



**TENDER DOCUMENT
FOR THE WORK**

**Annual Maintenance Contract for 2 Nos 20 KVA UPSs at Door
Sanchar Bhavan, O/o CGMT, Abids, Hyderabad for Year 2020-21.(Ist
Recall)**

**ELECTRICAL SUB-DIVISION-IV
HYDERABAD-63**

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Certified that this tender document contains (32) pages only.

SUB-DIVISIONAL ENGINEER (E)
BSNL Electrical SUB-Division-IV,
Hyderabad.



BHARAT SANCHAR NIGAM LIMITED
(A Govt. of India Enterprise)
(Electrical Wing)

O/O SUB-DIVISIONAL ENGINEER (E), BSNL Electrical SUB Division-IV,
6th floor, NW wing, BSNL Bhavan, 5-9-25, Hill Fort Road,
Adarsh Nagar, Hyderabad. -500063
Tel No: 040- 23224344.

NOTICE INVING TENDER

NIT No: 06/BESD-IV/HYD/2020-21

Dated:03-12-2020

The Sub-Divisional Engineer (Electrical), BSNL Electrical Sub-Division-IV, Hyderabad invites on behalf of BSNL sealed item rate tenders for the work of

S. No	Name of work	Estimated cost Rs.	EMD Rs.	Tender cost (non refundable)	Time for completion
1	Annual Maintenance Contract for 2 Nos 20 KVA UPSs at Door Sanchar Bhavan, O/o CGMT, Abids, Hyderabad for Year 2020-21.(1st Recall)	41,630/-	833/-	177/-	1 Year

From the contractors who are satisfying the following eligibility conditions:

1. 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

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

OR

- 1.2. The Manufacturer or authorized dealer of OEM of any of the makes of major equipment included in the NIT. The letter of authorization from manufacturer in original/ photocopy attested by BSNL Executive will be submitted.

OR

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

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.

NOTE: The estimated cost of one year shall be considered to evaluate the eligibility criteria.

GENERAL CONDITIONS

- (a) Valid Chartered Accountant Certificate with latest returns & Registration certificate with attested copies as applicable along with application on their printed letterheads for purchase of Tenders.

- (b) List of works completed of the requisite magnitude along with attested copies of certificate, testimonials of the satisfactory certificate from the department concerned obtained from an officer not below the rank of Executive Engineer.
- (c) Copy of PAN card
- (d) The Tenderer should submit the valid GST registration certificate, EPF Registration Certificate & ESI Registration certificate (As applicable)
- (e) The Tender shall be submitted in **two sealed covers marked as cover 1st and Cover 2nd, with mention of Name of work, date of opening of bids on both the covers.** The First cover shall contain Tender cost, Earnest Money Deposit in the form of **Demand Draft/Pay Order** of a Scheduled Bank or Nationalized Bank/State Bank guaranteed by Reserve Bank of India drawn in favour of **Accounts Officer (Cash), O/o CGMT, BSNL, Hyderabad** and the second cover should *contain* the tender document. In case the first cover is not annexed or Earnest Money is not in proper form the second cover containing tenders shall not be opened at all.
- (f) The tender will be received up to 3.00 P.M. on **11/12/2020** and opened at 3.30 P.M. on the same day.
- (g) In case holiday is declared on the opening day, the tenders will be opened on the next working day.

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

The firm who quotes on the tender downloaded from the web site shall strictly follow the following procedure:

- 1) Two sealed covers marked as cover 1st and Cover 2nd, with mention of Name of work, date of opening of bids.
- 2) The First envelope containing tender application, tender fee (non-refundable) in the form of separate DD, credentials of the tenderer which also includes authorization letter from dealer if any, self-attested **and** certified by the BSNL Executive. If not certified by the BSNL Executive then original document shall be produced at the time of opening and EMD in the shape of DD/PO of scheduled bank, separate DD shall be attached for tender fee and EMD.
- 3) Second Envelope shall contain duly filled tender document.
- 4) First envelope containing tender fee, attested document providing fulfillment of eligibility criteria and EMD in proper form shall be opened first
- 5) The second envelope shall not be opened in case
 - i) Tender fee is not submitted in proper form
 - ii) EMD is not in proper form
 - iii) Firm fails to fulfill eligibility criteria on the basis of document submitted in the first envelope
- 6) If any found/discrepancies found in the downloaded tender form, the contents in the hard copy issued from division office shall be final and binding.
- 7) Tenders received by post / courier shall not be accepted.

Sub-Divisional Engineer (E)

No: NIT/BESD-IV/HYD/2020-21/35

Dt.03-12-2020

- 1) The Executive Engineer (E), BSNL, Electrical Div. No.II, Hyd/Vijayawada, VSP/TPT/WGL/ATP.
- 2) SDE (E) Electrical Sub Division IV, Hyderabad, NZB, MDK, MBNR, KHM, NGD.
- 3) All Eligible Contractors.
- 4) SR SS/SDE (EP)/AO/Cashier/Auditor/Notice Board.

Sub-Divisional Engineer (E)
BSNL Electrical sub-Division-IV
HYDERABAD.

D.O.NIT no: 52/BED-I/HYD/2020-21

SCHEDULE OF QUANTITIES

Name of work: Annual Maintenance Contract for 2 Nos 20 KVA UPSs at Door Sanchar Bhavan, O/o CGMT, Abids, Hyderabad for Year 2020-21.(1st Recall)						
S	DESCRIPTION OF ITEM	Qty		Rate	Unit	Amount
1	Providing comprehensive maintenance of 20 KVAFrontline make Online UPS including periodic maintenance, break down maintenance, replacing faulty components,etc as required except replacement of battery as per the detailed specification attached. (for one Month)	2	Nos		Each	
Total Value of work for one Month: (A) =						
Total Value of work for 12 Months: (B) = (A) X 12 =						
CGST Payable extra on above Value (B) @ ____% (C) =						
SGST Payable extra on above Value (B) @ ____% (D) =						
IGST Payable extra on above Value (B) @ ____% (E) =						
Total inclusive of Taxes: (B)+(C)+(D)+ (E) =						

IMPORTANT INSTRUCTIONS TO TENDERERS DOWNLOADING THE TENDER DOCUMENT FROM WEB SITE

The Tenderers, 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 EW 8** forms will be attached with the agreement after the award of work. The contractor shall read the **BSNL EW 8** and keep themselves aware of the said Clauses.
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 of tenders.
4. The name of the tenderer shall be filled on the relevant pages of **BSNL EW 6** form etc., and all the pages shall be invariably signed and seal affixed.
5. The tenderer shall ensure that the downloaded tender document is properly stitched and sealed with sealing wax before submitting the document. Loose / spiral bound tenders shall not be accepted. Sealing of the tenders with adhesive tapes is not acceptable and the tenders are liable to be summarily rejected.
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 summarily rejected.
7. The tenderer shall sign the declaration enclosed before submitting the tender.
8. Tenders received by post/courier shall not be entertained.

CONTRACTOR

ENGINEER IN CHARGE

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 contract 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. Clause 10CC 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 1 year** 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:-

Quarterly payment shall be made after completion of maintenance period. With each bill, certificate from the contractor that maintenance has been carried out properly and testing etc., required during the period have been performed. This certificate has to be countersigned by SDE(E)/JTO(E) .

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 Clause 12 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 of action will be taken as per the directions of CBI or concerned department.

Contractor

**Sub-Divisional Engineer (E)
BSNL Electrical Sub- Division -IV,
HYDERABAD**

PROFORMA OF SCHEDULES

SCHEDULE 'A'

Schedule of quantities: Appended from page **5 - 5**

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 14**

SCHEDULE 'E'

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

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	_____ %	

<u>SCHEDULE 'F'</u> Reference to General Conditions of contract.	
Name of work:	Annual Maintenance Contract for 2 Nos 20 KVA UPSs at Door Sanchar Bhavan, O/o CGMT, Abids, Hyderabad for Year 2020-21.(1 st Recall)
Estimated cost of work:	Rs.41630/-
i) Earnest money :	Rs.833/-
ii) Performance Guarantee :	5% of tendered value of work.
iii) Security Deposit :	5 % of the tendered value of the work.
GENERAL RULES and DIRECTIONS:	
Definitions:	See below
2(v) Engineer-in-Charge	Sub-divisional Engineer (E) – BSNL Electrical Division- IV, Hyderabad.
2(viii) Accepting Authority	Sub-Divisional Engineer (E), BSNL Electrical Division-IV, 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	1/8 th (of whole	1/8 th (of whole	Not Applicable
2	3/8 th (of whole work)	1/2 (of whole work)	
3	3/4 th (of whole work)	3/4 th (of whole work)	
4	Full	Full	
Time allowed for execution of work.			1 Year
Authority to give fair and reasonable extension of time for completion of work.			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 rates.			Superintending Engineer (E), BSNL Electrical Zone, Hyderabad.

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)

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 "Annual Maintenance Contract for 2 Nos 20 KVA UPSs at Door Sanchar Bhavan, O/oCGMT,Abids,Hyderabad for Year 2020-21."(**IST RECALL**) 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.

Declaration by Contractor

(To be given by tenderers downloading the tender document from the web)

This is to certify that:

- 1) I / We have submitted the tenders in the proforma as downloaded directly from the web sites which are same as available in the web site and there is no change in the format, no. of pages, etc.
- 2) I / We have not made any modifications / corrections / additions etc., in the tender documents downloaded from web by me / us.
- 3) I / We have checked that no page is missing and all pages as per the index are available and that all pages of tender document submitted by us are clear and legible.
- 4) I / We have signed (with stamp) all the pages of tender document before submitting the same.
- 5) I / We have stitched and wax sealed the tender documents properly before submitting the same.
- 6) I / We have submitted the cost of the tender along with EMD in the first cover as prescribed.
- 7) I / We have read carefully and understood the 'Important instructions to contractors', 'important instructions to tenderers downloading the tender documents from web site' and entire standard BSNL EW 8 clauses and proforma form available in division office.
- 8) In case at later stage, it is noticed that there is any difference in my / our tender documents with the original documents, BSNL shall have the right to cancel the tender / work, forfeit the Earnest Money / Security Deposit, take appropriate action as per the prevailing rules in force and BSNL shall not be bound to pay any damages to me / us on this account.

Dated.....
(SIGN WITH SEAL)

(CONTRACTOR)

COMPUTERISED 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 for payment. 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 along with 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 work or 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

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

7.2 Application and format of the Computerised M.B.

(1) Irrespective of value of the work the conventional Measurement Books shall be replaced by a bound volume of computerized measurements to be furnished by the contractor, duly machine numbered for the pages, and with an MB number given by the Division Office. The pages of these Measurement Books shall be of A-4 size. All these Measurement Books belonging to a Division shall be serially numbered and a record of these Computerised 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 Computerised Measurement Books. The measurements shall be carried forward from the previous recorded measurements as per the existing procedure.

7.3 Mode of measurements

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

(2) These measurements shall then be 100% checked by the Junior Telecom Officer (E). If Junior Telecom Officer (E) is not available, the Sub-Divisional Engineer(E) shall perform 100% check of the measurements. The contractor shall incorporate all such changes or corrections, as may be done during these checks, to his draft computerised measurements, and submit to the department the corrected computerized measurements in the form of a book, duly hard bound in red colour on the lines of the 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 Computerised Measurement Book.

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

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

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

(1) The Computerized Measurement Book given by the contractor, duly bound, with its pages machine numbered, 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 to ensure that the checks and test checks done by them in the initial draft measurements are correctly incorporated in the Computerized Measurement Book before they record their certificates.

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

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

7.5. Computerised Bill to be submitted by the contractor

(1) The contractor shall submit his running and final bills in a computerised form in the same format as the existing conventional bills, with all the pages machine numbered, and hard bound, and with 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 the purpose 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 existing procedure.

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

7.6. Review of Measurement Books

(1) The Measurement Books are required to be reviewed by Divisional Accountant under the supervision of Executive Engineer (E). The Sub-Divisional Engineer(E)s are required to submit the Measurement Books in use in the Sub-Divisions to the Divisional Office, from time to time, so that at least once a year the entries recorded in each of the Books are subjected to a percentage check. The Divisional Officer should ensure that this annual review is conducted regularly and positively 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 or disfigured, 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 regarding writing of Measurement Books, recording of measurements, and their test check are being followed properly.

(3) On receipt of the Measurement Books in the Divisional Office, the Executive Engineer(E) should indicate 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 result of 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's ledger, 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 test audited:

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		Divisional Accountant	Divisional Officer
1	2	3	4	5	6

(6) The Measurement Book completed and returned for record during the year should also be similarly examined 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 concerned responsible for the loss should also be made promptly to the Chief Engineer, who is empowered to sanction the write off of the lost Measurement Books. In case of theft or loss of a blank Measurement Book, the Superintending Engineer shall be the competent authority to write off the 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 reconstructed at 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.

SPECIFICATIONS FOR MAINTENANCE OF UPS AND BACKUP BATTERY

Part 1: Scope of Maintenance:

1. Ensuring that UPS, backup battery, controls as well as connecting cables constituting the UPS system are maintained in healthy & clean conditions
2. Monitoring and ensuring that UPS and Batteries are maintained within limits.
3. To perform maintenance tasks as per schedule given in part III.
4. To ensure continuous UPS supply and in case of break down take steps to ensure restoration at the earliest.
5. In addition to breakdown maintenance as in Schedule of Quantities, the following Tasks shall also to be performed.

Part II – Tasks To Be Performed Within First 15 days.

1. Carry out general inspection with a view to identify short coming if any in the UPSs and battery bank installation.
 2. Check all the switches & meters for proper operation.
- All results of above inspection to be recorded and brought to the notice of Engineer- in –charge specially highlighting short comings for necessary action.

Part III – Maintenance schedule to be followed.

Quarterly

1. Check the output & input voltages are within limits.
2. Ensure that the installation is in clean and healthy working condition.
3. Check for any abnormal heating /smell.
4. Check for any abnormal noise.
5. Check for cleanliness of terminal.
6. Check water level of battery and top up the same, in all the UPS s to ensure proper levels
7. Check the operating condition of switches, transformer, semiconductor switching circuit, PCB, relays etc.
8. Cleaning of battery terminal and applying petroleum jelly, tighten the terminal, replace the damaged crimping etc
9. Checking the charging circuit and ensure all batteries are charging properly.

Half Yearly

1. Check that Hi /Low cut off circuit is functioning well
2. Testing battery voltage, specific gravity of electrolyte and top up if necessary .
3. Earthing system check.
4. Checking of the connection for tightness and cleanliness
5. Check all the Electrical connections for proper tightness

Yearly

Meggering for in all the equipment up to standard value

Testing

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

Notes

1. The service personnel shall check respective item on every visit. This shall be 100% test checked by JTO (E)/ SDE (E) once in Monthly, Half Yearly & Yearly checks shall be performed directly under the supervision of JTO (E)/SDE (E) and monthly report on the same duly countersigned by SDE (E) shall be sent to the EE (E) before 10th of next month.

Part-IV : Material

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

1 Replacement of battery

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

A. GENERAL SPECIFICATIONS and CONDITIONS OF CONTRACT

1.0 Scope of Maintenance

1.1 Attending Break down maintenance calls reported upon to the agency and periodical preventive maintenance as per the specification for maintenance of UPS and Backup given above.

1.2 After the contract period is over the installation has to be duly handed over to the new agency along with the record of test results of equipments & associated items like Battery etc., under supervision of SDE (E)/JTO (E) in charge. However installation is to be taken over by the new agency for O & M within 15 days of award of work.

2.0 METHODOLOGY

2.1 It is presumed that contractor will provide minimum qualified staff at the site, which will be adequate to perform break down and routine maintenance. In case of faults beyond the capacity of the staff provided as above, contractor shall immediately provide extra-specialized work force so as to attend to the fault in minimum reasonable time without any extra cost.

2.2 At the start of work, firm shall prepare an inventory of all Electro-Mechanical services jointly with J.T.O (E), concerned.

2.3 Any defects, shortcoming brought to the notice of the department while taking over AMC within the first 15 days from the date of start of contract, shall be the responsibility of the department, except the activities which are part of preventive maintenance and are required periodically. Such activities shall be undertaken by the firm.

2.4 In case of change of contract from one agency to other the defects listed during joint inspection shall be rectified by the old agency within 15 days from the date of preparation of defect list. If the agency fails to rectify the same within these 15 days, the same shall be got rectified at the risk & cost of the old agency without further notice. In such case, the department shall take necessary action for rectification of defects within next 15 days.

2.5 Firm shall maintain maintenance cards as per Clause 9.00 below

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

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

2.8 All materials shall be of approved make, model and capacity and shall be matching to the system. Invoice shall be produced in case of all major items etc. as a proof of genuine spares. Obsolete items not available in market can be repaired and re used.

3.0 TOOLS & PLANTS:

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

4.0 COMMERCIAL.

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

4.2 Payment shall be made on quarterly basis after completion of maintenance period and on submission of bill in printed letter head together with requisite certificate and documents as per **annexure - I**

4.3 The rates quoted must be full & final. Nothing extra is payable other than the quoted rates. Clause 10-CC shall not be applicable for this account. Accordingly, this clause stands deleted from PWD-8 form.

4.4 All taxes including service tax, levies, duties, insurance, Octroi and transportation etc. in respect of this contract are payable by the contractor and BSNL will not entertain any claim in respect of the same. No concessional form shall be issued.

4.5 BSNL shall deduct statutory taxes and duties like income tax, service tax/works contract tax etc. from payments due to the firm as per rules of the State/Central Govt. The Accounts Officer of the concerned Division shall issue certificates for such deductions to the firm.

5.0 DAMAGES TO BSNL INSTALLATION:

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

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

6.0 CURRENCY OF CONTRACT:

6.1 The currency of contract shall be 12 months. The Department reserves the right to terminate the contract by giving show cause notice of one-month duration at any time during the currency of the contract.

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

7.0 TERMINATION OF CONTRACT:

7.1 Right is reserved by BSNL for terminating the contract due to serious default. This includes major break down or accident or loss due to negligence on the part of firm, failure to attend breakdown, disobedience and abandoning the site etc. In such a case, 10% Performance Guarantee shall be forfeited to BSNL. The decision of Executive Engineer (E) in this regard shall be final and binding.

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

8 . PENALTIES FOR DEFICIENCY IN SERVICE:

SL NO	SERVICE	SERVICE CONDITIONS	PENALTY FOR DEFICIENCY IN SERVICE
1	UPS supply	The Contractor shall maintain the UPS and battery and ensure uninterrupted output .In case of the UPS. If the contractor fails to attend the complaint within 8 hours , a penalty of Rs.500/- per system per day or part thereof, exceeding 8 hrs. Subject to the maximum of 3 days shall be levied. If the agency fails to attend the fault within 3 days the faulty unit shall be removed from the contract without further notice.	Rs. 500/- per day

Note:-

1. In case contractor fails to comply with preventive/ periodical maintenance schedules, penalty of **one month's bill amount per UPS** shall be imposed.
2. In case of a major accident/loss on account of negligence on the part of the contractor, the contract shall be terminated and 10% of the estimated cost shall be recovered. Decision of Executive Engineer (E) shall be final and binding on the contractor.
3. Notwithstanding the compensation clause described above, the department shall take necessary steps for repair etc. of faulty equipment at risk & cost of firm, beyond 7 days of continuing failure, without further notice. The decision of EE (E) shall be final in this regard.
4. If the performance is found to be unsatisfactory by the Officers during their site visits / test checks for any of the services, one month's bill for that service for that site shall be recovered.

9.00 Maintenance card:

A maintenance card in standard proforma (as shown below) showing the history of maintenance activities undertaken shall be displayed every equipment .

FRONT SIDE OF CARD

SITE:-

AMC FIRM:-

EQUIPMENT:-

FIRM'S PH NO:-

CAPACITY:-

JTO (E)'S PH NO:-

MAKE & SL NO:-

SDE(E)'S PH NO:-

DATE	TYPE OF MAINTENANCE DONE	SIGN OF Service personnel	SIGN OF EXGE/Bldg STAFF	REMARKS

BACK SIDE OF CARD

DATE	NATURE OF FAULT	REPORTED TO	SIGN OF Bldg In charge	ATTENDED ON	SIGN OF Service Personnel	SIGN OF XGE STAFF

10.0 Guarantee and Defect Liability

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

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

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

CERTIFICATE TO BE SUBMITTED ALONG WITH EACH BILL

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

Sl.No	ITEM/SERVICES	REASONS FOR NON OPERATION

SIGNATURE OF CONTRACTOR

Counter signed by:

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/ 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
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 / 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 /
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
45	UPS	Supra/ Servomax / Mitsubishi / ITL / Keeline / Numeric / Emerson / APC/ Schneider / GE / Gutor

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