Sub Division: ESD 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 upto 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 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.

Name of work: Providing EI & Fans, Service Connection Panel, Earthing, AFD System for new RSU
@ Sunguvarchatram .(SW Pdg EI fans and AFD system)

<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>
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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)

For & on behalf of BSNL

Dated

Signature :

Designation :