

## परियोजना पर विस्तृत टीप

ग्राम पुटकापुरी (कोड़ातराई), पटवारी हल्का नं. 16 खसरा नं. 133/1, रकबा 1.800 हेक्ट. राजस्व वन भूमि (छोटे झाड़ का जंगल) में छत्तीसगढ़ राज्य विद्युत पारेषण कंपनी मर्यादित रायगढ़, जिला-रायगढ़ द्वारा 132/33 के.व्ही. उपकेन्द्र निर्माण हेतु प्रस्तावित है।

इस उपकेन्द्र के निर्माण से कोड़ातराई क्षेत्र में निर्बाध रूप से विद्युत सप्लाई की जा सकेगी तथा इस क्षेत्र में बनने वाले भारी उद्योगों को भी विद्युत प्रदाय किया जा सकेगा, कोड़ातराई क्षेत्र में पर्याप्त एवं लगातार विद्युत सप्लाई से उद्योगों के साथ कृषि को भी लाभ होगा जिससे समाज के सभी लोगों को पर्याप्त आर्थिक एवं सामाजिक लाभ होगा।

संलग्न :- उपकेन्द्र हेतु स्वीकृत प्राक्कलन की प्रति।



(पी.एस. नेताम)

कार्यपालन अभियंता (सिविल) संभाग,  
छ.रा.वि.पारे.कं.मर्या., रायगढ़  
Executive Engineer (Civil-Transport)  
Division, C.S.P.T.C.L. Raigarh


## SALIENT DATA

1. Name of Scheme : Construction of 132/33 KV S/s
2. Name of Applicant : E.E. (Civil) Dn., C.S.P.T.C.L., Raigarh
3. District : Raigarh
4. Tehsil : Pussore
5. Block : Pussore
6. Location of Sub Station : At. Village – Putkapuri
7. Survey Land in hact. : 1.800 hact.
8. If Revenue land Khasara No. : Khasara No. 133/1, Patwari Halka No. 16  
Village – Putkapuri.
9. Name of Range : Raigarh
10. Name of Forest Division : Raigarh
11. Name of Forest Circle : Raigarh
12. Longitude & Latitude : N21° 49'33.489" To N21° 49'35.629" &  
E83° 16'40.182" To E 83° 16'43.741"
13. Topo Sheet No. : F44R5
16. Year of Start : 2016-17

## FINACIAL :-

(1) 132/33 KV Sub Station	:	14.01 Crore
<hr/>		
Total Rs.	:	14.01 Crore
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Assistant Engineer (Civil)  
Sub Division, Raigarh  
C.S.P.T.C.L.

  
Executive Engineer (Civil)  
Division Raigarh  
C.S.P.T.C.L.,  
Executive Engineer (Civil-Trans)  
Division, C.S.P.T.C.L. Raigarh

**OFFICE OF THE CHIEF ENGINEER (COMMERCIAL & PLANNING)  
CHHATTISGARH STATE POWER TRANSMISSION COMPANY LIMITED**  
(A Government of Chhattisgarh Undertaking) (A successor Company of CSEB),  
3<sup>rd</sup> Floor State Load Dispatch Building, Danganiya- 492013, Raipur(C.G.)  
E-mail - cecnp.csptcl@ceeb.gov.in

No. 02-12/132 KV-S.S-80/1680

Raipur, dtd. 27<sup>th</sup> SEP 2013

To,

- 1) The CE (Trans)/(EHT:C&M)/(T&C)/(Civil-Trans.) CSPTCL, Raipur
- 2) The CE (O&M)/(BR) CSPDCL, Raipur/Bilaspur
- 3) The S.E. (EHT:C&M)/(T&C)/(Civil-Trans.) CSPTCL, Bilaspur
- 4) The EE, O/O the MD, CSPTCL, Raipur.
- 5) The E.E(EHT:Const.)/(Comm.)/(Store),CSPTCL, Bilaspur.
- 6) The E.E (S/S CUM MRT)/(Civil-Trans.) CSPTCL, Raigarh.
- 7) The E.E (Work shop Dn.) CSPTCL, Bhilai.
- 8) The RAO, CSPTCL, Bilaspur.
- 9) The Drawing Section O/o CE (Trans) CSPTCL, Raipur.
- 10) Estimate file.

O/o. Chief Engineer  
Raipur Trans. Co. Ltd., Raipur

Receipt No 342  
Date 27/9/13  
SE(C) APT  
EE(C) IKT  
Cash/Estt. ....  
Work/Tech.....  
P. S. ....  
ACE T/K CE

**Sub: Estimates for construction of 132/33 KV S/s at Kodatarai Distt. Raigarh and approx. 9 Km 132 KV LILO of 132 KV Raigarh-Sanangarh line to proposed 132/33 KV S/S Kodatarai (Gorra), Distt Raigarh.**

BoD of CSPTCL has accorded administrative approval for construction of 132/33 KV S/s at Kodatarai Distt. Raigarh and approx. 9 Km 132 KV LILO of 132 KV Raigarh-Sanangarh line to proposed 132/33 KV S/S Kodatarai (Gorra), Distt Raigarh. Approval is subject to the condition that the Tender for this work shall be initiated only after ensuring, CSERC approval, Forest approval, Budget Provision, Possession of Land, Loan tie up & Availability of equity.

C.E.(C&P) CSPTCL Raipur has accorded technical sanction to the following estimates:

S. No.	Name of Works	Estt. No. & Date & Sap No.	Amount	Transmission Scheme/Code
01	Estimate for Constn. of approx. 9 Km 132 KV LILO from Loc no. 33 of 132 KV Raigarh-Sarangarh line to proposed 132 KV S/s Kodatarai (Gorra) Distt Raigarh.	44-415-3427-13-0083, dtd. 27.09.2013, Sap Gr.No.Z274441513.0002, I. O. No. Z27415130019	<b>Rs. 6.32 Crore (Rs. Six Crore Thirty Two Lakhs Only)</b>	132 KV line (Scheme Code 415)

-02	Estimate for constn. of 1x40 MVA 132/33 KV X-mer of 132/33 KV S/s at Kodanari (Gorra) Distt Raigarh.	44-425-8888-13-0084. dtd. 27.09.2013 Sap Gr. No. Z274442513.0001. I.O. No. Z27425130020 (EHT), I.O. No. Z18425130015 (Civil)	Rs. 14.01 Crore (Rs. Forteen Crore One Lakh Only)	132 KV S/s (Scheme Code 425)
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The work may be taken up after observing all the requirements, as per Guide line of Task Force Report issued by CEA in Aug. 2005 phase – II ( i.e. Project Execution Phase Condition 2 ) of Trans Project & should be followed strictly before execution of work. A copy of the sanctioned estimates are enclosed herewith.

Please ensure that completion report is furnished within three months after completion of work.

Encl: As above.

*Hansoh 27/9/13*  
Suptdg. Engineer (PL)  
O/o Chief Engineer (C&P)  
CSPTransCL, Raipur

**Estimate for Constn. of 132/33 K.V.S/Stn. at Kodatarai ,  
Distt Raigarh**

\\ ABSTRACT //

S. No.	Particulars	Amt. (Rs.)
1	132/33 KV SIDE EQUIPMENTS (Total :A)	42304368
2	33 KV SIDE EQUIPMENTS (Total: B)	6253925
3	CONDUCTOR, CLAMPS & CONNECTORs (Total:C)	2253302
4	STEEL / STRUCTURE ( Total : D )	14992460
5	CABALE, Battery & Battery Charger And	
6	Miscellaneous Equipments (Total :E,F& G) Sub Total (1 to 5)	11295554 77099609
7	Store Incidental @ 2.5% on Sub Total ( 6 )	1927490
8	Sub Total (6 + 7)	79027099
9	Civil Work (Total -H)	35400603
10	Erection charges (Total- I )	6945788
11	Sub Total (8 + 9 + 10)	121373490
12	contingency @ 3%, H/Q, Estt,Engg % 6%, special T&P and vehicles @ 1% = 10% on S No. 11)	12137349
13	Sub Total (11+12)	133510839
14	Building & Construction Workers Welfare Cess @1% on item No. 13	1335108
15	Service tax @ 12.36 % on S.No. (9 & 10)	5234014
16	Total (13+14+15)	140079961
	SAY Rs.	14.01 Crore
(Rs.Forteen Crore One Lakh Only)		

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SUPDT. ENGINEER [PL]

O/o C.E.[C&P] C.S.P.T.C.L., RAIPUR

27.09.13  
EXECUTIVE ENGINEER [PL]

O/o C.E.[C&P] C.S.P.T.C.L., RAIPUR

## OFFICE OF THE CHIEF ENGINEER (C&amp;P)

C.S.P.T.C.L. : RAIPUR

## REPORT

Name of Work	Estimate for Construction of 132/33 K.V. S/S at Kodatarai , Distt Raigarh
Cost of Work	Rs.14.01 Crore
History & Scope	BoD of CSPTCL in it's meeting held on dtd. 17.09.2013 has accorded approval for construction of 132/33 KV. S/S at Kodatarai , Distt Raigarh. Accordingly, the estimate has been prepared.
Technical aspect	<p>1) 1x40 MVA, 132/33 KV Xmer : 1 No.</p> <p>2) 132 KV Transformer bay : 1 No.</p> <p>3) 132 KV feeder bay : 4No. (2no.for LILO of Raigarh-Sarangarh line and 2 no. for supply to proposed 132/33KV S/s Dabhra)</p> <p>4) 132 KV Main bus bar of twin zebra ACSR : 1 No.</p> <p>5) 132 KV Auxiliary bus bar of single zebra ACSR : 1 No.</p> <p>6) 132 KV bus coupler bay ( transfer breaker bay ) : 1 No.</p> <p>7) 33 KV Transformer bay : 1 No.</p> <p>8) 33 KV feeder bays : 6 Nos.</p> <p>9) 33 KV Main bus with Twin Zebra ACSR : 1 No.</p> <p>10) 33 KV Auxiliary bus with Single Zebra ACSR : 1 No.</p> <p>11) 33 KV Bus coupler bay (Transfer breaker bay) : 1 No.</p> <p>12) 1x10MVAR capacitor bank : 1 No.</p> <p>13) 1x10MVAR capacitor bank bay : 1 No.</p> <p>14) 33/0.4 KV, 200 KVA Station Xmer : 1 No.</p> <p>15) Civil foundation &amp; structure without equipments (for future use): 1 no. 1X63 MVA, 132/33 KV Xmer, 1 no 132 KV feeder bay &amp; 1 no.33 KV feeder bay</p> <p>16) Associated equipments in control room i.e. battery, battery charger, control panel etc.</p> <p>17) Control Room Building Type IV : 1 No.</p> <p>18) Staff quarter C type, - 1 No. E type - 1 Nos.</p>
Rate	The estimate has been framed as per Schedule of Rates applicable for the year 2013-14
Budget Provision	The provision of expenditure for this work has been made in the budget during the year 2013-14 and will be financed by borrowing loan from Financial Institute
Scheme	Transmission Scheme 132KV S/s (425 code)
Operating Division	<p>i) EE(EHT-Constn.)Dn., Bilaspur.</p> <p>ii) EE(Civil) Dn., Raigarh.</p> <p>iii) EE(MRT Cum S/s)Dn., Raigarh.</p> <p>iv) EE(Comm.)Dn., Bilaspur.</p>

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 J.P.D.T. ENGINEER (PL)  
 O/o C.E.(C&P) CSPTCL : RAIPUR

EXECUTIVE ENGINEER (PL)  
 O/o C.E.(C&P) CSPTCL : RAIPUR

ESTIMATE TECHNICALLY SANCTIONED  
 SAP Gr. No-Z274442513.0001  
 Internal Order No. For EHT-Z27425130020  
 Internal Order No. For Civil-Z18425130015  
 Estt.No.44-425-8888-13-0084 Dtd. 27.09.2013  
 For Rs. 14.01Crore  
 Chargable to 132 KV S/S (Scheme code 425)  
 Allocation No. A076540

"Approval is subject to condition that tender of this work shall be initiated only after ensuring CSERC approval, forest approval, budget provision, loan tie up & availability of equity."

CHIEF ENGINEER [C&P]  
 CSPTCL, RAIPUR

27/09/13

OFFICE OF THE CHIEF ENGINEER (C&P)					
C.S.P.T.C.L. : RAIPUR					
Estimate for Constrn. of 132/33 K.V.S/Stn. at Kodatarai, Distt Raigarh					
S.No.	PARTICULARS	Qty	Unit	Rate 2013-14	Amt.(Rs.)
<b>A]</b>	<b>132 KV SIDE EQUIPMENTS</b>				
1	40 MVA, 132/33 KV X-Mer with oil & accessories	1	Nos.	25377942	25377942
2	SF - 6 Circuit Breaker with structures complete	6	Nos.	692458	4154748
3	Current transformer having ratio				
	(I)800 - 400 / 1-1-1A	15	Nos.	107420	1611300
	(II)400 - 200 / 1-1-1A	3	Nos.	104154	312462
4	Potential Transformer having ratio 132 KV/√3 110KV/√3	3	Nos.	222493	667479
5	Lightning Arresters	15	Nos.	30178	452670
6	Communication Equipments				
	(I) 132 K.V. Coupling Capacitor	8	Nos.	82723	661784
	(II) Wave Traps (620 Amps. 0.5 MH	8	Nos.	147354	1178832
	(III) Carrier Cabinet [Double Channel]	4	Nos.	350000	1400000
	(IV) LMU [ Phase to Phase Coupling]	4	Nos.	71528	286112
	(V) RTU	1	Nos.	1041078	1041078
	(VI) EPAX [8/16]	1	Nos.	139332	139332
	(VII) Electronic Push Button Telephone	10	Nos.	1654	16540
	(VIII) 10 Pair armoured telephone cable	1	Kms.	61411	61411
	(IX) HF Cable [Coaxial Cable]	0.5	Kms.	71942	35971
7	Isolator [3- Phase with Earth Switch] without Insulator	4	Nos.	84063	336252
8	Isolator [3- Phase without Earth Switch] without Insulator	14	Nos.	72437	1014118
9	Control & Relay Panel for 3- Phase Feeder[DPR]	4	Nos.	363438	1453752
10	Control & Relay Panel for 40 MVA X-Mer	1	Nos.	441582	441582
11	Control & Relay Panel for T.B.	1	Nos.	184823	184823
12	Solid Core Insulator	180	Nos.	8201	1476180
<b>TOTAL [A]</b>					<b>42304368</b>
<b>B]</b>	<b>33 KV SIDE EQUIPMENTS</b>				
1	33 KV Vacume Circuit Breaker with Structure	9	Nos.	213993	1925937
2	33 KV Current Transformer				
	(I) 800 - 400 / 1-1-1A	6	Nos.	23930	143580
	(II) 400 - 200 / 1-1-1A	21	Nos.	19475	408975
3	33 KV Potential Transformer	3	Nos.	22971	68913
4	33 KV Lightning Arresters	24	Nos.	3672	88128
5A	Isolators including Insulators (800Amp.)				
	(I) With earth switch	6	Nos.	50518	303108
	(II) Without earth switch	14	Nos.	41221	577094
5B	Isolators including Insulators(1200Amp.)				
	(I)Without earth switch	6	Nos.	41221	247326
6	33 KV Solid Core Insulator	30	Nos.	1502	45060
7	33/0.4 KV, 200 KVA Station Transformer [With Oil & Accessories]	1	Nos.	490046	490046
8	36 KV 12 MVAR Capacitor Bank with Structure	1	Nos.	1092781	1092781
9	33 KV D.O. Fuse Set	1	Nos.	18232	18232
10	33 KV Transformer Control & Relay Panel	1	Nos.	96819	96819
11	33 KV Feeder Control & Relay Panel	6	Nos.	87255	523530

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S.No.	PARTICULARS	Qty	Unit	Rate 2013-14	Amt.(Rs.)
12	33 KV C&R Panel for transfer bus	1	Nos.	87255	87255
13	33 KV Control & Relay Panel for 10 MVAR Capacitor Bank	1	Nos.	137141	137141
<b>TOTAL [B]</b>					<b>6253925</b>
<b>C]</b>	<b>CONDUCTOR, CLAMPS &amp; CONNECTORS</b>				
1	ZEBRA ACSR	3	KM	255914	767742
2	Galvanised Steel Wires [ 7/3.66 Sq.MM]	1	KM	62960	62960
3	CLAMPS	1	Lot	500000	500000
	[I] T- Clamps Panther to Panther	0	Incl. in Lot	0	0
	[II] T- Clamps Zebra to Panther	0		0	0
	[III] Spacer cum T Clamps Double Zebra to Zebra	0		0	0
	[IV] Spacer cum T clamp Double Moose to Zebra	0		0	0
	[V] Post Insulator Clamps for Moose	0		0	0
	[VI] Post Insulator Clamps for Zebra	0		0	0
	[VII] Post Insulator Clamps for Double Zebra	0		0	0
	[VIII] Spacer for twin Zebra / Moose	0		0	0
	[IX] Isolator Pad Clamps Moose	0		0	0
	[X] Isolator Pad Clamps Zebra	0		0	0
	[XI] Wave Trap Clamps	0		0	0
	[XII] Lightning Arrester Clamps	0		0	0
	[XIII] CT Clamps	0		0	0
	[XIV] CC Clamps	0		0	0
	[XV] PG Clamps	0		0	0
	[XVI] Earth Wire Clamps	0		0	0
	(XVII) PI Clamp for Twin Moose	0		0	0
4	<b>i. Disc Insulator</b>				
	(I) Disc Insulator 90KN string	600	Nos.	474	284400
	(II) Disc Insulator 70KN string	200	Nos.	441	88200
	<b>ii. Hardware Bolted type</b>	1	Lot	550000	550000
	(III) Single Tension Hardware for Panther ACSR Conductor	0	Incl. in Lot	0	0
	(IV) Single Suspension Hardware for Panther ACSR Conductor	0		0	0
	(V) Single Tension Hardware for Zebra ACSR Conductor	0		0	0
	(VI) Double Tension Hardware for Zebra ACSR Conductor	0		0	0
	(VII) Tension hardware for earth wire.	0		0	0
	(VIII) Suspension HW for Zebra	0		0	0
<b>TOTAL [C]</b>					<b>2253302</b>
<b>[D]</b>	<b>STEEL STRUCTURE</b>	150	MT	84925	12738750
1	132 KV Gantry Columns - 3G 02	0.00	Incl.	84925	0
2	132 KV Gantry Beams - 3G 02	0.00		84925	0
3	132 KV C.T.	0.00		84925	0
4	132 KV LA - 3L 04	0.00		84925	0
5	132 KV CC - 3K 02	0.00		84925	0
6	132 KV PT - 3V 04	0.00		84925	0
7	132 KV PI - 3P 02	0.00		84925	0
8	132 KV Isolator - 3D 02	0.00		84925	0
9	132 KV Bus Bar - 3B 04	0.00		84925	0

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S.No.	PARTICULARS	Qty	Unit	Rate 2013-14	Amt.(Rs.)
10	132 KV Bus Bar - 3B 03	0.00	in (D)	84925	0
11	33 KV Gantry Columns - 1G 02	0.00		84925	0
12	33 KV [ Nos.] Gantry Beams - 1G 03	0.00		84925	0
13	33 KV LA - 1V 02	0.00		84925	0
14	33 KV CT - 1V 02	0.00		84925	0
15	33 KV PT - 1V 02	0.00		84925	0
16	33 KV PI - 1V 02	0.00		84925	0
17	33 KV Isolator - 1D 02	0.00		84925	0
18	33 KV Bus Bar - 1B 04	0.00		84925	0
19	33 KV Bus Bar - 1B 02	0.00		84925	0
20	Earth Spikes-25 mm dia /2000 mm Length [90Nos.]	90.00	No.	1613	145170
21	GI Pipes Different Sizes	3.00	MT	75305	225915
22	GI Flats/MS Flat 65X8mm	25.00	MT	75305	1882625
<b>TOTAL [D]</b>					<b>14992460</b>
<b>[E]</b>	<b>CABLES</b>				
1A	Unarmoured Copper Control Cable				
i	4 C, 4 Sq. mm	3	KM	66224	198672
ii	4 C, 2.5 Sq. mm	1	KM	66224	66224
iii	2 C, 2.5 Sq. mm	2	KM	36154	72308
iv	10C, 2.5 Sq. mm	3	KM	189287	567861
v	12 C, 2.5 Sq. mm	2	KM	189287	378574
vi	19 C, 2.5 Sq. mm	2	KM	294213	588426
1B	Armoured Cu /Al Power Cable				
i	4 C, 10 Sq. mm Cu	0.5	KM	205294	102647
ii	4 C, 16 Sq. mm Al	2	KM	560291	1120582
iii	Power Cable 3.5C, 100 Sq.mm Al	0.4	KM	560291	224116.4
iv	Power Cable 3.5C, 300 Sq.mm Al	0.7	KM	840436	588305.2
<b>TOTAL [E]</b>					<b>3907715.6</b>
<b>[F]</b>	<b>BATTERY &amp; BATTERY CHARGER</b>				
1	Battery 110 V, 300 AH	1	No.	371140	371140
2	Battery 48 V, 300 AH	1	No.	161952	161952
3	Battery Charger 110 V, 300 AH	1	No.	161935	161935
4	Battery Charger 48 V, 300 AH	1	No.	129548	129548
<b>TOTAL [F]</b>					<b>824575</b>
<b>[G]</b>	<b>MISCELLANEOUS EQUIPMENTS</b>				
1	AC Board 415 Volts/Stn. X-mer MB	3	No.	169383	508149
2	DC Board 110 Volts	2	No.	197614	395228
3	DC Board 48 Volts	1	No.	197614	197614
4	Heavy Duty Flood Light Laminaries 2 X 400 W	6	Nos.	44040	264240
5	Heavy Duty Flood Light Laminaries 2 X 250 W	4	Nos.	28243	112972
6	Tube Light Fitting Commercial type 1 X 40 W	10	set	2259	22590
7	Fire Fighting Equipments	1	set	112922	112922
8	10 Kltrs. Oil Storage Tank [MS]	1	Nos.	550612	550612
9	Junction Box 32 Terminal Blocks	2	No.	9468	18936
10	<b>Luminaires</b>				
i	High mast Lighting with fixtures & Luminaires	2	Nos.	340000	680000

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S.No.	PARTICULARS	Qty	Unit	Rate 2013-14	Amt.(Rs:)
ii	Internal Tube Light Fittings 1 X 40 W	10	Nos.	1500000	1500000
iii	Internal Tube Light Fittings 2X 40 W	12	Nos.		
11	<b>T &amp; P Items</b>				
i	Oil Testing Kit (BDV)	1	No.		
ii	Capacitance Meter	1	No.		
iii	Cell Tester	2	Nos.		
iv	Primary Injection Kit	1	No.		
v	Multimeters	2	Nos.		
vi	Tong Twesters	2	Nos.		
vii	Hydrometer	2	Nos.		
viii	Torch	3	Nos.		
ix	Discharge Rods with tends	6	Nos.		
x	Operating Rods suitable for 33 KV	2	Nos.		
xi	Mili-ampere Meter	1	No		
xii	DC Volt Meter	1	No		
xiii	AC Volt Meter	1	Nos.		
xiv	Hand Gloves	4	pairs		
xv	Megger 5 KV	1	No		
xvi	Tan-delta measurement Kit	1	No		
xvii	DE - Spanner Set of 25	1	No		
xviii	Tubular - Spanner Set of 25	1	No		
xix	Aluminium Ladder Extensible	2	Nos.		
xx	Aluminium Pedestal Type Ladder Extensible	1	No		
xxi	Rubber Sheets 5' X 3'	12	No		
12	<b>Furnitures</b>			200000	200000
	[I] Officer's Table	1	No		
	[II] Table for Control Room Operator	4	Nos.		
	[III] Chairs	10	Nos.		
	[IV] Stools	2	Nos.		
	[V] Steel Almirah [ Small ]	1	No.		
	[VI] Steel Almirah [ Big ]	1	No.		
13	Automatic data logging of Energy Meters & relay		L.S.	1500000	1500000
14	Miscellaneous & Unforeseen Items		L.S.	500000	500000
<b>TOTAL [G]</b>					<b>6563263</b>
<b>[H]</b>	<b>CIVIL WORKS</b>				
(a)	Foundation of				
1	40 MVA Transformer foundation suitable for 63 MVA	1	No.	270,000	270000
2	Future Transformer foundation (for 63 MVA)	1	No.	270,000	270000
3	132 KV and 33 KV Structures	LS	LS	LS	7500000
4	33/0.4 KV Station Transformer (200KVA)	1	No.	60,603	60603
5	1x10 MVAR Capacitor Bank	1	No.	LS	55000
(b)	Control Room Building Type - IV	1	No.	3,600,000	3600000
[c]	(I) Cable Tranches B-B	300	Mtrs.	6,800	2040000
	(II) Cable Tranches C-C	100	Mtrs.	5,700	570000

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S.No.	PARTICULARS	Qty	Unit	Rate 2013-14	Amt.(Rs.)
	(III) Cable Tranches D-D	100	Mtrs.	2,600	260000
	(IV) Cable Tranches E-E	100	Mtrs.	1,750	175000
(d)	External Water Supply arrangement including Tube Well, OH - Tank, Pump & Pipe Lines etc.	L.S.			410000
(e)	Approch Road to Control Room ( Tarring )	500	Mtr.	700	350000
(f)	Yard Leveling	16000	Cu.M	265	4240000
(g)	Yard Metaling	3000	Cu.M	1,150	3450000
(h)	Yard Fencing	600	Mtrs.	2,200	1320000
(i)	STAFF QUARTER				
	(I) C - Type	1	No.	2,110,000	2110000
	(II) E - Type	1	Nos.	1,500,000	1500000
	(III) F - Type	0	Nos.	1,115,000	0
(j)	Miscellaneous & Unforeseen Items(details mentioned in Annexure-I)	L.S.			7220000
<b>TOTAL [H]</b>					<b>35400603</b>
<b>[I]</b>	<b>ERECTION TESTING &amp; COMMISSIONING CHARGES</b>				
(a)	STRUCTURE				
1	Rate for unloading of Structure from Carriage	150	MT	1300	195000
2	Erection of S/Stn. Structure including fixing & alignment of templates for grouted / bolted type structures foundation, tightening of nut - bolt, washer etc. & including alignment / levelling of structures.	150	MT	5000	750000
(b)	Stringing of overhead gantries, vertical droppers with ACSR conductor including ifxing of insulator string, spacers, clamps etc.				
i	Twin Zebra /Twin panther	3000	Mtrs.	122	366000
iii	Stringing of overhead shield wires with standed galvanised steel complete with fixing of strain clamps at the structures.	1000	Mtrs.	48	48000
(c)	Unit rate for installation of transformers:				
	40 MVA Transformer, 132/33 KV, 3-phase transformer complete with marshalling box, control cabinet with associated control panels & other accessories.				
1	Unloading of transformer from trailer & placing on plinth.(63 / 40 MVA Transformer)	1	No. Per Job	300000	300000
(d)	Unit rate for installation of Station transformer:-				0
1	Unloading placing on plinth and complete erection of Station Transformer 33 / 0.4 KV	1	No. Per Job	13000	13000
	Assembly & erection of complete transformer with on plinth, connections etc including installation of marshalling boxes, control cabinet. air scaling arrangements, radiators. cooling fans & all accessories etc. for transformer including preliminary checks				

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S.No.	PARTICULARS	Qty	Unit	Rate 2013-14	Amt.(Rs.)
(e)	Unloading of capacitor bank , placing & complete erection	1	LS	15000	15000
(f)	Unit rate for installation of circuit breakers including unloading at site, placement on plinth, complete assembly, erection of control cabinet, erection of all accessories, SF6 gas filling, preliminary checks etc.				
1	132 KV CBs	6	Each	27957	167742
2	33 KV CBs	9	Each	14587	131283
(g)	Unit rate for installation of isolators with and without earth switch (3-phase) including unloading at site, placement on structure, erection of mechanism box, piping, alignment of contacts & checking of operation etc.				
1	132 KV Isolators	18	Nos.	4100	73800
2	33 KV Isolators.	26	Nos.	3000	78000
(h)	Unloading of <u>Current Transformer</u> at S/Stn. site and placement on structure and fixing of junction box including all accessories and making all connection etc.				
1	132 KV CTs	18	Nos.	7293	131274
2	33 KV CTs	27	Nos.	5835	157545
(i)	Unloading of <u>CVT / PT at S/Stn.</u> site and placement on structure and fixing of junction box including all accessories and making all connection etc.				
1	132 KV PT	3	Nos.	6442	19326
2	33 KV PT	3	Nos.	5592	16776
(j)	Unloading of surge <u>Lightening Arrestors</u> at S/Stn. site and placement of equipments on structures and fixing of junction box including all accessories and making all connection also including checking and installation of insulator base and surge counters etc.				
1	132 KV LAs	15	Nos.	3039	45585
2	33 KV LAs	24	Nos.	2066	49584
(k)	Unloading of Post Insulators at site & placement on structure including all accessories & making all connections .				
1	132 KV Post Insulators	180	Nos.	700	126000
2	33 KV Post Insulators	30	Nos.	500	15000
(l)	Wave trap with overhead suspension & other accessories for 132 KV	8	Nos.	7000	56000
(m)	set of coupling devices, line matching unit for PLCC purposes.	8	Nos.	7000	56000
1	Main AC Distribution Board	3	Nos.	23095	69285
2	Main DC Distribution Board	2	Nos.	23095	46190
3	Control & Relay Panel for 132 KV Transformer/Feeder/Bus-coupler	6	Nos	25527	153162
4	Control & Relay Panel for 33 KV Transformer/Feeder/Bus-coupler	9	Nos	23095	207855

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S.No.	PARTICULARS	Qty	Unit	Rate 2013-14	Amt.(Rs.)
(n)	Erection of other works :-				0
1	110 V Stationary Lead battery set	1	No	11000	11000
2	Battery Charger of 110 V Battery	1	No	18233	18233
3	48 V Stationary Lead Battery Set	1	Nos.	5500	5500
4	Battery Charger of 48 V Battery	1	Nos.	15803	15803
(o)	Installation of perforated type cable Trays with fixing accessories on cable racks in cable trenches.				
1	300 mm wide	100	Mtr.	37	3700
2	200 mm wide	500	Mtr.	30	15000
(p)	Cable installations :-				
1	Laying of cables on racks / cable trays / angle support overhead racks, conduits including dressing of cables with accessories for copper conductors control cables				
	4 core, 4 Sq. mm	3000	Mtrs.	23	69000
	2 core, 2.5 Sq. mm	2000	Mtrs.	23	46000
	4 core, 2.5 Sq. mm	1000	Mtrs.	23	23000
	10 core, 2.5 Sq. mm	3000	Mtrs.	23	69000
	12 core, 2.5 Sq. mm	2000	Mtrs.	23	46000
	19 core, 2.5 Sq. mm	2000	Mtrs.	24	48000
	4 C, 10 Sq. mm Cu	500	Mtrs.	23	11500
	4 C, 16 Sq. mm Al	2000	Mtrs.	23	46000
	Power Cable 3.5C, 100 Sq.mm Al	400	Mtrs.	30	12000
	Power Cable 3.5C, 300 Sq.mm Al	700	Mtrs.	30	21000
	Co-axial cable	500	Mtrs.	18	9000
2	Cable terminations including fixing of cable glands, lugs etc. for each type of control / power cables				
	4 C, 4 Sq. mm				
	4 C, 2.5 Sq. mm				
	2 C, 2.5 Sq. mm				
	10 C, 2.5 Sq. mm				
	12 C, 2.5 Sq. mm				
	19 C, 2.5 Sq. mm				
	Armoured Cu /Al Power Cable				
	4 C, 10 Sq. mm Cu	LS	LS	400000	400000
	4 C, 16 Sq. mm Al				
	Power Cable 3.5C, 100 Sq.mm Al				
	Power Cable 3.5C, 200 Sq.mm Al				
	Co-axial cable				
3	Laying of cables including dressing with clamps & other accessories duly buried under the ground at a depth of 0.5 mtrs.				
(q)	Earthing Installation :-				
	Rates for installation & testing of the following including jointing equipment termination, fixing & clamping with accessories & hard wares required such as saddle, clamps, cleats, plugs screws, nuts, bolts, washers & welding. drazzing etc :-				

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S.No.	PARTICULARS	Qty	Unit	Rate 2013-14	Amt.(Rs.)
1	25mm X 2000mm long MS rods, earth electrodes installation directly driven in to earth including excavation as required & welding to earth conductors.	75	Each	1945	145875
2	Providing of steel risers including welding to the earth mat at one end bolting to the structures at the other end for 65*8 mm flats.	6000	Mtrs.	97	582000
(r)	Yard Lighting :-				
1	Erection of pole for yard lighting & fitting of fixtures.	10	Each	4011	40110
2	Installation of light fixtures on gantry columns, supply connection to the light fitting from nearest supply board in the yard etc.	10	Each	2066	20660
(s)	Miscellaneous & unforeseen items.		L.S.		2000000
<b>TOTAL [I]</b>					<b>6,945,788.00</b>
	<i>Hg</i> 27.9.13				
	SUPDT. ENGINEER [PL]			<i>Shu</i> 27.09.13	
	O/o C.E.[C&P] C.S.P.T.C.L., RAIPUR			EXECUTIVE ENGINEER [PL]	
				O/o C.E.[C&P] C.S.P.T.C.L., RAIPUR	

