



**छत्तीसगढ़ स्टेट पावर डिस्ट्रीब्यूशन कम्पनी लिमिटेड**  
**CHHATTISGARH STATE POWER DISTRIBUTION COMPANY LIMITED**  
(छत्तीसगढ़ शासन का एक उपक्रम)(छत्तीसगढ़ राज्य विद्युत मण्डल की एक उत्तरवर्ती कम्पनी)

CIN - U40108CT2003SGC015822



Office of Executive Director (O&M) CSPDCL Raipur E-Mail-ceonm.raipur@cspc.co.in

No. 02-01 / WK-I / F.No.20 [Vol.16(A)] / 049

Raipur, Date **05 APR 2023**

To,

**The Executive Director / Chief Engineer** [ (R-City/R) / (R-Rural/R) / (D/R) / (B/R) / (RGH./R) / (J/R) / (A/R) / (RAJ./R) (Project) ]

C. S. P. D. C. L. Raipur (City) / Raipur (Rural) / Durg / Bilaspur / Raigarh / Jagdalpur / Ambikapur / Rajnandgaon Region.

**Sub: - Schedule of Rates for the year 2023-24.**

- Ref:-**
- 1.) T.O. Letter No. 02-01/Works/6011 Raipur, dated 14/11/2013.
  - 2.) T.O. Letter No. 02-01/Works/6408 Raipur, dated 19/12/2014.
  - 3.) T.O. Letter No. 02-01/Works/4808 Raipur, dated 08/12/2015.
  - 4.) T.O. Letter No. 02-01/Works/127 Raipur, dated 10/04/2017.
  - 5.) T.O. Letter No. 02-01/Works/132 Raipur, dated 10/04/2017.
  - 6.) T.O. Letter No. 02-01/Works/3829 Raipur, dated 24/09/2018.
  - 7.) T.O. Letter No. 02-01/Works/5684 Raipur, dated 28/01/2019.
  - 8.) T.O. Letter No. 02-01/Works/005 Raipur, dated 01/04/2019.
  - 9.) T.O. Letter No. 02-01/Works/2037 Raipur, dated 23/08/2019.

—00—

The Schedule of Rates for the year 2023-24 has been finalized and soft copy of the same is uploaded in the URJAINET of Power Company in CSPDCL's main page inside the Schedule of Rates folder as " Schedule of Rates 2023-24 " which can be downloaded as per necessity.

In continuation to this Office circular no. 3829 date 24/09/2018, the rate of Incidental charges, on all the works which are carried out by CSPDCL or through Contractor, shall be levied @ 7.5%. In addition to the above, Overhead charges @12.5% (which includes market fluctuation factor, contractor's profit and GST etc.) is also to be added in estimate cost. However, the tender value of the work shall be based on Basic SoR estimate + 7.5% Incidental charges only.

All the estimates are to be strictly prepared in line with the guidelines issued from this office vide letter no. 5684 date 28.01.2019 naming - "revised methodology for estimate preparation w.e.f. date of issue". While preparing the estimates, rates of various materials may be referred as provided in the SoR 2023-24 folder under various sub-heads. Similarly, while preparing estimates for all the line shifting works undertaken by NHAI, State Govt. agencies and State PWD for all National Highway / Road development

projects, Supervision charges should be taken @ 2.5% as per circular no. 005 date 01/04/2019. Photocopies of referred letters are also attached herewith.

The other Important Instructions, which are part of Schedule of Rates for the year 2023-24, are enclosed herewith for your ready reference. It is requested to issue necessary instructions to all the officers up to the rank of JE under your jurisdiction to take necessary action as above.

The new Schedule of Rates 2023-24 is applicable with effect from 01.04.2023 to 31.03.2024.

Encl: - As above.

[Approved by M.D. (Distribution)]

  
**EXECUTIVE DIRECTOR (O&M)  
CSPDCL: RAIPUR**

Copy to:-

1. The Executive Director / Chief Engineer [(S&P) / Civil / (EITC) / (RA & PM) / (Vigilance) / {H.R.(Distn.)}] CSPDCL Raipur.
2. General Manager [F&A] CSPDCL Raipur.
3. The Superintending Engineer [ (O&M) / City ( I / II) / City ], CSPDCL Raipur / Durg / Mahasamund / Rajnandgaon / Bilaspur / Janjgir-Champa / Raigarh / Korba / Ambikapur / Jagdalpur / Kanker / Kawardha / Baloda-Bazar / Baikunthpur Circle.
4. The Executive Engineer (Project) CSPDCL Raipur / Baloda Bazar / Mahasamund / Durg / Rajnandgaon / Dantewada / Jagdalpur / Kanker / Bilaspur / Janjgir-Champa / Raigarh / Jashpur / Ambikapur / Baikunthpur Division.

---- for favour of kind information and necessary action please.

Encl: - As above.

  
**SUPERINTENDING ENGINEER (WORKS-I)  
O/o E.D. (O&M) C.S.P.D.C.L. RAIPUR**



# CHHATTISGARH STATE POWER DISTRIBUTION COMPANY LTD.

## SCHEDULES OF RATES FOR THE YEAR 2023-24

### IMPORTANT INSTRUCTIONS TO BE FOLLOWED WHILE PREPARING ESTIMATES

The schedule of rates have been prepared based on revision in the cost of materials, steel sections, civil work, labour & transportation charges etc., for applicability during the year 2023-24. Salient points relating to the schedule are briefly mentioned hereunder--

1. While preparing the estimates for any work, estimated quantity required as per field conditions must only be taken in the schedule.
2. While preparing estimates, all the relevant codes like C.G. State Electricity Supply Code, C.E.A. (Technical Standards for construction of electrical plants and electric lines 2010, CEA (Safety requirements for construction, operation and maintenance of electrical plants and electrical lines regulations 2011, C.E.A. (installation and operation of meters, regulations 2006) with all amendments etc. are strictly to be followed.
3. (i) Estimates for 33 kV Lines should normally be framed with 9.1 Mtr / 11 Mtr long, 280 Kg / 365 Kg PCC pole. Use of H- Beams is restricted only to limited works in urban areas or difficult terrain.  
(ii) Similarly estimates for 11 kV lines should normally be framed with 8 Mtr / 9 Mtr / 9.1 Mtr / 11 Mtr long PCC poles as per requirements. Use of H- Beams / R.S. Joist is restricted only to limited works in urban areas or difficult terrains.  
(iii) Items like Vacuum Circuit Breaker (VCB), Power Transformer and Distribution Transformer shall be procured by CSPDCL only for all schemes except for works to be executed by CSPDCL as per circular no. 02-01/Works/2037 date 23.08.2019.  
(iv) The materials like H-Beam, Wide Parallel Flange Beam (WPB) and ACSR/AAAC conductors are to be supplied by Chhattisgarh State Power Distribution Company Limited (CSPDCL), if available at Area Stores at the time of tender, for all turnkey works except for works to be executed by CSPDCL as per circular no. 02-01/Works/2037 date 23.08.2019.  
(v) For any new river / road crossing requiring line to be erected on tower, the same must be laid on Panther conductor.  
(vi) For any new 33 kV line crossing below Railway / Road track, 400 sq.mm. Underground XLPE cable is to be used. Similarly, for any new 11 kV line crossing below Railway / Road track, 240 sq.mm. Underground XLPE cable is to be used.

- (vii) Circular no. 6011 date 14.11.2013, No. 6408 date 19.12.2014, and guidelines issued vide this office letter No. (a) 4808 date 08.12.2005, (b) 127 Raipur, dated 10/04/2017; (c) 132 Raipur, dated 10/04/2017; (d) 3829 Raipur, dated 24/09/2018; (e) 5684 Raipur, dated 28/01/2019; (f) 005 Raipur, dated 01/04/2019; and (g) 2037 dated 23.08.2019 should be strictly followed.
- (viii) The order no. 02-11/IV-3/CTPT/3171 date 16.03.2016 issued by ED (HR) CSPDCL Raipur is to be strictly followed.
4. The earthing arrangement at 33/11 kV S/s should be made in accordance with the detailed guidelines circulated vide erstwhile MPEB's letter No. 08-01-STD-STATION EARTH-3574 Dtd. 21.05.1999.
5. The schedule of underground Railway / Road crossing on existing rail / road tracks (Sch.A-6) has been revised in the year 2016-17 and :-
- (i) It is instructed that for the works which are carried out by CSPDCL at its own cost, laying of cable should be done using H.D.D. Technique only.
- (ii) If Railway department applies for conversion of existing overhead line crossings to underground crossing for which work is to be carried out by themselves, then schedules may be prepared as per their request.
6. **The Energy Efficient I.S.I. Marked 11/0.4 kV Distribution Transformers (with or without Secondary Terminal Box, as the case may be) earlier marked as Level-2 have been renamed as Level-1.** The rates of these DTs have been indicated in Standard Stock Materials of SoR for year 2023-24.
7. The rate of concreting mix includes GST.
8. Use of RCC Blocks have been incorporated for lines to be laid on 140 kG, 8 Mtr. long PCC Pole and associated stay set.
9. Use of Covered conductor, which was earlier restricted to only in last span of HT consumers, is now available for 11 kV & 33 kV line extension purposes also.
10. The covered conductor of various ratings should be -- 11 kV / 33 kV-- AlMgSi Conductor with Triple extruded longitudinal water blocking layer, XLPE Insulation, Outer layer of UV – resistant XLPE. The same should be type tested as per relevant Standard from CPRI or equivalent lab.
11. It should be ensured that the enlisted materials used by Turnkey contractor must bear I.S.I. Mark or must confirm to other applicable standards.
12. The guarantee period of the materials provided by the Turnkey contractors should be as per purchase orders placed by ED/CE (S&P) CSPDCL for that particular material.
13. **Civil Works--**
- (i) The list of Civil items for Stage-I estimate / administration approval for Civil works are indicated in Civil wing rates.



- (ii) The assumptions made for preparing the standard schedules of lines include normal conditions of terrain and soil and do not apply to black cotton soil, for which simple base padding would not be adequate and concreting of the pole would be required. In case the geographical area is such that the line has to encounter river / railway crossing etc.; the same is to be supplemented separately in the main technical estimate.
14. The rates of items, which do not find place in the enclosed list of materials, should be ascertained from the latest stores inventory or from the market. A specific mention to this effect should be made in the estimate, whenever such rates are used.
15. In Job wise labour rates for maintenance works, Incidental charges and Overhead charges should not be included as the same already includes Overhead charges at the rate 20%.
16. The Standard schedules are applicable only for the schemes relating to ND Obligatory, Sub-transmission (Normal) and System Improvement works. For Deposit / Contributory works, While the cost of materials / Labour charges / Transport charges / Overhead charges etc. are to be taken as per the schedule, the Supervision charges / GST etc. be computed as per the various Relevant Circulars in force.
17. Regarding applicability of Supervision Charges and Overhead Charges, guidelines issued vide T.O. letter no. 0132 date 10.04.2017; Circular no. 0127 date 10.04.2017 and other instructions issued from time to time, shall be strictly followed, which are mentioned as under --
- (i) The supervision charges at the rate of 15% / 5% / 2.5%, as the case may be, shall be levied only in cases where the applicant carries out the work by himself through some contractor.
- (ii) No supervision charges shall be levied on works carried out by CSPDCL through its own system for release of new connection.
- (iii) The Overhead charges shall be levied at the rate 12.5%.
- (iv) CSPDCL shall recover Supply Affording charges along with 15% Supervision Charges but will not recover additional cost per meter (in case of New NSC as per order date 30.06.2016 of CSERC), where work has to be got executed on Supervision basis and complete work shall be executed by the applicant.
18. Estimation of work is to be made as per actual site requirement and provision for any other expenditure payable to Govt. e.g. taxes, forest clearance related charges, Bank guarantee and misc. charges levied by Railway department in case of Railway crossings etc. is to be made in the estimate.
19. All the Labour schedules have been thoroughly reviewed to make them more realistic, few new Labour schedules added too.

20. The Transportation charges have been reviewed and revised to be taken @ 4% on the material cost for all schedules except for schedule B-1, B-3 and B-8 where the transportation charges are to be taken @ 2% on the material cost. Accordingly, to facilitate ease in preparation of estimates, it is proposed that two rows may be inserted in the Schedule of Rates, for computation of Transportation rates, one for Power Transformer and another one for other materials in the schedules B-1, B-3 and B-8.
21. The cost of Labour charges for concreting of PCC Poles & H-Beam along with back filling of PCC Poles have been updated by applying CPI changes of 4.3%.
22. The rates of services used in various schedules of SoR have been updated by applying CPI changes of 4.3%
23. Use of R.S. Joist of 125x70 mm size have been stopped and replaced by PCC Pole of 200 kG, 9 Mtr. long size.
24. All the other instructions issued by competent authorities regarding preparation of estimate from time to time, which are not mentioned herein, must be strictly followed.
25. On the basis of above, it is proposed to maintain the ongoing SoR rates for preparation of current estimates and further proposed to initiate for new SoR w.e.f 01.04.2024.
26. It is directed to ensure strict compliance of the above guidelines / instructions while preparing the estimates.

  
**EXECUTIVE DIRECTOR (O&M)**  
**CSPDCL: RAIPUR**



CHHATTISGARH STATE POWER DISTRIBUTION COMPANY LTD.

No. 02-01/WK/

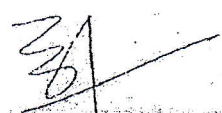
6011

Raipur, Date 14/11/2013

CIRCULAR

At present 9.3 Mtr. Long Steel structure is being widely used for LT and 11 kV Line extension in city areas with AB Cable.

Now, it has been decided to use 200 kg, 9 Mtr. Long PCC Pole in place of 9.3 Mtr. Long Steel structure in urban areas where AB cable is being strung. How ever concreting of PCC Poles will have to be done during erection.

  
CHIEF ENGINEER (O&M)  
C.S.P.D.C.L., RAIPUR

Copy to:-

1. The Executive Director / Chief Engineer [(R/R) / (D/R) / (B/R) / (J/R) / (R/N/R) / (A/R)], C.S.P.D.C.L. Raipur / Durg / Bilaspur / Jagdalpur / Rajnandgaon / Ambikapur Region.
2. The Chief Engineer [(S&P) / (ST-RE)] C.S.P.D.C.L. Raipur.
3. The Superintending Engineer [(O&M) / (City+H)] Circle, CSPDCL AMBIKAPUR.

  
ADDL. CHIEF ENGINEER (W)  
O/o C.E. (O&M) C.S.P.D.C.L. RAIPUR

(A Government of Chhattisgarh under Taking (A Successor Company of C.S.E.B.)

CIN UF0A08CTT2003SGC015822

Office of the Executive Director (O&M) CSPDCL, Email ID ceonm.raipur@cseb.gov.

NO. 02-01/Works/LT cable/

6408

Raipur, Dated

19/12/2014

To,

The Executive Director/Chief Engineer(..... Region)

CSPDCL, .....

Sub:- IS 14255 regarding specification of Aerial Bunched cables for working voltage upto and including 1100 Volts.

Please refer to IS 14255, a copy of which is enclosed herewith. As per Para6.4 of this code, "The size of street light conductor shall be 16 Sqmm". The provision in the estimate is to be made according to this IS code, where the work for street light is being proposed.

Encl:- As above.

  
**EXECUTIVE DIRECTOR (O&M)**  
**CSPDCL; RAIPUR**



IS 14255 : 1995

भारतीय मानक

वायवीय गुच्छित केबल — 1 100 वोल्ट तक और सहित की  
कार्यवारी वोल्टता के लिए — विशिष्टि

*Indian Standard*

**AERIAL BUNCHED CABLES — FOR WORKING  
VOLTAGES UP TO AND INCLUDING  
1 100 VOLTS — SPECIFICATION**

UDC 621-315-211 ( 621-315-616-96 ) : 621-396-67

© BIS 1995

**BUREAU OF INDIAN STANDARDS  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002**

April 1995

## FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Power Cables Sectional Committee had been approved by the Electrotechnical Division Council.

This standard specifies the requirement of Polyethylene/crosslinked polyethylene insulated cables with aluminium conductors twisted over a central bare/insulated aluminium alloy messenger wire for use as overhead distribution feeders for rated voltages up to and including 1100 V.

Many countries are now increasingly using cables with insulated conductor for LT overhead lines. This system is commonly called ABC system (Aerial Bunched Cables).

In the ABC system, the insulated conductors (3 or 4 numbers as required) are twisted around a high strength aluminium alloy bearer wire, which carries the main weight and also serves as the earth-cum-neutral wire. The bearer wire (messenger) may be bare or insulated. The phase conductors are not under tension.

The system is very safe and LT faults are practically eliminated. Consequently, interruptions of supply are minimized and the life of transformers is considerably increased as these are not subjected to frequent faults as happens with the bare conductors. The problem of tree clearance is also minimized.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (revised)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.



# Indian Standard

## AERIAL BUNCHED CABLES — FOR WORKING VOLTAGES UP TO AND INCLUDING 1 100 VOLTS — SPECIFICATION

### SECTION 1 GENERAL

#### 1 SCOPE

1.1 This standard covers the requirements of polyethylene/crosslinked polyethylene insulated cables with aluminium conductors, twisted over a central bare/insulated aluminium alloy messenger wire for use as overhead distribution feeders.

1.2 The cables covered in this standard are suitable for use on three phase ac (earthed or unearthed) system for rated voltage up to and including 1 100 V.

NOTE— The cables conforming to this standard may be operated continuously at a power frequency voltage 10 percent higher than the rated voltage.

1.3 The cables covered in this standard are suitable for use where the combination of ambient temperature and temperature rise due to load, including temperature on exposure to direct sunlight results in conductor temperature not exceeding the following:

Type of Insulation	Normal Continuous Operation	Short Circuit Operation
Polyethylene	70°C	160°C
Crosslinked polyethylene	90°C	250°C

#### 2 REFERENCES

2.1 The following Indian Standards are necessary adjuncts to this standard:

IS No.	Title
398 (Part 4): 1979	Aluminium conductors for overhead transmission purposes: Part 4 Aluminium alloy stranded conductors (aluminium-magnesium-silicon type) (second revision)
1885 (Part 32): 1993	Electrotechnical vocabulary: Part 32 Electric cables (first revision)
8130 : 1984	Conductors for insulated electric cables and flexible cords (first revision)
10418 : 1982	Drums for electric cables
10810 (series)	Methods of test for cables. (The relevant part numbers are given in col 4 of 10.1)

#### 3 TERMINOLOGY

3.0 For the purpose of this standard the following

definitions, in addition to those given in IS 1885 (Part 32) : 1993 shall apply.

#### 3.1 Routine Tests

Tests made by the manufacturers on all finished cable lengths to demonstrate the integrity of the cables.

#### 3.2 Type Test

Tests required to be made before supply on a general commercial basis on a type of cable in order to demonstrate satisfactory performance characteristics to meet the intended application.

NOTE— These tests are of such a nature that after they have been made, they need not be repeated unless changes are made in the cable materials or design which might change the performance characteristics.

#### 3.3 Acceptance Tests

Tests carried out on samples taken from a lot for the purpose of acceptance of the lot.

#### 3.4 Optional Tests

Special tests to be carried out, when required by agreement between the purchaser and the supplier.

#### 3.5 Earthed System

An electric system which fulfills any of the following conditions:

- a) The neutral point or mid point connection is earthed in such a manner that even under fault conditions, the maximum voltage that can occur between any conductor and earth does not exceed 80 percent of the nominal system voltage;
- b) The neutral point or mid point connection is not earthed but a protective device is installed which automatically cuts out any part of the system which accidentally becomes earthed; or
- c) In case of ac system only, the neutral point is earthed through an arc suppression coil with arrangement for isolation within 1 hour of occurrence of the fault provided that total of such periods in a year does not exceed 125 hours.

#### 3.6 Unearthed System

An electric system which does not fulfil the requirements of earthed system (see 3.5).

## SECTION 2 MATERIALS

## 4 CONDUCTOR

## 4.1 Phase/Street Lighting Conductor

The conductor shall be of H2 or H4 grade aluminium complying with the requirements of IS 8130 : 1984.

## 4.2 Messenger (Neutral Conductor or Otherwise)

The conductor shall be of heat treated aluminium-mag-

nesium-silicon alloy wires containing approximate 0.5 percent magnesium and approximately 0.5 percent silicon conforming to IS 398 (Part 4) : 1979.

## 5 INSULATION

5.1 The insulation shall be either of cross-linked polyethylene compound or of polyethylene compound, conforming to requirement given in Tables 1 and 2 respectively.

Table 1 Properties of XLPE Insulation

(Clause 5.1)

Sl No.	Tests	Requirements
(1)	(2)	(3)
i)	Tensile strength	12.5 N/mm <sup>2</sup> , <i>Min</i>
ii)	Elongation at break	200 percent, <i>Min</i>
iii)	Ageing in air oven:	
	a) Treatment : Temperature	135 ± 3°C
	Duration	7 days
iv)	b) Tensile strength variation	±25 percent, <i>Max</i>
	c) Elongation variation	±25 percent, <i>Max</i>
	Hot set:	
a)	Treatment : Temperature	200 ± 3°C
	Time under load	15 min
	Mechanical stress	20 N/cm <sup>2</sup>
b)	Elongation under load	175 percent, <i>Max</i>
	c) Permanent elongation (set) after cooling	15 percent, <i>Max</i>
v)	Shrinkage:	
	a) Treatment : Temperature	130 ± 3°C
b)	Duration	1 hour
	Shrinkage	4 percent, <i>Max</i>
vi)	Water absorption (Gravimetric):	
	a) Treatment : Temperature	85 ± 2°C
	Duration	14 days
b)	Water absorbed	1 mg/cm <sup>2</sup> , <i>Max</i>
	Volume resistivity:	
a)	at 27°C	1 × 10 <sup>11</sup> ohm-cm, <i>Min</i>
	at 70°C	1 × 10 <sup>11</sup> ohm-cm, <i>Min</i>
viii)	Carbon black:	
	a) Content	Under consideration
	b) Dispersion	



Table 2 Properties of PE Insulation  
(Clause 5.1)

SI No.	Property	Requirements
i)	Volume resistivity:	
	a) at 27°C	$1 \times 10^{14}$ ohm-cm, <i>Min</i>
	b) at 70°C	$1 \times 10^{12}$ ohm-cm, <i>Min</i>
ii)	Tensile strength	10 N/mm <sup>2</sup> , <i>Min</i>
iii)	Elongation at break	300 percent, <i>Min</i>
iv)	Melt flow index	3, <i>Max</i>
v)	Vicat softening point	85°C, <i>Min</i>
vi)	Carbon black:	
	a) Content	Under consideration
	b) Dispersion	Under consideration
vii)	Environmental stress cracking	No cracks shall be visible to naked eye

### SECTION 3 CONSTRUCTION

#### 6 CONDUCTOR

6.1 The power/outer insulated neutral/street lighting conductors shall conform to flexibility class 2 of IS 8130 : 1984.

6.2 The messenger (Neutral conductor) or otherwise shall be either stranded circular or compacted circular type and shall have minimum 7 strands. The surface of the conductor shall be smooth.

6.3 A protective barrier may be applied between the conductor and insulation, if required. Such barrier, when used, shall be compatible with insulating material and suitable for the operating temperature of the cable.

6.4 The size of street lighting conductor shall be 16 mm<sup>2</sup>.

6.5 The size of messenger conductor and its breaking load shall be as per Table 3.

6.6 There shall be no joints in any wire of the messenger conductor except those made in the base rod or wires before final drawing. The direction of outer layer of wires in messenger conductor shall be right hand.

#### 7 INSULATION

7.1 The conductor (with protective barrier, wherever applied) shall be provided with crosslinked polyethylene or polyethylene insulation applied by extrusion.

Table-3 Size and Requirements of Messenger Conductor  
(Clause 6.5)

SI No.	Nominal Cross Sectional Area of Phase Conductor	Messenger Conductor:		
		Nominal Cross Sectional Area	Maximum dc Resistance at 20°C	Minimum Breaking Load
	mm <sup>2</sup>	mm <sup>2</sup>	ohm/km	kN
(1)	(2)	(3)	(4)	(5)
i)	16	25	1.38	7.0
ii)	25	25	1.38	7.0
iii)	35	25	1.38	7.0
iv)	50	35	0.986	9.8
v)	70	50	0.689	14.0
vi)	95	70	0.492	19.7

**7.2 Thickness of Insulation**

The average thickness of insulation shall be not less than the nominal value ( $t_n$ ) specified in Table 4.

**Table 4. Thickness of Insulation**

Nominal Area of Conductor mm <sup>2</sup>	Nominal Thickness ( $t_n$ ) mm
(1)	(2)
16	1.2
25	1.2
35	1.2
50	1.5
70	1.5
95	1.5

**7.3 Tolerance on Thickness of Insulation**

The smallest of measured values of thickness of insulation shall not fall below the nominal value ( $t_n$ ) specified in Table 4 by more than  $0.1 \text{ mm} + 0.1 (t_n)$ .

**7.4 Application of Insulation**

The insulation shall be so applied that it fits closely on the conductor (or barrier, if any) and it shall be possible to remove it without damaging the conductor.

7.5 The colour of insulation shall be black.

**8 CORE IDENTIFICATION**

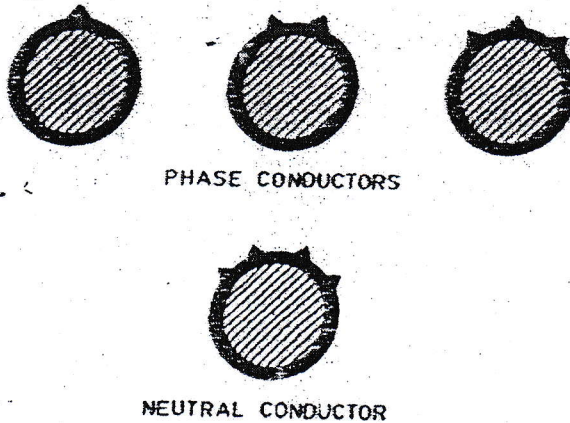
8.1 The phase conductors shall be provided with one, two or three 'ridges' and outer neutral insulated conductor, if provided, shall have four 'ridges' as shown in Fig. 1 for quick identification. The street lighting conductor and messenger conductor (if insulated) shall not have any identification mark.

8.2 Identification by other means, as agreed between the supplier and purchaser, is also permissible.

**9 ASSEMBLY (LAYING UP)**

9.1 Three insulated phase conductors, one insulated neutral conductor (if required) and a street lighting conductor (if required) shall be twisted around the bare (or insulated) as required messenger conductor without filters with a lay not exceeding 35 times the diameter of the insulated phase conductor.

9.2 The direction of lay shall be right hand.



**FIG. 1 CORE IDENTIFICATION**



**CHHATTISGARH STATE POWER DISTRIBUTION COMPANY LIMITED**  
**OFFICE OF THE EXECUTIVE DIRECTOR (O&M)**  
(A GOVT.OF CHHATTISGARH UNDERTAKING)  
(A SUCCESSOR COMPANY OF CSEB)

No./02-01/Work-I/ 15-60/ 4808

Raipur, Dated 08/12/2015

To,

The Executive Director/Chief Engineer(-----R)/ -----  
The Superintending Engineer -----  
The Executive Engineer -----  
C.S.P.D.C.L  
-----

**Sub :- Guidelines regarding use of Steel / PCC Supports.**

While Scrutiny of various works estimate it is noticed that uniformity in preparation of estimates of laying LT/11KV/33KV lines in respect of use of supports is not maintained and instructions issued by this office are not being followed. In many cases estimates under various schemes have been found prepared on steel supports of various types/sizes even in rural areas. Use of steel supports, if technically not required, results in to higher cost of estimates unnecessarily without adding any extra benefit. Our SOR has provision of H Beam, RSJ, various sizes of PCC Poles. While preparing estimates by field officers the type & sizes of supports needs to be considered based on various technical/safety requirements. It is clearly mentioned in the Para VII (a), (b) & (c) of preface of approved SOR 15-16 about the supports to be used in various types of LT/HT lines (Copy enclosed). Similarly instructions were issued by T.O. vide circular no. 6011 dt. 14.11.2013. It is there fore once again instructed to adhere to the guidelines mentioned in Para VII (a), (b) & (c) & Circular no. 6011 dt. 14.11.2013 while preparing the estimates. If it is necessary to use steel support instead of suitable size PCC Pole due to some technical/safety requirements, then it needs to be clearly mentioned in the history & scope of the estimate with proper reasons.

Any deviations from the instructions as mentioned above will be viewed seriously.

Encl: As above.

**EXECUTIVE DIRECTOR (O&M)**  
**CSPDCL, RAIPUR**

**Copy to :-**

1. The CE / SE / EE / (STRE) CSPDCL ..... for information & necessary action please.
2. The CE (EITC) CSPDCL, Raipur. It is requested to upload a copy on Urjainet, Public Document.

Mamta Eng.doc- 137 -

Regd Office Address Vidut Seva Bhawan, Daganiya Raipur-4920013 Phone No. 771-2574901  
Fax 0771-2574922 Website www.cspdcl.co.in

O/o CE (EITC)  
Receipt No. 1130010A  
Date 12 APR 2017  
DGM (IT) / SE (O)  
EE web  
Section .....

**CHHATTISGARH STATE POWER DISTRIBUTION COMPANY LTD.**

(A Government of Chhattisgarh Undertaking) (A Successor Company of CSEB)

CIN- U40108CT2003SGC015822

Office of Executive Director (O&M) CSPDCL Raipur

E-Mail-[ceom.raipur@cseb.gov.in](mailto:ceom.raipur@cseb.gov.in)

NO. 02-01/Works/ 127

Raipur, Dated 10/4/17

**CIRCULAR**

Sub:- Execution of line extension work under 15% supervision basis.

00-00

CSERC vide order no. 1135 dated 30.06.2016 has revised the charges for new service connection w.e.f. 01.07.2016 and made mandatory to recover from the consumers supply affording charges on per KW basis and cost of extension work on per meter basis. However, there was no mention regarding the works that would be carried out by the consumers (in case consumer intends to carry out work at its own) under 15% supervision basis.

In this regard, the CSERC has accorded following approval in a case referred to them:-

**“Supply Affording charges will be recovered along with 15% Supervision Charges but will not recover additional cost per meter, where work has to be got executed on Supervision basis and complete work shall be executed by the applicant.”**

Accordingly it is requested that where the consumer intends to execute line extension work by paying 15% supervision charges to CSPDCL, the above guidelines be followed.

**EXECUTIVE DIRECTOR(O&M)**

**CSPDCL;RAIPUR**

Copy to:

1. The ED/CE (...../R/ Project /Fin. /Tr.), CSPDCL, .....
2. SE (City/O&M), CSPDCL, .....
3. EE (City/O&M/Project), CSPDCL, .....
4. AE (Zone/Sub div.) CSPDCL, .....
5. JE (O&M) CSPDCL, .....

Note:- The CE (EITC) CSPDCL, Raipur is requested to upload the same on urjainet.



O/o CE (EITC)  
Receipt No. 120010A  
Date 17 APR 2017  
DGM (IT) / SE (O)  
EE. Wab  
Section .....

**CHHATTISGARH STATE POWER DISTRIBUTION COMPANY LTD.**

(A Government of Chhattisgarh Undertaking) (A Successor Company of CSEB)

CIN- U40108CT2003SGC015822

Office of Executive Director (O&M) CSPDCL Raipur

E-Mail-ceonm.raipur@cseb.gov.in

11/4

12/4

12/4

No. 02-01/Works/ 132

Raipur, Dated

10/04/2017

To,

ED/CE (...../R)

CSPDCL, .....

Sub:- Applicability of Supervision Charges and Overhead Charges.

In continuation to this office letter no. 6592 dtd 20.03.2017, the competent authority in reference to clause no. 4.9 & 4.29 of supply code of 2011 has approved that:-

1. The supervision charges @ 15% shall be levied only in cases where the consumer carries out the work by himself through some contractor.
2. No supervision charges shall be levied on works carried out by CSPDCL through its own system for release of New connection.
3. The Overhead charges shall be levied @ 12.5 %

The above revisions are made effective w.e.f. 01.04.2017. Accordingly, necessary modification in the estimates which have already been sanctioned during the current year 2017-18 may be made.

Further, the above guidelines be circulated to all your subordinate officers & ensure strict compliance.

  
**EXECUTIVE DIRECTOR (O&M)**  
**CSPDCL, RAIPUR**

Copy to:-

1. ED (Project) CSPDCL, Raipur
2. SE (City/O&M) circle CSPDCL, .....
3. EE (City/O&M) Dn. CSPDCL, .....

Note:- ~~The~~ CE (EITC) CSPDCL, Raipur is requested to upload the same on urjainet.

O/o. E.D. (EITC)  
CSPDCL Raipur  
Receipt No. 3058  
Date 24-SEP-2018  
AGM (IT)  
SE (D)  
EE W

**CHHATTISGARH STATE POWER DISTRIBUTION COMPANY LTD.**  
(Government of Chhattisgarh Undertaking)  
**OFFICE OF THE EXECUTIVE DIRECTOR (O&M)**  
CIN: U40108CT2003SGC015822  
Telephone: (0771) - 2574 901, Fax: (0771) - 2574 922  
Website: [www.cspdcl.co.in](http://www.cspdcl.co.in) e-mail: [ceonm.raipur@cspc.co.in](mailto:ceonm.raipur@cspc.co.in)



Section No. 02.01/Works/ 3829  
24/9

Raipur, Dated: 24-Sep-2018

**CIRCULAR**

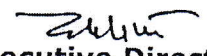
**Sub:** - Reduction in rate of Incidental Charges from 9% to 7.5%.

\*\*\*\*\*

With reference to the above cited subject, competent authority has approved that the Incidental Charges shall be levied @ 7.5% instead of present 9% on all the works which are carried out by CSPDCL or through contractor.

The above revisions are made effective w.e.f Date of issue of this circular. All new estimates and tenders are to be prepared accordingly.

Further, the above guidelines be circulated to all your subordinate officers & ensure strict compliance.

  
**Executive Director (O&M)**  
**CSPDCL, Raipur**

**Copy to:-**

1. The Director (O&M)/(C&RA), CSPDCL, Raipur.
2. The Executive Director/ Chief Engineer (F&A/ HR/ S&P/ Revenue/ Project/ RA&PM/ EITC/ Trg-R&D/ Vigilance/ Civil/ RR/ BR/ DR/ RajR/ AR/ JR), CSPDCL, Raipur/ Durg/ Ambikapur/ Jagdalpur/ Rajnandgaon/ Bilaspur.
3. The Superintending Engineer (City-I/II/MT/Civil/Store) Circle CSPDCL, \_\_\_\_\_.
4. The Executive Engineer (O&M/City/MT/STM/AMR/Proj/Civil) CSPDCL, \_\_\_\_\_.
5. The Staff Officer, O/o MD (CSPDCL), Raipur.
6. The Senior Accounts Officer/Assistant Manager (CAU)/ Raipur-I/ II/ Bilaspur/ Durg/ Jagdalpur/ Ambikapur/ Janjgir-Champa/ Rajnandgaon CSPDCL.

✓ **Note:** - The ED (EITC) CSPDCL, Raipur is requested to upload the same on Urjainet.



O/o CE (EITC)  
 Receipt No. CHH  
 Date 28 JAN 2019  
 DGM (W) DS  
 EE  
 Section .....

**CHHATTISGARH STATE POWER DISTRIBUTION COMPANY LTD.**  
 (Government of Chhattisgarh Undertaking)  
**OFFICE OF THE EXECUTIVE DIRECTOR (O&M)**  
 CIN: U40108CT2003SGC015822  
 Telephone: (0771) - 2574 901, Fax: (0771) - 2574 922  
 Website: www.cspdcl.co.in e-mail: ceonm.raipur@cspc.co.in

No. 02-01/Works/5684 Raipur, Dated: 28-Jan-2019

**CIRCULAR**

**Sub: - Revised methodology for Estimate Preparation w.e.f date of Issue.**

\*\*\*\*\*

In partial modification to the Circular No. 02-01/works/3999 Raipur dated 29/09/2018; the GST @ 18% shall be applicable on overhead charges presently being recovered from consumers/ Deposit work. The revised methodology for Estimate preparation is given below:

**(A) for estimates where work is to be carried out from company's own fund and all Govt. Schemes including NSC related work**

Particulars	Amount	Example
Material cost including GST as per SoR	A	118.00
Material cost excluding GST (A/1.18)	B	100.00
Centages @7.5% on (on cost of material A)	C	8.85
Labour Charges	D	20.00
Transportation Charges	E	5.00
Applicable Overhead charges % of (A+C+D+E) present rate 12.5%	F	18.98
<b>Total Estimated cost Excluding GST (B to F)</b>	<b>G</b>	<b>152.83</b>
Applicable CGST @ 9% on (G)	H	13.75
Applicable SGST @ 9% on (G)	I	13.75
<b>Total Estimated cost including GST (G+H+I)</b>	<b>J</b>	<b>180.34</b>

**(B) for estimate where the cost of work is deposited by Applicant**

Particulars	Amount	Example
Material cost including GST as per SoR	A	118.00
Material cost excluding GST (A/1.18)	B	100.00
Centages @7.5% on (on cost of material A)	C	8.85
Labour Charges	D	20.00
Transportation Charges	E	5.00
Applicable Overhead charges % of (A+C+D+E) present rate 12.5%	F	18.98
Supervision charges applicable if any as % of (A+D), assume 15% for calculation purpose	G	20.70
<b>Total Estimated cost Excluding GST (B to G)</b>	<b>H</b>	<b>173.53</b>
Applicable CGST @ 9% on (H)	I	15.62
Applicable SGST @ 9% on (H)	J	15.62
<b>Total Estimated cost to be deposited by Applicant including GST (H+I+J)</b>	<b>K</b>	<b>204.77</b>



(C) for estimate where the applicant will carry out the work through A class contractor after depositing Supervision charges and GST on Supervision Charges

Particulars	Amount	Example
Material cost including GST as per SoR	A	118.00
Material cost excluding GST (A/1.18)	B	100.00
Centages @7.5% on (on cost of material A)	C	8.85
Labour Charges	D	20.00
Transportation Charges	E	5.00
Applicable Overhead charges % of (A+C+D+E) present rate 12.5%	F	18.98
<b>Total Estimated cost Excluding Supervision Charges &amp; GST (B to F)</b>	<b>G</b>	<b>152.83</b>
Supervision charges applicable if any as % of (A+D), assume 15% for calculation purpose	H	20.70
Applicable CGST payable by applicant on supervision charge @ 9% on (H)	I	1.86
Applicable SGST payable by applicant on supervision charge @ 9% on (H)	J	1.86
<b>Total cost to be deposited by Applicant including GST (H+I+J)</b>	<b>K</b>	<b>24.43</b>

The above revisions are made effective from date of Issue of this circular. All new estimates are to be prepared accordingly. Further, Tenders shall continue to be issued as follows:

Particulars	Amount	Example	Remark
Material cost (excluding GST)	A	100.00	Initially Rs 118, after deloading GST 18% comes out to Rs 100
Centages @ 7.5% on A	B	7.50	
Labour ; assuming Rs 20	C	20.00	
Transport ; assuming Rs 5	D	5.00	
<b>Value of work for Tender (A+B+C+D)</b>	<b>E</b>	<b>132.50</b>	
Contractors Quote in % ; assuming 5% on (E)	F	6.63	
<b>Total Value of Awarded work (E+F)</b>	<b>G</b>	<b>139.13</b>	
CGST @ 09 % on G	H	12.52	
SGST @ 09 % on G	I	12.52	
<b>Total value of work including GST (G+H+I)</b>	<b>J</b>	<b>164.17</b>	

Further, the above guidelines be circulated to all your subordinate officers & ensure strict compliance.

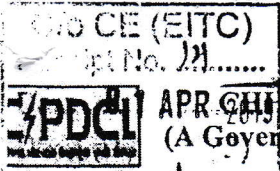
  
**Executive Director (O&M)**  
**CSPDCL, Raipur**

**Copy to:-**

1. The Director (O&M)/(C&RA), CSPDCL, Raipur.
2. The Executive Director/ Chief Engineer (F&A/ HR/ S&P/ Revenue/ Project/ RA&PM/ EITC/ Trg-R&D/ Vigilance/ Civil/ RR-City/RR-Rural/ BR/RigR/ DR/ RajR/ AR/ JR), CSPDCL, Raipur/ Durg/ Ambikapur/ Jagdalpur/ Rajnandgaon/ Bilaspur.
3. The Superintending Engineer (City-I/II/MT/Civil/Store) Circle CSPDCL, \_\_\_\_\_.
4. The Executive Engineer (O&M/City/MT/STM/AMR/Proj/Civil) CSPDCL, \_\_\_\_\_.
5. The Staff Officer, O/o MD (CSPDCL), Raipur.
6. The Senior Accounts Officer/Assistant Manager (CAU)/ Raipur-I/ II/ Bilaspur/ Durg/ Jagdalpur/ Ambikapur/ Janjgir-Champa/ Rajnandgaon CSPDCL.

**Note: - The CE (EITC) CSPDCL, Raipur is requested to upload the same on Urjainet.**





CHHATTISGARH STATE POWER DISTRIBUTION COMPANY LTD.  
(A Government of Chhattisgarh under Taking (A Successor Company of C.S.E.B.)  
CIN UF0A08CTT2003SGC015822

Office of the Executive Director (O&M) CSPDCL, Email ID ceonm.raipur@cseb.gov.in

No./02-01/Work-I/circular /05

Raipur, Dated 01/04/2019

**CIRCULAR**

The competent authority has accorded an approval for reduction in supervision charges from 15% (fifteen percent) to 2.50% (two & half percent) for all line shifting work being under taken by National Highway Authority of India, state Govt. agencies and state PWD for all National Highway / Road development projects. This will be made applicable from the date of issue of this circular.

An earlier circular No. 02-02/CE(RA&PM)/ACE-II/circular/HT/1242 Raipur dated. 31.07.2018 is hereby withdrawn with immediate effect.

*(J.S. Netam)*

**EXECUTIVE DIRECTOR (O&M)  
CSPDCL, RAIPUR**

Raipur, Dated 01/04/2019

No./02-01/Work-I/circular /06  
Copy Forwarded to:-

1. The Director (O&M)/(C&RA), CSPDCL, Raipur.
2. The Executive Director/Chief Engineer / General Manager (O&M)/ (Revenue) / (Project)/(RA&PM) /(S&P) /(EITC) /(Fin) /(Trg.R&D) /(Vigilance) /(Civil) /(RR/City/Rural) (DR) /(BR)/ (AR)/ (JR)/ (Raj.R)/(Rig. R) (HR)CSPDCL/ CSPHCL, Raipur/ Durg/ Bilaspur/Ambikapur /Jagdalpur/Rajnandgaon/Raigarh.
3. Staff officer to Special Secretary(Energy), Mahanadi Bhavan, Atal Nagar Raipur.
4. TheSuperintending Engineer (City-I/II) /(MT)/ (Civil)/ (Store), Circle CSPDCL, .....
5. The Superintending Engineer (ES) & Chief Electrical Inspector, CG Govt., Mahanadi Bhavan, Atal Nagar Raipur.
6. The P.S. to Secretary, CSERC, Irrigation Colony, Shanti Nagar, Raipur.
7. The P.S. to Secretary PWD, GOCG, Mahanadi Bhavan, Atal Nagar Raipur.
8. The Executive Engineer.....CSPDCL, .....
9. The Staff Officer to Chairman/Managing Director,CSPDCL/CSPHCL/CSPGCL/ CSPTtrans.CL/CSPTrd.CL, Raipur.
10. The Senior Accounts Officer/Assistant Manager(CAU)/Raipur-I/II/Bilaspur/Durg/ Jagdalpur / Ambikapur/Janjgir-Champa/Rajnandgaon/Raigarh. CSPDCL.
11. Order file.

**Note:** (i) The Chief Engineer (EITC) is requested to display this circular on Power Company's official website.

*(Signature)*  
**SUPERINTENDING ENGINEER(W.)  
O/o EXECUTIVE DIRECTOR (O&M)  
CSPDCL, RAIPUR**

# CHHATTISGARH STATE POWER DISTRIBUTION COMPANY

(Government of Chhattisgarh Undertaking)

CIN: U40108CT2003SGC015822

Telephone: (0771) - 2574 901, Fax: (0771) - 2574 922

Website: [www.cspdcl.co.in](http://www.cspdcl.co.in) e-mail: [ceonm.raipur@cspc.co.in](mailto:ceonm.raipur@cspc.co.in)



No. 02-01/Works/ 2037

Raipur,

Dated:

23-Aug-2019

## CIRCULAR

**Sub: - Execution of works under 24% Supervision basis.**

\*\*\*\*\*

It has been decided to take up the Deposit works on full turnkey basis for consumers/ parties including Govt. and Quasi-Govt. Departments (where ownership is with applicant/ Depositor) on Supervision charges @ 24%.

In this regard following points shall be kept in mind before preparing the estimates:

- i. Estimate shall be prepared after the joint survey with authorized representative of applicant and detailed scope of the work be prepared at the time of survey itself.
- ii. Consent of the applicant shall be obtained for:
  - a) Payment of estimated cost of work along with applicable GST
  - b) The applicant will provide the specification for the items which are not included in CSPDCL's SoR
  - c) The applicant will provide necessary space/ROW for executing the work.
  - d) Consent to bear the over cost, if any, after completion of work.
- iii. Estimate shall be prepared under Scheme "ND Contributory Works - 24%, Code (047)".
- iv. Entire work shall be executed on full deposit and full turnkey basis.
- v. In estimate provision must be made for charges under Sec-68, charging permission and drawing/ documentation etc.
- vi. The amended clause of DoP 6.1.5 (a) shall be applicable, issued vide DoP order no 2944 dated 24/12/2016 for administrative approval of such works.
- vii. Guarantee period- to be taken care of by contractor (After completion of work GP to be transferred to applicant & contractor). For this necessary clause may be inserted in the tender document that Guarantee for the materials like Transformers, breakers, CTs etc. may be transferred to the applicant after completion of work as per tender specification. Further, applicant may also be informed that all necessary support during guarantee period on materials installed shall be provided by contractor directly to the applicant and CSPDCL has no liability after completion/ handed over of work to applicant.



- viii. Non SoR items to be provisioned as per market rate or as per SoR of PWD with supporting documents to be provided by applicant.
- ix. All materials should confirm to relevant IS codes.
- x. Format for handing over of work to applicant after its completion must be given.
- xi. Provisions of materials to ensure all safety rules must be made in the estimate e.g. rubber mat, hand gloves, common tools, yard metalling, fencing, gate, yard light etc as per requirement.
- xii. The provision of materials like LT cable, LT control panel should be made keeping in mind for future load growth in the premises in consultation with applicant.
- xiii. Provisions of spare incoming cable may be made in the estimate in consultation with applicant.
- xiv. Civil works like construction of control room shall not be executed by CSPDCL.
- xv. This will not be the right of applicant to get the work executed from CSPDCL.

Accordingly it is requested that where the consumer/applicant intends to get their work executed on full turnkey basis by paying 24% Supervision charges to CSPDCL, the above guidelines be followed.

  
**Chief Engineer (O&M)**  
**CSPDCL, Raipur**

**Copy to:-**

1. The Director (O&M)/(C&RA), CSPDCL, Raipur.
2. The Executive Director/ Chief Engineer (F&A/ HR/ S&P/ Revenue/ Project/ RA&PM/ EITC/ Trg-R&D/ Vigilance/ Civil/ RR-City/RR-Rural/ BR/RigR/DR/RajR/AR/JR), CSPDCL, Raipur/ Durg/ Ambikapur/ Jagdalpur/ Rajnandgaon/ Bilaspur/ Raigarh.
3. The Superintending Engineer (City-I/II/MT/Civil/Store) Circle CSPDCL, \_\_\_\_\_.
4. The Executive Engineer (O&M/City/MT/STM/AMR/Proj/Civil) CSPDCL, \_\_\_\_\_.
5. The Staff Officer, O/o MD (CSPDCL), Raipur.
6. The Senior Accounts Officer/Assistant Manager (CAU)/ Raipur-I/ II/ Bilaspur/ Durg/ Jagdalpur/ Ambikapur/ Janjgir-Champa/ Rajnandgaon CSPDCL.

**Note: - The CE (EITC) CSPDCL, Raipur is requested to upload the same on Urjainet portal.**