E-Tender Bid Document
for the work

SITC of 25 Nos Wind driven Roof top Turbo Air Ventilator Systems for various ID BTS Sites under GM (Rural) Hyderabad.

ELECTRICAL DIVISION - II

HYDERABAD-63

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Certified that this tender document contains (34) pages only.

EXECUTIVE ENGINEER (E)
BSNL Electrical Division-II
Hyderabad.

BHARAT SANCHAR NIGAM LIMITED
(A Govt. of India Enterprise)
(Electrical Wing)
% EXECUTIVE ENGINEER (E), BSNL Electrical Division-II,
6th floor, NW wing, BSNL Bhavan, 5-9-25, Hill Fort Road,
Adarsh Nagar, Hyderabad. -500063
Tel No : 040- 23224152, Fax No: 040-23224156

NOTICE INIVING TENDER (E-TENDER)

Digitally Sealed item rate, single stage bidding & single electronic envelope system, **Online item rate e-Tenders** are invited by the Executive Engineer (E), BSNL Electrical Division - II, Hyderabad on behalf of CMD, BSNL from the eligible bidders for undertaking the following work.

S. No	Name of work	NIT No	Estimated cost Rs.	Bid Security/Earnest MoneyDeposit Amount for the tenderRs.	Time for completion
1	SITC of 25 Nos Wind driven Roof top Turbo Air Ventilator Systems for various ID BTS Sites under GM (Rural) Hyderabad.	70	3,74,650/-	7,493/-	Two Months

2.1 Purchase of Tender Document: Tender document can be obtained by downloading it from the website **https://etenders.gov.in/eprocure/app** and selecting Bharat Sanchar Nigam Limited(Govt. of India Enterprise) under Tender by Organization. Also the Bid document is available at http://www.telangana.bsnl.co.in/tenders_active.php for view and download purpose.

2.2 There is no tender fee. However the bidder has to pay e portal charges as applicable.

2.3 Availability of Tender Document: The tender document shall be available for downloading from 25.11.2020(write date in dd/mm/yyyy) onwards up to 04.12.2020 (write date in dd/mm/yyyy).

3.1 ***In case of tenders invited through e-tendering process, physical copy of the tender document would not be available for sale.***

Note 2: **The Tender document shall not be available for download on its submission/closing date.**

4. Eligibility Criteria: -

a) The bidder should have

(i) Financial norms:

Turnover: 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

(ii) Physical norms

The Contractors satisfying the following conditions:

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

OR

1.2 The manufacturer/ authorized dealer/ OEM of any of the makes of turbo ventilator. The letter of authorization from manufacturer in original/ photocopy attested by BSNL Executive shall have to be produced by the dealers.

OR

1.3 Experience of having successfully completed similar works (SITC of Turbo Air Ventilator/ Free cooling systems with DC Fans/Free cooling systems with Exhaust fans) in Central Government / State Government/ Central Autonomous body/Central Public Sector Under taking during last 7 years ending last day of month previous to the one in which Applications are invited, should be either of the following:-

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

OR

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

OR

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

The testimonials regarding the list of works satisfactorily completed (at least for the requisite magnitude) should be obtained from an Officer not below the rank of Executive Engineer in the organization concerned.

NOTE: **Similar work means "SITC of Turbo Air Ventilator/ Free cooling systems with DC Fans/Free cooling systems with Exhaust fans"**

b) Valid PAN card

c) Valid GST Registration No or exemption No.

4.1 The bidders shall submit necessary documentary proof showing that they meet the eligibility criteria along with their tender bid. All documents submitted will also be self-attested by the bidder.

5. Bid Security/EMD : Rs.7,493/-

5.1 The bidder shall furnish the bid EMD in one of the following ways:-

(a). Earnest Money amounting to **Rs. 7,493/-**in the form of demand draft/ FDR/ BG / CDR of a nationalized/scheduled bank guaranteed by the Reserve Bank of India, drawn in favour of **"Accounts officer (cash), Main, BSNL, Hyderabad"**must accompany each tender. The Validity period of EMD is 120 days, from the date of opening of tender.

5.2 Exemption from payment of earnest money and security deposit by any other unit/ department shall not hold good for BSNL.

6. Date & Time of Submission of Tender bids: on or **before 15.00 Hrs.& 04.12.2020** (state time & date of receipt of tender) e.g. "hh: mm of dd/mm/yyyy".

Note 4: In case the date of submission (opening) of bid is declared to be a holiday, the date of submission (opening) of bid will get shifted automatically to the next working day at the same scheduled time. Any change in bid opening date due to any other unavoidable reason will be intimated to all the bidders separately.

7. Opening of Tender Bids: Next day of tender closing time i.e., @16.00Hrs on 05.12.2020

8. Place of opening of Tender bids:

8.1 In case of tenders invited through e-tendering process, the tenders shall be opened through 'Public Online Tender Opening Event (POTOE)'. BSNL's Tender Opening Officers as well as authorized representatives of bidders can attend the Public Online Tender Opening Event (TOE) from the comfort of their offices.(Kindly refer page nos: 11-15 of Tender document for further instructions.)

8.2 In addition & in case of tenders invited through manual bidding process, authorized representatives of bidders (i.e. vendor organization) can attend the TOE at **the Chambers of The Executive Engineer (Electrical), Electrical Division-II, Hyderabad, #602, Sixth Floor, BSNL Bhavan, Adarshnagar, Hyderabad, Telangana-500063** where BSNL's Tender Opening Officers would be conducting Public Online or manual Tender Opening Event (TOE).

9. Tender bids received after due time & date will not be accepted.

10. Incomplete, ambiguous, Conditional, unsealed (in case of manual tender) tender bids are liable to be rejected.

11. The **Executive Engineer (Electrical)**, reserves the right to accept or reject any or all tender bids without assigning any reason. He is not bound to accept the lowest tender.

12. The bidder shall furnish a declaration in his tender bid that no addition / deletion / corrections have been made in the downloaded tender document being submitted and it is identical to the tender document appearing on the website.

12.1 In case of any correction/ addition/ alteration/ omission in the tender document, the tender bid shall be treated as non-responsive and shall be rejected summarily.

Note 5: All documents submitted in the bid offer should be preferably in English. In case the certificate viz. experience, registration etc. is issued in any other language other than English, the bidder shall attach an English translation of the same duly attested by the bidder & the translator to be true copy in addition to the relevant certificate.

Note 6: All computer generated documents should be duly signed/ attested by the bidder/ vendor organization.

IMPORTANT DATES		
S.No	**EVENT**	**TIME & DATE**
1	Start Date for download of Bid document from E-tender Portal	18.30Hrs of 25.11.2020
2	End Date for download of Bid document from E-Tender Portal	15.00Hrs of 04.12.2020
3	Last Date & time for **Online submission** of **Bid** in E-Tender Portal	15.00Hrs of 04.12.2020
4	Last Date & time for **OFF line submissions** at O/o The Executive Engineer(Electrical), Hyderabad	15.00Hrs of 04.12.2020
5	Time & date of opening of Offline submissions at O/o The Executive Engineer(Electrical), Hyderabad	15.30Hrs of 05.12.2020
6	Time & date of Online opening of Bid in E-tender Portal	16.00Hrs of 05.12.2020
E-Tender Portal site address: https://etenders.gov.in/eprocure/app		

Executive Engineer (E)
Electrical Division - II
Hyderabad

Lr.No. 24(1)/BEDH-II/2020-21/ 293 Dt: 25-11-2020

1) The Chief Engineer (E), BSNL Electrical Zone, Hyderabad.
2) The Superintending Engineer (E), BSNL Electrical Circle, Hyderabad/Vijayawada.
3) The Executive Engineer (E), BSNL, Electrical Div. No.I, Hyd./Vijayawada, VSP/TPT/WGL/ATP.
4) SDE (E) Electrical Sub Division I, II, III & V, Hyderabad.
5) All Eligible Contractors.
6) SR SS/SDE (EP)/AO/Cashier/Auditor/Notice Board.

Executive Engineer (E)

TENDER INFORMATION

1. Type of tender-: Item Rate, Single Stage & Single envelope Tender.

1. **Bid Validity Period/Validity of bid Offer: 90 days from the tender opening date.**
2. The envelope shall contain one set of the following documents:-

i) EMD (Attach scanned pdf copy of demand draft/ FDR/ BG / CDR of a nationalized/scheduled bank guaranteed by the Reserve Bank of India.)
ii) Certificates showing fulfillment of the eligibility criteria as per clause 4 (Refer page no: 4)
iii) No Near Relative Certificate dully filled & signed (Refer to Page 24)
iv) Under taking regarding EPF Provisions dully filled & signed (Refer to Page 24)
v) Under taking regarding ESI Provisions dully filled & signed (Refer to Page 25)
vi) Under taking to abide by EW6 & EW 8 dully filled & signed (Refer to Page 25)
vii) Compliance Sheet dully filled & signed (Refer to Page 26)
viii) Electronic Form- financial along with Price Schedule (*BoQ in excel sheet to be filled and uploaded by bidder*)

3. **In case of e-tendering, the following documents are required to be submitted offline(i.e. offline submissions) to The Executive Engineer (Electrical), Electrical Division-II, Hyderabad, #602, Sixth Floor, BSNL Bhavan, Adarshnagar, Hyderabad, Telangana-500063** on or before the date & time of submission of bids in a sealed envelope.
The envelope shall bear the tender number, name of work and the phrase: "Do Not Open Before (due date & time of opening of tender)".

i) EMD – Bid security (original copy)
ii) Certificates showing fulfillment of the eligibility criteria as per clause 4 (Refer page no: 4)
iii) NIT Document Signed by the Bidder on each and every page

Note: Online Documents will not be opened if offline documents are not received as per requirement

4. Time Period allowed for completion of work : 2 Months
5. Consignee/Engineer In charge

i) **Engineer in Charge:** **The Executive Engineer (Electrical), Electrical Division-II, Hyderabad, #602, Sixth Floor, BSNL Bhavan, Adarshnagar, Hyderabad, Telangana-500063**

ii) **Consignee:** **The Sub Divisional Engineer (Electrical)**
Delivery Address: **BSNL Electrical Sub Division-III, Sixth Floor, BSNL Bhavan, Adarshnagar, Hyderabad, Telangana-500063**

SCHEDULE OF QUANTITIES

Name of work: SITC of 25 Nos Wind driven Roof top Turbo Air Ventilator Systems for various ID BTS Sites under GM (Rural) Hyderabad.

Sl.No.	DESCRIPTION OF ITEM	Qty		Rate	Unit	Amount
1	SITC of wind operated roof top Turbo Ventilator with FRP base plate on BTS Site Shelter/room cabin, having Throat dia of 24", body dia 30" and height 18" with aluminum vanes /Blades of suitable thickness, width and quantity to sustain the bird Hits. The shaft shall be made of hardened steel without bearing and single point rotation type having consistent RPM i/c cutting the shelter / room cabin, proper sealing with sealant and riveting the system with Aluminum Rivets, i/c providing FRP Sheet not less than 2mm thick, for mounting the turbo ventilator (12 SFT area approx) etc as reqd.	25	Jobs		Job	
2	Supplying and Fixing MS Louvers of 600 mm x 600 mm size -2 nos, made of 0.6 mm thick MS frame, including cutting, welding along with G.I Mesh i/c cutting, welding, one coat red-oxide and paint, along with suitable accessories at the location specified by Engineer-in-charge i/c cutting the container / shelter / wall / door, welding, bolts & nuts, proper sealing with sealant etc., as required.	25	Sets		Set	

Sub Total _____

Add GST @18% of total amount _____

Total including GST _____

Contractor Executive Engineer (E)

SCOPE OF WORK

SITC of 25 Nos Wind driven Roof top Turbo Air Ventilator Systems for various ID BTS Sites under GM (Rural) Hyderabad.

1. SITC of wind operated roof top Turbo Ventilator with FRP base plate on BTS Site Shelter/room cabin, having Throat dia of 24", body dia 30" and height 18" with aluminum vanes /Blades of suitable thickness, width and quantity to sustain the bird Hits. The shaft shall be made of hardened steel without bearing and single point rotation type having consistent RPM i/c cutting the shelter / room cabin, proper sealing with sealant and riveting the system with Aluminum Rivets, i/c providing FRP Sheet not less than 2mm thick, for mounting the turbo ventilator (12 SFT area approx) etc as reqd.

2. Supplying and Fixing MS Louvers of 600 mm x 600 mm size -2 nos, made of 0.6 mm thick MS frame, including cutting, welding alongwith G.I Mesh i/c cutting, welding, one coat redoxide and paint, along with suitable accessories at the location specified by Engineer-in-charge i/c cutting the container / shelter / wall / door, welding, bolts & nuts, proper sealing with sealant etc., as required.

E-TENDERING INSTRUCTIONS TO BIDDERS

General

These Special Instructions (for e-Tendering) supplement 'Instruction to Bidders', as enclosed in Sec 4 Part A of the Tender Documents. Submission of Bids only through an online process is mandatory for this Tender.

For conducting electronic tendering, BSNL Electrical Zone, Telangana is using the portal (**https://etenders.gov.in/eprocure/app**) as per the Govt of India guidelines

1. Tender Bidding Methodology:
   Sealed Bid System –'Single Stage – Single Envelope,
2. Broad outline of activities from Bidders prospective:
   1. Procure a Digital Signing Certificate(DSC)
   2. Register on Electronic Tendering System®(ETS)
   3. Create Users and assign roles on ETS
   4. View Notice Inviting Tender (NIT) on ETS
   5. Download Official Copy of Tender Documents from ETS
   6. Clarification to Tender Documents on ETS
      - Query to BSNL(Optional)
      - View response to queries posted by BSNL, as addenda.
   7. Bid-Submission on ETS
   8. Attend Public Online Tender Opening Event (TOE) on ETS Opening of Techno-commercial Part
   9. View Post-TOE Clarification posted by BSNL on ETS (Optional)Respond to BSNL's Post-TOE queries
   10. Attend Public Online Tender Opening Event (TOE) on ETS Opening of Financial-Part (Only for Technical Responsive Bidders)
3. Digital Certificates

   For integrity of data and its authenticity/ non-repudiation of electronic records, and be compliant with IT Act 2000, it is necessary for each user to have a Digital Certificate (DC). also referred to as Digital Signature Certificate (DSC), of Class 2 or above, issued by a Certifying Authority (CA) licensed by Controller of Certifying Authorities (CCA) [referhttp://www.cca.gov.in].

4. Registration

To use the Electronic Tender® portal (**https://etenders.gov.in/eprocure/app**), vendor needs to register on the portal. Registration of each organization is to be done by one of its senior persons who will be the main person coordinating for the e-tendering activities. In ETS terminology, this person will be referred to as the Super User (SU) of that organization. For further details, please visit the website/portal, and click on the 'Supplier Organization' link under 'Registration' (on the Home Page), and follow further instructions as given on the site.

Pay Annual Registration Fee as applicable.

Note: After successful submission of Registration details and Annual Registration Fee (as applicable). Please contact NIC Helpdesk (as given below), to get your registration accepted/activated.

NIC Helpdesk	
Telephone	**+91 0120-4200462, +91 0120-4001002, +91 0120-4001005**
E-mail ID	Technical: support-eproc@nic.in

BSNL Contact-1	
BSNL's Contact Person	**Shri.SLVSivaram, Executive Engineer(E)**
Telephone/ Mobile	(040) 23224152 , 9490183700 [between 9:30 hrs to 18:00 hrs on working days]
E-mail ID	eeediv2bsnl@gmail.com

BSNL Contact-2	
BSNL's Contact Person	Shri K V Murali Krishna, SDE(EP)
Telephone/ Mobile	9490000625, 040-23224134 [between 9:30 hrs to 18:00 hrs on working days]
E-mail ID	sde1bsnlhyd@gmail.com

5. **Bid related Information for this Tender (Sealed Bid)**

The entire bid-submission would be online on ETS. Broad outline of submissions are as follows:

- Submission of Bid Security/ Earnest Money Deposit(EMD)
- Submission of digitally signed copy of Tender Documents/ Addendum/addenda
- Two Envelopes
  - Techno-commercial-Part
  - Financial-Part

6. Offline Submissions:

The bidder is requested to submit the following documents offline to (designation and address of tender receiving authority) on or before the date & time of submission of bids specified in the covering letter of this tender document, in a Sealed Envelope. The envelope shall bear (name of the work), the tender number and the words 'DO NOT OPEN BEFORE' (due date & time).

1. EMD-Bid Security in Original.
2. Certificates showing fulfillment of the eligibility criteria as per clause 4 (refer page 4)
3. NIT Document Signed by the Bidder on each and every page

7. Special Note on Security of Bids

Security related functionality has been rigorously implemented in ETS in a multi-dimensional manner. Starting with 'Acceptance of Registration by the Service Provider', provision for security has been made at various stages in Electronic Tender's software. Security related aspects as regard Bid Submission are outlined below:

As part of the Electronic Encrypter™ functionality, the contents of both the 'Electronic Forms' and the 'Main-Bid' are securely encrypted using a Pass- Phrase created by the Bidder himself. Unlike a 'password', a Pass-Phrase can be a multi-word sentence with spaces between words (e.g. I love this World). A Pass-Phrase is easier to remember, and more difficult to break. It is recommended that a separate Pass-Phrase be created for each Bid-Part. This method of bid-encryption does not have the security and data-integrity related vulnerabilities which are inherent in e-tendering systems which use Public-Key of the specified officer of a Buyer organization for bid-encryption. Bid-encryption in ETS is such that the Bids cannot be decrypted before the Public Online Tender Opening Event (TOE), even if there is connivance between the concerned tender-opening officers of the Buyer organization and the personnel of e-tendering service provider.

Typically, 'Pass-Phrase' of the Bid-Part to be opened during a particular Public Online Tender Opening Event (TOE) is furnished online by each bidder during the TOE itself, when demanded by the concerned Tender Opening Officers who will open the bid. Else Tender Opening Officer may authorize the bidder to open his bid himself.

There is an additional protection with SSL Encryption during transit from the client-end computer of a Supplier organization to the e-tendering server/ portal.

8. Public Online Tender Opening Event(TOE)

ETS offers a unique facility for 'Public Online Tender Opening Event (TOE)'. Tender Opening Officers as well as authorized representatives of bidderscan attend the Public Online Tender Opening Event(TOE) from the comfort of their offices. For this purpose, representatives of bidders (i.e. Supplier organization) duly authorized are requested to carry a Laptop and Wireless Connectivity to the Internet.

Every legal requirement for a transparent and secure 'Public Online Tender Opening Event (TOE)' has been implemented on ETS. As soon as a Bid is decrypted with the corresponding 'Pass-Phrase' as submitted online by the bidder himself (during the TOE itself), salient points of the Bids are simultaneously made available for downloading by all participating bidders. The work of taking notes during a manual 'Tender Opening Event' is therefore replaced with this superior and convenient form of 'Public Online Tender Opening Event (TOE)'.

ETS has a unique facility of 'Online Comparison Chart' which is dynamically updated as each online bid is opened. The format of the chart is based on inputs provided by the Buyer for each Tender. The information in the Comparison Chart is based on the data submitted by the Bidders in electronic forms. A detailed Technical and/ or Financial Comparison Chart enhances Transparency. Detailed instructions are given on relevant screens. ETS has a unique facility of a detailed report titled 'Minutes of Online Tender Opening Event (TOE)' covering all important activities of 'Online Tender Opening Event (TOE)'. This is available to all participating bidders for 'Viewing/ Downloading'.

There are many more facilities and features on ETS. For a particular tender, the screens viewed by a Supplier will depend upon the options selected by the concerned Buyer.

NOTE: In case of internet related problem at a bidder's end, especially during 'critical events' such as – a short period before bid-submission deadline, during online public tender opening event, during e-auction, it is the bidder's responsibility to have backup internet connections. In case there is a problem at the e-procurement/ e-auction service-provider's end (in the server, leased line, etc) due to which all the bidders face a problem during critical events, and this is brought to the notice of BSNL by the bidders in time, then BSNL will promptly re-schedule the affected event(s).

9. Other Instructions

For further instructions, the vendor should visit the home-page of the portal (**https://etenders.gov.in/eprocure/app**), and go to the User-Guidance Center

The help information provided through 'ETS User-Guidance Center' is available in three categories – Users intending to Register / First-Time Users, Logged-in users of Buyer organizations, and Logged-in users of Supplier Organizations. Various links are provided under each of the three categories.

Note: It is strongly recommended that all authorized users of Supplier organizations should thoroughly peruse the information provided under the relevant links, and take appropriate action. This will prevent hiccups, and minimize teething problems during the use of ETS.

10. The following 'FOUR KEY INSTRUCTIONS for BIDDERS' must be assiduously adhered to:

1. Obtain individual Digital Signing Certificate (DSC or DC) well in advance of your first tender submission deadline on ETS.
2. Register your organization on ETS well in advance of your first tender submission deadline on ETS
3. Get your organization's concerned executives trained on ETS well in advance of your first tender submission deadline on ETS
4. Submit your bids well in advance of tender submission deadline on ETS as there could be last minute problems due to internet timeout, breakdown, etc.

   While the first three instructions mentioned above are especially relevant to first-time users of ETS, the fourth instruction is relevant at all times.

11. Minimum Requirements at Bidders end

- Computer System with good configuration (Min P IV, 1 GB RAM, Windows XP)
- Broadband connectivity.
- Microsoft Internet Explorer 6.0 or above
- Digital Certificate(s) for users.

IMPORTANT INSTRUCTIONS TO THE TENDERERS

Please note that the offers, which do not comply the following, will not be considered and will be summarily rejected. These instructions supersede the BSNL EW 8 clauses in case of any Disparity.

1. **Tenders with any condition including that of conditional rebates shall be rejected forthwith summarily.**
2. Insurance, loading, unloading, transportation etc., should be included on works contact basis.
3. No Octroi exemption certificate shall be issued by the department nor will the Octroi duty paid by the contractor be reimbursed. Hence Octroi charges shall be included in the offer.
4. The price shall be firm and fixed during the currency of the contract. No cost escalation is permitted. Clause10CC is not applicable.
5. The Extension of time for completion of the works is governed by clause 5 of the tender documents.
6. No advance payments can be made. The payment is governed by the normal department practice. Stipulations like levy of interest if pay mention to make in specified time is not acceptable.
7. The firm should deposit EMD before submission of their offer. The EMD of other works refundable to them cannot be adjusted against this work. The firm's offer shall be liable for rejection without EMD for this particular work.

8) **TAXES AND DUTIES**

The firm shall quote rates for all the items inclusive of all taxes and duties, inclusive of Octroi, entry tax, work contract tax, Service tax/ GST. No concession form will be issued by the Department.**However the agency shall clearly indicate the GST/ Service portion in case of composite works at the time of submission of tender itself for the purpose GST/ service tax calculation.**

Tendered rates shall be inclusive of all taxes and levies payable under the respective statutes. However pursuant to the constitution (Forty sixth amendment) Act, 1982, If any further tax or levies imposed by statute, after the 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 in the opinion of Superintending Engineer whose decision shall be final and binding is not attributable to delay in execution of work within the control of the contractor.

The contractor shall keep necessary books of accounts and other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by a duly authorized representative of Government and further shall furnish such other information/documents as the Engineer-in-Charge may require.

The contractor shall within a period of 30 days of imposition of any further tax or levy pursuant to the constitution (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.

Note: No additional condition whatsoever will be accepted for turnover tax/ sale tax on works contract. In case of additional conditions for the payment of such claims by the contractor, the tender may be summarily rejected by the accepting authority.

9) **INCREASE /DECREASE OF TENDERED QUANTITY**

a) BSNL will have the right to increase or decrease upto 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.

10) ***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.

11) **COMPLETION OF WORK**:-

11.1 The time period will be reckoned from the 10th day after the date on which the order of commence the work issued to the contractor. The time allowed for completion of work is 2 months as per the directions of the Engineer-in-charge.

12) **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.

13) **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 EW - 8 forms stands modified accordingly. Flow chart of the procurement process/ contract shall be supplied by the contractor and approved by Executive Engineer concerned.

14) **PAYMENT TERMS:**-

Payment to the Contractors during progress of work is regulated for all the items as below.

a) 80% of pro rata of the approved price breakup of contract value on receipt of equipment at site and after satisfactory physical inspection.

b) 20% of pro rata of the approved price break up of the contract value after successful installation and commissioning of equipment.

15) **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 upto 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.

15(a) Agency has to observe all the labour rules & regulation in force. Agency shall be fully responsible for any violation observed at any time.

16 **Inspection of Site and Contract Documents**

For the purpose of inspection of site and relevant documents, the contractor is required to contact E.E (Elect) concerned who shall give reasonable facilities for Inspection of the same. The contractor shall inspect and examine the site and its surroundings and shall satisfy himself before commencement of work as to the form and nature of the site, the quantities and nature of work, materials necessary for completion of the works, the means of access to the site, the accommodation he may require and in general shall himself obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect his work. No extra charges consequent on any misunderstanding or otherwise shall be allowed.

17 Variation in quantities in respect of unit rates items will be governed by unit rates in the Agreement. This applies to all variations ordered during the currency of the main contract regardless of the quantity of variation. For any item of work not covered by the schedule of work Clause12 of BSNL EW -8 shall apply.

18. **I.S. Standards:**
The entire system shall conform to relevant Bureau of Indian 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 upto date.

19. **Modifications/Alterations.**

19.1 Modifications or alterations in the design/specifications of any equipment/material will not be permitted by the department as a matter of principle.

19.2 However, the department may relax the above stipulation in exceptional circumstance where:

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

OR

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

19.3 Prior written approval of the department shall be obtained before execution of such alterations/modifications.

20. **Quality Assurance**
The EI works are to be executed in accordance to the CPWD specifications. The work is considered to be completed only after the successful completion of testing.

21. **Procedure for submission of bills:**

The agency shall clearly indicate the GST/ **service tax number** on the bill copy / invoice. The bill shall contain measurement (work done / supplies) portion and the GST/ service tax portion separately. Bills received without these particulars will not be considered.

22. **Termination of contract on death of contractor**

Without prejudice to 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.

23. **Indulging of contractor on criminal / anti-social 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/Central Excise /Customs Departments recommends such a course – action will be taken as per the directions of CBI or concerned department.

Contractor

Executive Engineer (E)
BSNL Electrical Division - II
HYDERABAD

PROFORMA OF SCHEDULES

SCHEDULE 'A'

Schedule of quantities: Appended from page **8**

SCHEDULE 'B'

Schedule of materials to be issued to the contractor.

Sr. No.	Description of item	Quantity	Rates in figures and words at which the material will be charged to the contractor	Place of Issue
1	2	3	4	5
NIL				

SCHEDULE 'C'

Tools and plants to be hired to the contractor

Sr. No.	Description of item	Hire charges per day	Place of Issue
1	2	3	4
NIL			

SCHEDULE 'D'

Extra schedule for specific requirements/ document for the work, if any.

I. Model form of bank guarantee: Appended from **page 22**

SCHEDULE 'E'

Schedule of component of Cement, Steel, other materials, Labour etc. for price escalation.

NIL

Name of Work: SITC of 25 Nos Wind driven Roof top Turbo Air Ventilator Systems for various ID BTS Sites under GM (Rural) Hyderabad.

CLAUSE 10 CC

Component of Cement expressed as per cent of total value of work	Xc	____ %	Not Applicable
Component of Steel expressed as per cent of total value of work	Xs	____ %	
Component of civil(except cement and steel) / Electrical construction Materials expressed as per cent of total value of work	Xm	____ %	
Component of Labour expressed as per cent of total value of work	Y	____ %	

SCHEDULE 'F' Reference to General Conditions of contract.	
Name of work:	SITC of 25 Nos Wind driven Roof top Turbo Air Ventilator Systems for various ID BTS Sites under GM (Rural) Hyderabad.
Estimated cost of work:	**Rs. 3,74,650/-**
i) Earnest money :	**Rs. 7,493/-**
ii) Performance Guarantee : iii) Security Deposit :	5% of tendered value of work. 5 % of the tendered value of the work.
GENERAL RULES and DIRECTIONS:	
Definitions:	See below
2(v) Engineer-in-Charge	Executive Engineer (E) – BSNL Electrical Division- I, Hyderabad.
2(viii) Accepting Authority	Executive Engineer (E), BSNL Electrical Division-I, Hyderabad.
2(x) Percentage on cost of materials and labour to cover all overheads and profits.	10%
2(xi) Standard Schedule of Rates	-----
2(xii) Department	BSNL
9(ii) Standard contract Form	BSNL EW-8 as modified and corrected upto date.
Clause 1 i) Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance, in days. ii) Maximum allowable extension beyond the period provided in I) above in days	15 Days (As per Tender)

Clause 2 Authority for fixing compensation under Clause 2.	Superintending Engineer (E), BSNL Electrical Zone, Hyderabad.
Clause 5 Number of days from the date of issue of award letter of acceptance for reckoning date of start Milestone(s) as per table given below:-	**10 days**

Table of Mile Stone(s)

Sl. No.	Description of Milestone (Physical)	Time allowed in days (from date of start)	Amount to be with-held in case of non-achievement of milestone
1	**Not Applicable**		
2			

OR

Sl. No.	Financial Progress	Time allowed (from date of start)	Amount to be with-held in case of non-achievement of milestone
1	1/8th (of whole	1/8th (of whole	**Not Applicable**
2	3/8th (of whole work)	1/2 (of whole work)	
3	3/4th (of whole work)	3/4th (of whole work)	
4	Full	Full	

Time allowed for execution of work. Authority to give fair and reasonable extension of time for completion of work.	**2 Months** EE(E), SE(E)
Clause 7 Gross work to be done together with net payment/ adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment.	As Applicable.
Clause 10CC Clause 10CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column.	NOT APPLICABLE
Clause 11 Specifications to be followed for execution of work (separately for each component of work)	Specifications as appended with Schedule of work.
Clause 12 **12. 2& 12.3** Deviation Limit beyond which clauses 12.2 and 12.3 shall apply	50%
12.5 Deviation Limit beyond which clauses 12.2 and 12.3 shall apply for foundation work	NOT APPLICABLE
Clause 16 Competent Authority for deciding reduced	Superintending Engineer (E), BSNL Electrical Zone, Hyderabad.

rates.	
Clause 30 (i) Minimum Qualifications and experience required for Principal Technical Representative.	
a) For works with estimated cost put to tender more than Rs. 5 Lakhs for Elect/ Mech. Works	Graduate Engineer(Electrical) or Diploma Holder in Electrical With 3 Years Experience.
b) For works with estimated cost put to tender more than Rs. 2 lakh but less than Rs.5 Lakhs for Elect/ Mech. Works	NA
c) Discipline to which the Principal Technical Representatives should belong.	Elect./Mech.
d) Minimum experience of works	Three (3) years
e) Recovery to be effected from the contractor in the event of not fulfilling provision of clause 30(i)	Rs.4,000/- p.m. for Graduate Rs.2,000/- p.m. for Diploma holder

MODEL FORM OF BANK GUARANTEE

(Bank Guarantee bond for EMD for Air Conditioning, Diesel Engine Alternator, Lifts and Substation works, Wherever the amount of EMD is more than Rs.20,000/=)

Whereas_____(hereinafter called "the contractor(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 Contractor(s) withdraws its Tender during the period of Tender validity specified on the Tender Form: or
2. If the Contractor(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

UNDERTAKINGS TO BE FURNISHED BY THE TENDERER

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.

- **In case of proprietorship firm, certificate will be given by the proprietor & for partnership firm certificate will be given by all the Directors of the company**

(Seal of the firm) (Signature of Bidder)

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".

* Strikeout 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".

* Strikeout whichever is not applicable

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

(Seal of the firm) (Signature of Bidder)

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)

Name of Work: SITC of 25 Nos Wind driven Roof top Turbo Air Ventilator Systems for various ID BTS Sites under GM (Rural) Hyderabad.

COMPLIANCE SHEET

I/We..... (Name of firm) have read/Understood all the terms and conditions as mentioned in bid Document and accept the same unconditionally.
I/We state to comply in full manner with all the General, Commercial, Technical and Operating financial conditions of the tender document for the work **"**SITC of 25 Nos Wind driven Roof top Turbo Air Ventilator Systems for various ID BTS Sites under GM (Rural) Hyderabad.**"**without any reservation and deviation.

(Seal of the firm) **(Dated Signature of Contractor)**

IMPORTANT NOTE: The BSNL EW 8 Form is available at http://www.telangana.bsnl.co.in for ready reference and download.

COMPUTERIZED MEASUREMENT BOOK

CLAUSE 6A

Engineer-in-Charge shall, except as otherwise provided, ascertain and determine by measurement the value of work done in accordance with the contract.

All measurements of all items having financial value shall be entered by the contractor and compiled in the shape of the Computerized Measurement Book having pages of A-4 size as per the format of the department so that a complete record is obtained of all the items of works performed under the contract.

All such measurements and levels recorded by the contractor or his authorized representative from time to time, during the progress of the work, shall be got checked by the contractor from the Engineer-in-Charge or his authorized representative as per interval or program fixed in consultation with Engineer-in-Charge or his authorized representative. After the necessary corrections made by the Engineer-in-Charge, the measurement sheets shall be returned to the contractor for incorporating the corrections and for resubmission to the Engineer-in-Charge for the dated signatures by the Engineer-in-Charge and the contractor or their representatives in token of their acceptance.

Whenever bill is due for payment, the contractor would initially submit draft computerized measurement sheets and these measurements would be got checked/test checked from the Engineer-in-Charge and/or his authorized representative. The contractor will, thereafter, incorporate such changes as may be done during these checks/test checks in his draft computerized measurements, and submit to the department a computerized measurement book, duly bound, and with its pages machine numbered. The Engineer-in-Charge and/or his authorized representative would thereafter check this MB, and record the necessary certificates for their checks/test checks.

The final, fair, computerized measurement book given by the contractor, duly bound, with its pages machine numbered, should be 100% correct, and no cutting or over-writing in the measurements would thereafter be allowed. If at all any error is noticed, the contractor shall have to submit a fresh computerized MB with its pages duly machine numbered and bound, after getting the earlier MB cancelled by the department. Thereafter, the MB shall be taken in the Divisional Office records, and allotted a number as per the Register of Computerized MBs. This should be done before the corresponding bill is submitted to the Division Office forpayment. The contractor shall submit two spare copies of such computerized MB's for the purpose of reference and record by the various officers of the department.

The contractor shall also submit to the department separately his computerized Abstract of Cost and the bill based on these measurements, duly bound, and its pages machine numbered alongwith two spare copies of the bill. Thereafter, this bill will be processed by the Division Office and allotted a number as per the computerized record in the same way as done for the measurement book meant for measurements.

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for checking of measurements/levels by the Engineer-in-Charge or his representative.

Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in-the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard, method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available then a mutually agreed method shall be followed.

The contractor shall give not less than seven days' notice to the Engineer-in-Charge or his authorized representative in charge of the work before covering up or otherwise placing beyond the reach of checking and/or test checking the measurement of any work in order that the "Same may be checked and/or test checked and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of checking and/or test checking measurement and shall not cover up and place beyond reach of measurement any work without consent, in writing of the Engineer-in-Charge or his authorized representative in charge of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of checking and/or test checking measurements without such notice having been given or the Engineer-in-Charge's consent being obtained in writing the same shall be uncovered at the Contractor's expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

Engineer-in-Charge or his authorized representative may cause either themselves or through another officer of the department to check the measurements recorded by contractor and all provisions stipulated herein above shall Inapplicable to such checking of measurements or levels.

It is also a term of this contract that checking and/or test checking the measurements of any item of work in the measurement book and/or its payment in the interim, on account of final bill shall not be considered as conclusive evidence as to the sufficiency of any workor material to which it relates nor shall it relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

1. As per the CPWD Works Manual 2014

7.1Computerized Measurement Books (CMB's) and Bills to be submitted by the contractor

7.2 Application and format of the Computerized M.B.

(1) Irrespective of value of the work theconventional Measurement Books shall be replaced by a bound volume of computerized measurements to be furnished by the contractor, duly machine numbered for the pages, andwith an MB number given by the Division Office. The pages of these Measurement Books shallbe of A-4 size. All these Measurement Books belonging to a Division shall be serially numberedand a record of these Computerized Measurement Books shall be maintained in a separate
Register in Form CPWA 92.
(2) The same format as in existing Measurement Books shall be used for the ComputerizedMeasurement Books. The measurements shall be carried forward from the previous recordedmeasurements as per the existing procedure.

7.3 Mode of measurements

(1) The measurements shall be recorded and entered in computerized format in the first instance bythe contractor, and a hard copy shall be submitted to the Department. All entries shall be madeexactly as per the existing procedure.

(2) These measurements shall then be 100% checked by the Junior Telecom Officer (E)If Junior Telecom Officer (E) isnot available, the Sub-Divisional Engineer(E) shall perform 100% check of the measurements. Thecontractor shall incorporate all such changes or corrections, as may be done during these checks,to his draft Computerized measurements, and submit to the department the correctedcomputerized measurements in the form of a book, duly hard bound in red colour on the lines ofthe conventional Measurement Books now in use, and with its pages machine numbered.

(3) The Sub-Divisional Engineer(E)and the Executive Engineer(E) shall test check these computerized measurements as per the existing instructions. This book shall be treated as a ComputerizedMeasurement Book.

(4) The Junior Telecom Officer (E), Sub-Divisional Engineer (E)and the Executive Engineer(E)shall record the necessarycertificates for their checks and test checks as per the existing procedure in this ComputerizedMeasurement Book.

(5) The Computerized Measurement Book shall be allotted a serial number as per the Register of Computerized Measurement Books.

7.4. Cutting or over-writing in the Computerized M.B. not allowed

(1) The Computerized Measurement Book given by the contractor, duly bound, with its pages machinenumbered, shall have no cutting or over-writing.

(2) It is the responsibility of the Junior Telecom Officer (E) or the Sub-Divisional Engineer(E)as the case may be toensure that the checks and test checks done by them in the initial draft measurements arecorrectly incorporated in the Computerized Measurement Book before they record theircertificates.

(3) In case of any error, the Computerized Measurement Book shall be cancelled, and the contractorshall re-submit a fresh Computerized Measurement Book. This should be done before thecorrespondingComputerized bill is submitted to the Division for payment.

(4) The contractor shall submit as many copies of Computerized Measurement Books as may berequired, and as are specified in the NIT/contract, for the purpose of reference and record in thevarious offices of the department.

7.5. Computerized Bill to be submitted by the contractor

(1) The contractor shall submit his running and final bills in a Computerized form in the same formats the existing conventional bills, with all the pages machine numbered, and hard bound, andwith all the entries made as per the existing procedure.

(2) The contractor shall submit as many copies of the computerized bills as may be required for thepurpose of reference and record in the various offices of the department.

(3) The bill shall be carried forward from the previous running account bill as per the existingprocedure.

(4) These Computerized bills shall be processed by the various offices for payment, as per theexisting procedure.

7.6. Review of Measurement Books

(1) The Measurement Books are required to be reviewed by Divisional Accountant under thesupervision of Executive Engineer (E). The Sub-Divisional Engineer(E)are required to submit theMeasurement Books in use in the Sub-Divisions to the Divisional Office, from time to time, sothat at least once a year the entries recorded in each of the Books are subjected to a percentagecheck. The Divisional Officer should ensure that this annual review is conducted regularly andpositively every year.

(2) The review by the Divisional Accountant shall be in the following respects:-

(i) To compare the books in use with part I of the Register of Measurement Books maintained in CPWA Form 92, and to note necessary corrections in the Register.

(ii) To see that no original sheet is torn out of a Measurement Book, nor any entry erased ordisfigured, and that the corrections made therein are initialed.

(iii) To see that pencil entries are not inked over.

(iv) To test check the accuracy of calculations, and to ensure that the instructions regardingwriting of Measurement Books, recording of measurements, and their test check are beingfollowed properly.

(3) On receipt of the Measurement Books in the Divisional Office, the Executive Engineer(E)shouldindicate in column 2 of the "Review Notes" in each Measurement Book as referred to in para 7.6(5) below as to which of the calculations are to be test checked by the Divisional Accountant.The extent of this check will be determined by the Executive Engineer (E)having regard to the resultof the last review, and should cover complete set of measurements.

(4) Payments based on the entries reviewed should be traced into various accounts and verified.Similarly, supplies or issue of materials should be traced into the various accounts, contractor'sledger, etc. and verified.

(5) **Communication of discrepancies**

The defects, discrepancies, etc. noticed should be communicated to the Sub-Divisional Engineer (E)concerned and summarized in the following form in the Measurement Book that has been testaudited:

Review Notes by Divisional Accountant

Pages reviewed generally	Calculations selected by Divisional Officer for re-check		Defects and discrepancies noticed	Dated initials of	
	Pages	Dated initials		DivisionalAccountant	Divisional Officer
1	**2**	**3**	**4**	**5**	**6**

(6) The Measurement Book completed and returned for record during the year should also be similarlyexamined prior to their final record in the Divisional Office.

7.7. Loss of Measurement Books

(1) When a Measurement Book is lost, an FIR should be lodged with the police.

(2) An immediate report of the facts of the case together with an explanation of all parties concernedresponsible for the loss should also be made promptly to the Chief Engineer, who is empoweredto sanction the write off of the lost Measurement Books. In case of theft or loss of a blankMeasurement Book, the Superintending Engineer shall be the competent authority to write offthe loss.

(3) Such losses for write off should be reported in the proforma as at Appendix 10.

(4) It is also necessary that the measurements in the lost Measurement Book should be reconstructedat the earliest.

2. The M.B. movement Register is opened in the Sub Division and all other routine procedures followed in case of normal Measurement books are also followed in computer Measurement Books also.

TECHNICAL SPECIFICATIONS FOR TURBO VENTILATORS

I. GENERAL:

1) The workers engaged by firm should maintain proper discipline and good behavior with occupants. Agency has to observe all the labour rules and regulations in force and indemnify BSNL against any claims whatsoever, either from this clause or any other clause in the contract.

2) The agency should provide the workers with proper Tools & Plant, Testing and safety equipment.

3) Firm should have round the clock contact telephone number. In case of Emergency, the contractor and authorized engineer 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.

II**. PACKING, FORWARDING AND STORAGE AT SITE:-**

Before dispatch to site, the equipment / component / materials shall be properly packed to have protection against transit damages and damages against storage at transporter's premises or at work site. However, damaged items shall be replaced as per the direction of Engineer-inCharge. All the stores and materials required for satisfactory completion of the work shall be arranged at work site by the contractor from his own sources. However, safe custody of the material stored at site will be the responsibility of the contractor.

III. PROGRAMME FOR EXECUTION:-

The firm shall supply detailed program to Engineer-in-charge for execution of contract within 15 days of award of work. The program shall contain details about submission & approval of drawing, supply of materials etc. Tentative dates for installation and testing shall also be submitted.

IV. INSTALLATION

1) Opening on shelter for fixing Ventilator and Supply air grill shall be done by the contractor / agency. The opening shall be made in the required size and finishing shall be done to avoid further damage / tear of shelter material.

2) Generally the turbo air ventilator systems shall be installed on roof and the fresh air inlet arrangement at the bottom of cabin. The Turbo Air Ventilator and fresh air inlet arrangement may be fixed on side wall also based on site conditions.

3) The joint between shelter and ventilator / Supply air grill assembly shall be made water proofing in order to avoid entry of seepage water.

4) Any damage to the Shelter / Room due to the carelessness on the part of firm’s staff shall be the responsibility of firm and shall be replaced / rectified without any extra cost.

5) Any accident or damage will be the responsibility of contractor and the BSNL will not entertain any claim, compensation, penalty etc. on this account or on account of nonobservance of any other requirement of law relevant to this work.

V. DATE OF COMPLETION:

The work shall be deemed to have been completed after the fulfillment of the following:

a). Physical installation of Wind operated Turbo Ventilator.

b). Successful completion of testing & commissioning of Wind operated Turbo Ventilator in presence of representative of Engineer-in-Charge.

VI. COMPLETION PLAN:

Contractor shall submit a set of Drawings showing location of each installation.

WARRANTEE:- The agency shall offer warrantee for the system for one year from the date of commissioning including replacement of all faulty components at free of cost to BSNL.

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)	BieccoLawrie / 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/ KWHrmeter	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/ lsolator /ELCB/RCCB/ Distribution Board	Crompton / Havells / lndokopp / 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
22	Centrifugal Pump	Amrut / BE / Beacon / Batliboi / Crompton / Jyoti / Kirloskar
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 / Pilkingston / 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 /
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	ISI mark
43	Fire Extinguisher	ISI mark
44	Lift	OTIS, Kone, Mitsubishi ,Schindler,Johnson

NOTE:

1. In case of External / PMC works, the list of approved makes may be modified as per client's requirement.
2. 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.
3. Any additional makes may be approved by concerned PCEs/Sr CEs/CEs(Elect) for the work under his jurisdiction as already accorded vide letter no. 3-2-5/EW/VEP-1/2007 dated 05-07-2007.

ANNEXURE

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.

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

ANNEXURE

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 Ladders.

INDIAN ELECTRICITY RULES 1956

Note:-Tender documents & BSNL EW-8 General conditions of contract work for electrical works can also be downloaded from the website
http://www.telangana.bsnl.co.in/tenders_active.php