

% SUB DIVISIONAL ENGINEER (E), BSNL Electrical Sub Division, Div-I, 2nd floor, BSNL Bhavan, Sangareddy.

NOTICE INVITING TENDER

NIT No: 02/BESD/SGD/ 2024-25

Dated: 06/09/2024

The Sub Divisional Engineer (E), BSNL Electrical Sub Division, Sangareddy, BSNL Bhavan, Sangareddy, invites on behalf of the Chairman, BSNL sealed item rate tenders for the following work:

Work	Name of work	Estimated	EMD (Rs.)	Tender cost (Non-	Time for
No.	ivalle of work	Cost (Rs.)	EMD (RS.)	Refundable) (Rs.)	completion
01	Replacement of DG startup battery for DG set at GM Office, Sangareddy	19,200	384/-	177/-	One Month

Eligibility Conditions:

from contractors satisfying the following conditions

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

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

Contractor shall submit and confirm:

- 1) Valid "Chartered Accountant Certificate" and Registration Certificate with attested copies as applicable along with application on their printed letterheads for purchase of Tenders.
- 2) The tenderer shall submit the tenders in two sealed covers marked as cover 1st and 2nd. The first cover should contain earnest money deposited in the shape of Demand draft/ pay order of a Scheduled Bank or Nationalized Bank / State Bank guaranteed by Reserve Bank of India drawn in favour of the **Accounts officer (cash)**, **BSNL**, **Sangareddy** and the 2nd cover should contain the tender document. In case the first cover is not annexed or earnest money is not in proper form, the 2nd cover containing tenders will not be opened at all.
- 3) The firm who quotes on the tender downloaded from website shall strictly follow the following procedure: The tenderer shall submit the tenders in two sealed covers marked as cover 1st and 2nd.
- 4) The first cover should contain the following
 - a) Earnest Money Deposit (EMD) in the shape of Demand draft/ pay order of a Scheduled Bank or Nationalized Bank / State Bank guaranteed by Reserve Bank of India or Bank Guarantee bond drawn in favour of the **Accounts officer (cash)**, **BSNL**, **Sangareddy**.
 - b) Cost of the tender documents in the shape of DD.
 - c) The Credentials of tenderer self attested and certified by any BSNL Executive. If not certified by BSNL Executive, then original documents shall be produced at the time of opening.
- 5) The Second cover should contain duly filled tender document.

 The first envelop containing tender fee, attested document proving fulfilment of eligibility criteria containing and EMD in proper form shall be opened first.
- 6) The second envelope shall not be opened in case
 - a) Tender fee is not submitted in proper form
 - b) EMD is not in proper form

- c) Firm fails to fulfill eligibility criteria on the basis of document submitted in the first envelope.
- 7) If any difference/ discrepancies found between downloaded tender form, any hard copy issued from division office, the contents in Draft NIT issued from SDE(E)'s office will be final and binding.
- 8) Tenders received by post/courier shall not be entertained.

Conditions and tender forms can be downloaded up to 3.00PM on or before 18/09/2024 on payment of Rs. 177/-(inclusive of all Taxes, Non-refundable) by cash/ DD to AO (cash), BSNL, Sangareddy.

The tender will be received up to 3 PM on Dt: 18/09/2024 and opened at 3.30 PM on the same day. In case holiday is declared on the opening day, the tenders will be opened on the next working day.

Tender Documents can be downloaded from website Note: https://telangana.bsnl.co.in/tenders_active.php

Sub Divisional Engineer (E)

Lr. No: NIT 02/BESD/SGD/2024-25/20

Dated: 06 /09/2024

- 1) The Executive Engineer (E), BSNL, Electrical Division No.I, Hyderabad.
- 2) SDE (E) Electrical Sub Division IV/Sangareddy/ Nizamabad/ Nlg/ KHM/ II/ III
- 3) All Eligible Contractors.
- 4) SR SS/SDE (EP)/AO/Cashier/Auditor/Notice Board.

Sub Divisional Engineer (E) BSNL Electrical Sub Division, Mahabubnagar.

Dated: 06/09/2024 **DNIT No: 43/BEDH-I / 2024-25**

> SDE (E-P) BEDH-I

NIT No. 43/BESD/MBNR/2024-25

Name of Work: Replacement of DG startup battery for DG set at GM Office, Sangareddy

S	DESCRIPTION OF ITEM	QTY		RATE	UNIT	AMT
1	Supplying and fixing of 12V 150AH lead acid DG start up battery along with interconnections and testing of Dg set etc as reqd. (I/c buyback of old battery)	1	Jobs		Job	

,00		,000	-		
Total					
Add GST @18% on above total					
 Total	Sul				

NOTE:

The prices shall be quoted after taking into account the entire credit on inputs under GST act introduced with effect from 01-07-17. ii) The firm shall be responsible to see that input tax credit shown in the above columns are correct & Input tax credit for the amount shown above are admissible as per GST ACT Invoice favouring BSNL shall be issued by the supplier indicating GST (as applicable CGST/ ii) SGST/IGST) with documentary proof to avail input tax credit by BSNL as per the requirement of GST ACT. iv) The rates quoted shall be inclusive of all taxes and duties. v) The evaluation and comparison of responsive bids shall be done on the basis of Net cost to BSNL on the prices offered inclusive of packing, forwarding, freight and insurance charges but excluding input tax credit/ GST as indicated in the price schedule. Octroi/ Entry tax are not to be included in the composite price and hence the same will not be considered for the purpose of evaluation and comparison of responsive bids. However, Octroi will be paid extra, as per actual wherever applicable on production of proof of payment/relevant invoices/ documents. vi) Works contract tax will not be deducted at the source as it is subsumed in the GST. However any deduction of tax at source under GST is affected it will be done as per statutory instructions issued by Govt of India time to time. vii) If any levy/duty is not payable or documentary proof is not produced, the amount for the same shall be deducted. viii) The firm should quote for each item separately. They should not club the items while In case of ambiguity, between schedule and specifications, schedule shall prevail. If there is ix) ambiguity between "schedule and specification" verses IS/BS standards, "schedule and specification" shall prevail. The agency shall scrupulously follow the "Minimum Wages Act - 1948" and its amendments x) from time to time. xi) It shall be ensured by the agency that there are no complaints from the workers regarding short payment of wages.

CONTRACTOR

SUB DIVISIONAL ENGINEER (E)

IMPORTANTINSTRUCTIONSTOTHE 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. Tenderswithanyconditionincludingthatofconditionalrebatesshallberejected 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 prices hall be firm and fixed during the currency of the contract. No costes calation is permitted. Clause 10 CC 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) TAXESANDDUTIES

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.

Thecontractorshallkeepnecessarybooksofaccountsandotherdocumentsforthepurposeofthis 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.

<u>Note</u>: 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/DECREASEOFTENDEREDQUANTITY

- a) BSNL will have the right to increase or decrease up to 25% of the Contract value depending upon the requirement of goods and services specified in the schedule of items without any change in the unit price or other terms and conditions at the time of award of contract.
- b) In exceptional situation where the requirement is of an emergent nature and it is necessary to ensure continued supplies from the existing vendors, the purchaser reserves the right to place repeat orders up to 50% of the quantity of goods and services contained in the running tender/contract within a period of 12 months from date of award of work at the same rate or a rate negotiated (downwardly) with the existing vendors considering the reasonability of rates based on prevailing market conditions and the impact of reduction in duties and taxes etc.

10) CURTAILMENTOFQUANTITY:-

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) **COMPLETIONOFWORK**:-

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

12) **EXTENSIONOFTIME**:-

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) **COMPENSATIONFORDELAY:**

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

14) **PAYMENTTERMS:**-

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

a) 100% of the approved price of contract value on completion of work.

15) **EPFPROVISIONS:-**

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

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 BSNLEW-8 shall apply.

18. **I.S. Standards:**

The entire system shall conform to relevant Bureau of Indian Standards as amended upto date. Where IS standards are not available the British standard(s) shall be followed. In case of conflict, the requirements of these specifications shall be given over-riding priority. The electrical and earthing work shall be carried out as per CPWD specifications for electrical works (internal) and electrical works (external) as amended up to date.

19. **Modifications/Alterations.**

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

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.

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

20. Quality Assurance

21.

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.

22. 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.

23. 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.

24. <u>Indulging of contractor on criminal/ anti-social activities and cases under investigation/ charge sheeted by CBI or any other Government agencies Etc</u>

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-I
HYDERABAD

PROFORMAOF SCHEDULES

SCHEDULE'A'

Scheduleofquantities: Appended from page 5-8 SCHEDULE 'B' Scheduleof materials to be issued to the contractor.

Sr. No.	Description of item	Quantity	Rates in figures and words atwhichthematerialwillbe charged to the contractor	PlaceofIssue
1	2	3	4	5
NIL				

SCHEDULE'C'

Toolsand plantsto behiredtothe contractor

Sr.No.	Descriptionofitem	Hirechargesper day	PlaceofIssue	
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 page12 SCHEDULE 'E'
Schedule of component of Cement, Steel, other materials, Labour etc. for price escalation.

CLAUSE10CC

Component of Cement expressed as per cent of total value of work	Xc	%	
Component of Steel expressed as	Xs	%	
Percent of total value of work			
Component of civil(except cement	Xm	%	\ NotApplicable
And steel)/Electrical construction			
Materials expressed as percent of			
total value of work			
Component of Labour expressed as	Y	%	
Percent of total value of work			

SCHEDULE'F' Reference to General Conditions of contract.	
Name of work:	Replacement of DG startup battery for DG set at GM Office, Sangareddy.
Estimated cost of work:	Rs. 19,200/-
i)Earnest money:	Rs. 384/-

ii) Performance Guarantee:	5%oftendered value of work.
iii) Security Deposit:	5%ofthetenderedvalue 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	BSNLEW-8asmodifiedandcorrected up to date.
 Clause1 i) Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance, in days. ii) Maximum allowable extension beyond 	15Days(As per Tender)
The period provided in I) above in days	
Clause2 Authority for fixing compensation under	Superintending Engineer (E), BSNL Electrical Zone, Hyderabad.

Clau	se2.			
Clause5 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:-		10d	ays	
		Table	of M	ile Stone(s)
Sl. No.	Description of Milestone (Physical)	Time allowed In days(from date of start)	In days(from milestone	
2			Not	Applicable
	<u> </u>		C	OR .
Sl. No.	Financial Progress	Time allowed(fro	om	Amount to be with-held in case of non-achievement of milestone
1	1/8 th (of whole	1/8 th (of whole		
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)		Not Applicable
4	Full	Full		
Time	e allowed for execution	n of work.		One Months
	nority to give fair and none for completion of v		ion	EE(E), SE(E)
Clause7 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.		NOTAPPLICABLE		
Clause11 Specifications to be followed for execution of work(separately fo reach component of work)			Specifications as appended with Schedule of work.	
12.2	Clause12 12.2&12.3DeviationLimitbeyondwhich clauses 12.2 and 12.3 shall apply			50%
12.5 DeviationLimitbeyond which clauses 12.2 and 12.3 shall apply for foundation work			NOTAPPLICABLE	

Clause16 Competent Authority for deciding reduced rates.	Superintending Engineer(E),BSNL Electrical Zone, Hyderabad.
Clause30(i) Minimum Qualifications and experience required for Principal Technical Representative.	
a) For works with estimated cost put to tender more than Rs.5Lakhs 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

MODELFORMOFBANKGUARANTEE

(BankGuaranteebondforEMDforAirConditioning,DieselEngineAlternator,Liftsand Substation works, Wherever the amount of EMD is more than Rs.20,000/=)

Whereas (herein after called" the contractor(s)") has submitted its Tenderd at ed for the work
KNOW ALL MEN by these presents that WEOF 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

$\underline{UNDERTAKINGSTOBEFURNISHEDBYTHETENDERER}$

NONEARRELATIVEWORKINGCERTIFICATE

I	Son/
Certi in B! that	Ify that none of my relative(s) as defined in the tender document is/ are employed SNL unit as per details given in tender document. In case at any stage, it is found the information given by me is false / incorrect, BSNL shall have the absolute 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	l of the firm) (Signature of Bidder)
	UNDERTAKING REGARDING EPF PROVISIONS
"I	Son of
	Resident of here by give an ertaking that
Misc * I/ regist In ca BSN intin * Stril	We have employed onlypersons in our establishment and hence the EPF and cellaneous provisions Act, 1952 is not applicable to my/ our establishment. We have registered as per the EPF and Miscellaneous provisions Act, 1952and our ration no is We undertake to keep it valid during the currency of contract. ase at any stage, it is found that the information given by me is false / incorrect, L shall have the absolute right to take any action as deemed fit/without any prior nation to me". ke out which ever is not applicable trach a self-attested photocopy of the above said EPF registration certificate.

(Seal of the firm)

(Signature of Bidder)

<u>UNDERTAKING REGARDING ESI PROVISIONS</u>

"I	Sonof
Resident of	here by give an
Ondertaking that	
* I/ We have registered as per the ESI registration no is	48 is not applicable to my/our establishment. I and Miscellaneous provisions Act, 1948 and our ader take to keep it valid during the currency of contract. at the information given by me is false/ incorrect, to take any action as deemed fit/without any prior by of the above said ESI registration certificate.
(Seal of the firm)	(Signature of Bidder)
UNDER	RTAKINGTOABIDEBYEW6&EW 8
"I	
of	dent of
complete bid document and I am	hereby give an undertaking that I have read the aware of all the clauses and sub clauses of BSNL EW will abide by all the terms and conditions available in 8 forms.
(Seal of the firm)	(Signature of Bidder)

COMPLIANCESHEET

I/We(N	ame 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 G	eneral, Commercial, Technical
and Operating financial conditions of the tender de	ocument for the <mark>work</mark>
"Replacement of DG startup battery for DG se	et at GM Office, Sangareddy."
without any reservation and deviation.	
(Seal of the firm) (D	ated Signature of Contractor)
	,

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

Declaration by Contractor

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

This is to certify that:

- 1) I / We have submitted the tenders in the proformas downloaded directly from the web sites which are same as available in the website 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.
- 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	(CONTRACTOR)	
(SIGNWITHSEAL)		

COMPUTERISEDMEASUREMENTBOOK

CLAUSE6A

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 overwriting 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 thebill based on these measurements, dulybound, 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 contractorshall, without extra charge, provide all assistance witheveryappliance, labour and other things necessary for checking of measurements/levels by the Engineer-in-Chargeor 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 inthe 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. AspertheCPWDWorksManual2014

Computerised Measurement Books(CMB's) and Bills to be submitted by the contractor 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 beofA-4size. 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.

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 Enginee r(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.

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 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 contractorshallsubmitasmanycopiesofComputerisedMeasurementBooksasmaybe required, and as are specified in the NIT/contract, for the purpose of reference and record in the various offices of the department.

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 hardbound, 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.

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) is 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) Thereviewbythe Divisional Accountants hall 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	Dated initials of	
	Pages	Dated initials	noticed	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.

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) SuchlossesforwriteoffshouldbereportedintheproformaasatAppendix 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.

TECHNICAL SPECIFICATIONS

- 1. The work shall be carried out as per current CPWD specifications for Electrical works as amended from time to time and Indian Electricity Rules as amended up to date.
- 2. The work shall be supervised by a qualified technical staff.
- 3. LayoutoftheworkwillbegivenbytheEngineerinchargeorhisdutyauthorized representative at the site of work.
- 4. Following categories of wiring shall be done on separate conduits.
 - a) Power plug
 - b) Light and fan wiring
 - c) Emergency light point wiring
 - d) Telephone wiring
 - e) AC unit wiring.
- 5. The No. of power plug points and emergency light point (fed from DC supply) shall not exceed 2 per circuit.
- 6. Earthing sets work shall be carried out in the presence of the Engineer-in-charge or his authorized representative.
- 7. Samples of all the materials, fittings accessories switch gears etc., shall be approved from the Engineer-in-charge before using the same on the work. Rejected material shall be removed immediately form the site of work.
- 8. The contractor will have to carry out the following test at his cost and intimate test results before final bills are paid. Nothing extra will be paid to him on this account.
 - 1) Earth test
 - 2) Polarity test
 - 3) Insulation test
 - 4) Earth continuity test of the surface recessed conduit pipes.
- 9. Any damages done to the building by the contractor during the executing of the work shall have to be made good at his cost and risk. If it is not done within a reasonable time determined by the Executive Engineer (E) then the same will be got done at his cost departmentally after giving notice to him.
- 10. The outlet boxes, IC boxes for switch gears and ends of conduit etc., for different categories of conduit runs catering for different types of electrical wiring as mentioned inclauseaboveshallbepaintedinside/outsidewithdifferentcolourssatisfyingdifferent categories mentioned so as to avoid mixing of various circuits and their wiring and nothing extra will be paid for this.
- 11. At the time of laying conduit pipes in the slab and in recess the contractor will keep wire of 15 SWG GI throughout the conduit pipe and will have to take special care so that the conduit does not pass through air conditioning ducts, grills columns, beams etc. If any such necessity is foreseen special written permission of Executive Engineer (Electrical) should be obtained before such work is carried out. In case of failure the contractor will not be paid on this account. The contractor should recess the conduit in the walls before they are plastered and co-ordination with the progress of building work. Any damages thus done will have to be made good at the cost of the contractor. The conduit pipes should be mechanically and electrically continuous.

- 12. The bakelite covers for the switches; plug sockets etc., shall not be removed or broken for taking connections which shall be done at their back by providing suitable wooden reaper in the IC boxes where found necessary. All wooden boxes for switches, plug, regulator etc., shall be provided with 1/8" thick bakelite sheet covers.
- 13. The runs of various circuits wiring at various places shall be kept minimum by taking the runs on walls where cross of columns is not necessary. This has to be decided before casting of slab so that unnecessary length of conduit is not laid there in.
- 14. All the IC distribution sub-main board and corresponding switch near shall be sign- written clearly indicating the No. of distribution boards, type of load it is serving and the number of circuits contained in the distribution box. Details of the routes led from a particular distribution box shall be placed in tabular from on the reverse of the cover of the distribution box.
- 15. Underground cables both of 11KV and 1.1 KV grade should be subjected to pressure of insulation tests before and after laying the same in the ducts. In case of unsatisfactory tests, the cost of all repairs and replacement and all extra works of removal and relaying will have to be made good by the contractor at his own risk.
- 16. While making the end connections of wires, no strand shall be cut and the termination of wires shall be done with necessary lugs and ferrules without any extra payment.
- 17. Thebusbarsofthesingle-phasedistributionboxshallbeofsolidaluminiumstrip instead of sheet metal.
- 18. Lugs should be provided while terminating 8 SWG GI wire fro earth continuity without any extra payment.
- 19. The termination of conduit etc., in the junction box to be provided above DBs should be done by making proper holes knockouts instead of cutting the box.
- 20. The contractors will have to make arrangements to take the materials to site of work at his own cost and risk. Octroi, if paid by the contractor for the materials supplied by the Department can be claimed by his against the original vouchers.
- 21. If any conduits were laid before award of this work the recovery for the same will be made from the contractor at rates specified in the SR 94 (internal) plus abatement of tender.
- 22. The contractor shall submit the completion plan as required vide general specifications for electrical works. Part-I (internal) & part II (external) as applicable within 30days the completion of the work. In case of contractor fails to submit the completion plan as aforesaid he shall be liable to pay sum equivalent to 2.5% of the value of the work subject to a ceiling of Rs. 2500/- as may be fixed by the S.E. (E).

Sd/-Executive Engineer(E)

LISTOFAPPROVEDMAKES-BSNLELECTRICAL WING

S.No.	Item	Makes
1	Engine	AshokLeyland/Cummins/Caterpillar/KOEL/VolvoPenta/Mahindra&Mahindra(upto40KVA)/Escorts(upto30 KVA)/Eicher (up to 20 KVA)
2	Alternator(Brushless)	CromptonGreaves(AL.series)/KEC/LeroySomer/ Stamford/Jyoti Ltd
3	Battery(LeadAcid/Mntc. Free)	AmaraRaja/AMCO/Farukawa/Hitachi/Exide/Prestolite/Standard
4	HVSwitchgear(Vacuum Circuit Breaker/SF6)	BieccoLawrie/Crompton/Kirloskar/MEI/JyotiLtd
5	Transformer(Oilfilled/Dry type)	ABB/SchneiderElectric/AndrewYule/BharatBijlee/ Crompton / EMCO / Kirloskar / Siemens
	a)Above400 KVA	
	b)Upto 400KVA	In addition to above makes, Uttam/Automatic Electric Gear(AEG)/Patson/RajasthanTransformerandSwitchgear
6	AirCircuitBreaker	L&T/SchneiderElectric/Siemens
7	MCCB(Ics=Icu)	L&T/SchneiderElectric/Siemens
8	SDFunits	L&T/SchneiderElectric/Siemens/HPL/Havells
9	PowerContactors	L&T/SchneiderElectric/Siemens/Lakshmi(LECS)
10	ChangeOver Switch	HPL/Havells /H-HElcon
11	IntelligentAPFCRelay	L&T/EPCOS(Siemens)/SchneiderElectric/NeptuneDucati/Syntron/ABB
12	Bus Bar Trunking / SandwichedBusDuct	Moeller/L&T/SchneiderElectric/ABB/Legrand/Zeta
13	PowerCapacitors(MPP/APP)	L&T/EPCOS(Siemens)/ABB/Crompton/Schneider Electric/Neptune Ducati
14	Digital/KWHrmeter	SchneiderElectric/AE/Digitron/IMP/Meco/Rishabh/ Universal/HPL/L&T/ABB
15	ColdshrinkHT/LTCableJoint	Denson/3M(M-Seal)/Raychem
16	RubberMatting	ISImark
17	MCB/lsolator/ELCB/RCCB/ Distribution Board	Crompton /Havells / Indokopp / MDS Legrand/ L&T / SchneiderElectric/Siemens/Standard/C&S/ABB/HPL
18	MS/PVCConduit	ISImark
19	CableTray	MEM/Bharti/Ratan/Slotco/Profab
20	HT/LT Cables	ISImark
21	PVC insulated copper conductor wire	ISImark
22	CentrifugalPump	Amrut/BE/Beacon/Batliboi/Crompton/Jyoti/Kirloskar
23	SubmersiblePump	Crompton/Amrut/BE/Calama/Kirloskar/KSB

24	Motors	ABB/BharatBijlee/CromptonGreaves/SchneiderElectric/ HBB / KEC /Siemens/Jyoti Ltd	
25	FreshAirFans	GE/Khaitan/Almonard/Crompton	
26	Starter	ABB/BCH/SchneiderElectric/L&T/ Siemens	
27	SinglePhasePreventer	L&T/Minilec/Siemens/Zerotrip	
28	GI/MSPipe	ATC/ATL/BST/GSI/ITC/ITS/IIA/JST/Jindal/TTA/ Tata/Zenith	
29	Foot Valve	ISImark	
30	GateValve	Advance/Audco/JohnsonControls/Zoloto/Annapurna/ Fountain / Kirloskar / Leader / Sant / Trishul	
31	Compressors	Carrier/Emersoncopeland/York/Danfoss(forchillersonly)	
32	ResinBondedGlasswool	FibreGlass/Pilkingston/UPTwiga	
33	ExpandedPolystyrene	BASF(India)Ltd.	
34	Gauge	Feibig/H.Guru/ Pricol	
35	Controls	FLICA/Honeywell/Indfoss/Penn-Danfoss/Ranco/ Ranutrol / Sporland	
36	Fine Filters	AnfiltraEffluent/ARW/Athlete/Airtake/Dyna/	
37	GISheet	HSUJindal/National/NipponDenro/Sail/Tata	
38	HeatDetector	Appollo/Chemtron/Edward/Fenwal/Hochiki/Nitton /SystemSensor/Wormald/HoneywellEssar/Notifier	
39	IonizationDetector	Appollo/Cerebrus/Edward//Fenwal/Hochiki/Nitton/	
40	PhotoElectricSmoke Detector	Appollo/Cerebrus/Edward/Fenwal/Hochiki/Nitton/Wormald	
41	FirePanel(Microprocessor based)	AgniInstruments/AgniDevices/ArunaAgencies/Carmel Sensor / Ravel Elect./Honeywell Essar/Notifier/Navin Systems	
42	Sprinkler/HoseReel&Hose	ISImark	
43	FireExtinguisher	ISImark	
44	Lift	OTIS,Kone,Mitsubishi,Schindler,Johnson	

NOTE:

- $1. \quad In case of External/PMC works, the list of approved makes may be modified as per client's requirement.$
- 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 equipment's are also acceptable in addition.

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3. AnyadditionalmakesmaybeapprovedbyconcernedPCEs/SrCEs/CEs(Elect)fortheworkunder jurisdiction as already accorded vide letter no. 3-2-5/EW/VEP-1/2007 dated 05-07-2007.

ANNEXURE

LISTOFINDIAN STANDARDS

I.S.277 Galvanized steel sheets.

I.S.325 ThreePhaseInductionMotors I.S.655 Metal Air Ducts

I.S.732 CodeofPracticeforElectricalWiringandfittingsforBuildings. I.S.778 Gun Metal Gate, Globe and Check Valves for general purposes.

I.S.900 CodeofPracticeforInstallationandMaintenanceofInductionMotors. I.S.996Single Phase small AC and Universal Motors.

I.S.1239MildSteelTubes,G.I.Pipes,Tubularandotherwroughtsteelfittings.

I.S.1248Direct Acting Electrical Indicating Instruments.

I.S. 1520 Horizontal Centrifugal Pumps for clear, cold and freshwater.

I.S.1554PVC Insulated (heavy duty) Electrical

Cables (Part-

I)forworkingvoltagesuptoandincluding110volts.

I.S.2372Timber for cooling towers.

I.S.2516ACCircuitBreakers.

I.S. 2592 Recommendation for Methods of Measurements of Fluid flow by the following the following

means of Orifice Plates and Nozzles.

I.S. 1822 Motor Starters of Voltage not exceeding 1000 volts.

I.S.2208HRC Cartridge Fuse – Links upto 650 volts.

I.S.3589Electricallyweldedsteelpipesforwater,gasandsewage.

I.S.3624Bourden Tube Pressure and Vacuum Gauges.

I.S.4047HeavyDutyairbreakswitchesandcompositeunitsofairbreak

Switches and fuses for voltage not exceeding 1000 volts.

I.S.6392SteelPipeFlanges.

I.S. 7403 Code of Practice for Selection of Standard Worm and Helical Gear and General Control of Control of

Boxes.

I.S.8148Specificationforpackagedairconditioning.

IMPORTANTNOTE

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

ANNEXURE

LISTOFSAFETYSTANDARDS

 $I.S. 618 Code of Practice for safety and health requirements in Electrical and \ Gas$

Welding and Cutting Operations.

I.S.659 SafetycodeforAir Conditioning.

I.S.660 SafetycodeforMechanicalRefrigeration.

I.S.3016CodeofPracticeforFireprecautionsinweldingandcuttingoperations.

I.S.3210Code for Safety procedures and practices in Electrical works.

I.S. 3696 Safety for Scaffolds and Ladders.

INDIANELECTRICITYRULES1956

<u>Note:</u>-Tenderdocuments&BSNLEW-8Generalconditionsofcontractworkforelectrical works can also be downloaded from the website http://www.telangana.bsnl.co.in/tenders_active.php