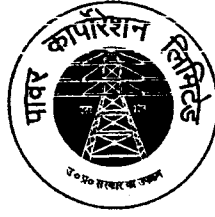


# उत्तर प्रदेश पावर कारपोरेशन लिमिटेड

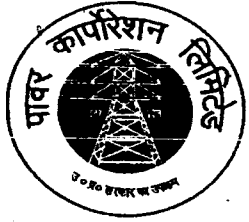


कास्ट शेडयूल (संशोधित)  
2011-12

ग्रामीण विद्युतीकरण एवं द्वितीय प्रणाली नियोजन संगठन  
- 9वाँ तल, शक्ति भवन विस्तार,  
लखनऊ

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**UP Power Corporation Ltd.**  
**Rural Electrification & Secondary System**  
**Planning Organisation**  
**Shakti Bhawan Extn, 14-Ashok Marg,**  
**Lucknow-226 001**

e-mail- [cgmrespocl@gmail.com](mailto:cgmrespocl@gmail.com)

☎ : 0522-2287733(O)

(Fax) : 0522-2287871

No: 3003 -RESPO /D&S/CS/2011&12

Dated: 19 Aug. 2011

**CORIGENDUM**

In partial modification of O.M. 2804/ RESPO /D&S/CS/2011&12 dated 05-08-2011, the cost schedule has been revised . The revised cost schedule is enclosed herewith .

Encl:- As above

**Chief Engineer (RESSPO)**

No. \_\_\_\_\_ - RESPO /D&S/CS/2011&12 of date \_\_\_\_\_

Copy forwarded to the following for information and necessary action :-

- 3- M.D. Vidyut Vitran Nigam Ltd. Purvnchal/Paschimanchal /  
Madhyanchal/Dakhinanchal/KESKO.
- 4- All CE Distribution Zones/LESA,UPPCL.

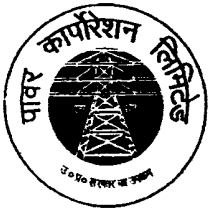
**Chief Engineer (RESSPO)**

No. \_\_\_\_\_ - RESPO /D&S/CS/2011&12 of date \_\_\_\_\_

Copy forwarded to the following for information and necessary action :-

- 5- CE attached to Chairman, UPPCL, Lucknow.
- 6- CE(MM)/CE(Commercial)/CE(CMUD),UPPCL,Lucknow
- 7- GM (Audit and Accounts)/(Budget and Cost),UPPCL,Lucknow.
- 8- Sri N.C. Tripathi, Executive Engineer with copy of CD with the remark that the previous rate schedule may be removed and revised rate schedule may be uploaded on UPPCL Website .

**Chief Engineer (RESSPO)**



**Rural Electrification & Secondary  
System Planning Organization  
U.P.P.C.L. Shakti Bhawan Extn.  
14- Ashok Marg, Lucknow.**

No. <sup>2804</sup> -RESSPO/D&S/CS(2011-12)

Dated 05 Aug., 2011

**OFFICE MEMORANDUM**

In suppression of all previous Orders for the construction of 33 KV and LT lines, 11/0.4 KV sub-station up to 100 KVA in Plains and 33 KV Lines, 33 KV/11 KV New Sub-station and increasing capacity of 33/11 KV Sub-station, HVDS system, the Cost Schedules have been revised as per the enclosed schedules.

2. The rates of equipments and materials are as per revised stock issue rates finalized by material Management Organization for the year 2011-12 w.e.f. 1.4.2011 as intimated vide Letter No. 63-CE(MM) Stock issue rates dated 27 Jan., 2011. The rates of locally procured items are based on the information received from different field units as well as assumed in this office. However these rates are tentative and are subject to revision according to market fluctuation.
3. The cartage and erection charges have been calculated on estimated average basis and added to the cost of work. The cartage and erection charges may vary from area to area and the actual figure may be worked out at zonal level for adoption.
4. The total cost given on these schedules are inclusive of 3% contingency, 1.5% T&P and 31.5% establishment audit & accounts charges as intimated by the Corporation.
5. The schedules shall be used for formulation of schemes/projects only. Estimates should be prepared on actual basis as per the requirement of Discom.
6. In case of difference between Cost Schedule & Cost Data Book, consumers will be charged as per Cost Data Book, while for other purpose estimation will be done as per Cost Schedule.
7. The cost of non-centralised items were not reported by the Discom in spite of repeated persuasion. As such their approximate cost has been taken.

**Chief Engineer (Resspo)**

-2-

**No. /CE/RESSPO/D&S/CS (2011-12) dt.**

Copy alongwith a set of cost schedules forwarded to the following:-

1. M.D. Vidyut Vitran Nigam Ltd., Purvanchal / Paschimanchal / Madhyanchal / Dakhinanchal / KESCO..
2. All CE Distribution Zones/LESA,UPPCL with the remarks that Cost Schedule may be distributed to the Circles/Divisions at their end.

**Encl:** As above.

**Chief Engineer (Resspo)**

**No. /CE/RESSPO/D&S/CS (2011-12) dt.**

Copy alongwith a set of cost schedules forwarded to the following:-

1. CE attached to Chairman, UPPCL, Lucknow.
2. CE (MM) / C.E.Commercial/ C.E. (CMUD), UPPCL, Lucknow.
3. GM (Audit and Accounts)/(Budget and Cost), UPPCL, Lucknow.
4. Sri N.C. Tirpathi, Executive Engineer with copy of CD, with the remark that the copy of Cost Schedule may be put on UPPCL Website.

**Encl:** As above.

**Chief Engineer (Resspo)**

**PART - A**  
**ABSTRACT OF COST SCHEDULES APPLICABLE FOR THE YEAR 2011-12**

W.E.F 01.04.2011  
PLAINS : 2011-12

Sl. No.	Particulars	Cost of material	Cartage charges @ 3%	Erection charges @ 7%	Total of Col. 3,4,&5	3% contingencies on Col. 6	Total of Col. 6&7	1.5% T&P on Col. 8	31.5% of Estab. & AA Charges on Col. 8	Total of Col. 8,9&10	Total (Say)	Referen ces
1	2	3	4	5	6	7	8	9	10	11	12	13
A	LINES (Per Kilometer)											
1	11 KV Main line with Rabbit on PCC Pole	181180	14490	12680	208350	6251	214601	3219	67599	285419	285420	Annex-1
2	11 KV Spur Line with ACSR Weasel on PCC Pole	152110	12170	10650	174930	5248	180178	2703	56756	239637	239640	Annex-1
3	3 Phase L.T. Line with ACSR Weasel on PCC Poles for Rural Area	132600	10610	9280	152490	4575	157065	2356	49475	208896	208900	Annex-3
4	3 Phase L.T. Line with ACSR Rabbit on PCC Poles for Rural Area	161700	12940	11320	185960	5579	191539	2873	60335	254747	254750	Annex-3
5	3 Phase L.T. Line with AAAC Weasel on PCC Pole for Rural Area	137400	10990	9620	158010	4740	162750	2441	51266	216457	216460	Annex-3
6	3 Phase Distribution Line with AAAC Rabiit on PCC Pole	193800	15500	13570	222870	6686	229556	3443	72310	305309	305310	Annex-3
7	1 Phase Distribution Line AAAC Weasel on PCC Pole	96900	7750	6780	111430	3343	114773	1722	36153	152648	152650	Annex-3

  
**E.E. (TECHNICAL)**

Sl. No.	Particulars	Cost of material	Cartage charges @ 8%	Erection charges @ 7%	Total of Col. 3,4,&5	3% contingencies on Col. 6	Total of Col. 6&7	1.5% T&P on Col. 8	31.5% of Estab. & AA Charges on Col. 8	Total of Col. 8,9,&10	Total (Say)	References
1	2	3	4	5	6	7	8	9	10	11	12	13
	B. Sub Station (Village/Town)											
1	25 KVA 11/433 KV on Double Pole PCC Structure for:-											
	a) Village/Town	82040	6560	5740	94340	2830	97170	1458	30609	129237	129240	Annex-4
	b) Rural	72040	5760	5040	82840	2485	85325	1280	26877	113482	113480	
	63 KVA 11/433 KV on Double Poles PCC Structure:-			0								
2	a) Village/Town	130470	10440	9130	150040	4501	154541	2318	48680	205539	205540	Annex-4
	b) Rural	120470	9640	8430	138540	4156	142696	2140	44949	189785	189790	
	100 KVA 11/433 KV on Double Pole PCC Structure For:-			0								
3	a) Village/Town	162150	12970	11350	186470	5594	192064	2881	60500	255445	255450	Annex-4
	b) Rural	152150	12170	10650	174970	5249	180219	2703	56769	239691	239690	

**Note:-**

The cartage and erection charges has been taken as 8% and 7% of cost of material respectively. The actual charges may vary from site to site

  
E. E. (TECHNICAL)

**COST ANALYSIS OF DOUBLE POLE STRUCTURE WITH PCC POLES FOR 11 KV  
SECTION LOCATIONS FOR MAIN & SPUR LINES**

w.e.f. 01.04.2011

Plains: 2011-12

Sl.No.	Items	Unit	Rate (Rs)	Qty.	Amount (Rs.)
1	2	3	4	5	6
1	PCC Pole 8.5 M Long	Nos	1976	2	3952
2	Stone Pad 300x300x75mm	Nos	88	2	176
3	MS Channel cross arms 100x50x2240(Top Channel)	Nos	940	1	940
4	Cross bracing MS Angle	Set	2084	1	2084
5	Clamps with Nuts & Bolts for top channel	Nos	158	2	316
6	Barbed wire Gi	Kg.	84	2	168
7	Danger board & clamps with bolts & nuts	Nos	240	1	240
8	Concreting of poles	Nos	535	2	1070
9	Earthing complete	Nos	437	2	874
10	E Bracket with bolts & nuts	Nos	102	3	306
11	11 KV Disc Insulator B&C type (4500Kg) with fittings	Set	361	6	2166
12	11 KV Pin Insulators with pins	Nos	130	3	390
13	PG Clamps	Nos	79	6	474
14	Stay complete	Nos	1032	6	6192
	Total	(A)-			19348
	<b>Less (Cost of one PCC Pole with fitting)</b>				
1	PCC Pole 8.5 M Long	Nos	1976	1	1976
2	Stone Pad 300x300x75mm	Nos	88	1	88
3	11 KV Steel X-arm "V" type	Nos	522	1	522
4	Cross arm holding clamps with bolts & nuts	Nos	90	1	90
5	11 KV Pin Insulators with Pins	Nos	130	3	390
6	F-bracket with bolts & nuts	Nos	137	1	137
7	Earthing complete	Nos	437	1	437
	Total	(B)			3640
	<b>Extra cost of section D/P complete in place of single pole</b>	Rs. (A-B)=			15708
				Say	15710

  
E.E.(TECHNICAL)



## COST ANALYSIS OF ONE KM OF THREE PHASE AND SINGLE PHASE L.T. LINES

w.e.f. 01.04.2011

Plains: 2011-12

Sl.No	Paarticular	Unit	Rate (Rs.)	3 Phase LT Line with ACSR Weasel /Rabbit Conductor on PCC Pole in Rural Area (20 support/Km)			3 Phase LT Line with AAAC Weasel/Rabbit Conductor on PCC Pole in Rural Area (20support/Km)			1 Phase LT Main Line with AAAC Weasel Conductor on PCC Pole in Rural Area (20 support/Km)			
				Weasel		Rabbit		Weasel		Rabbit		Weasel	
				Qty.	Amt (RS)	Qty.	Amt (RS)	Qty.	Amt (RS)	Qty.	Amt (RS)	Qty.	Amt (RS)
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	PCC Support 8.5 Long	Nos	1976	20	39520	20	39520	20	39520	20	39520	20	39520
2	Stone Pad 300x300x75mm	Nos	88	20	1760	20	1760	20	1760	20	1760	20	1760
3	LT Clamp with nuts & bolts for PCC Pole	Nos	137	60	8220	60	8220	80	10960	80	10960	40	5480
4	Earth wire clamps for PCC Pole	Nos	164	20	3280	20	3280	20	3280	20	3280	20	3280
5	LT Shackle Insulator 100x115 mm	Nos	22	60	1320	60	1320	80	1760	80	1760	40	880
6	Bolts & nuts for shackle	Kg.	102	15	1530	15	1530	30	3060	30	3060	13.3	1357
7	Loop Guard complete 3-phase	Nos	24	40	960	40	960	40	960	40	960	0	0
8	Loop Guard complete 1-phase	Nos	18	0	0	0	0	0	0	0	0	40	720
9	Phase wire ACSR Weasel	Km	18445	3.09	56995.05	0	0	3.09	0	0	0	0	0
10	Phase wire ACSR Rabbit	Km	27851	0	0	3.09	86059.59	0	0	0	0	0	0
11	Phase wire AAAC Weasel	Km	15540	0	0	0	0	3.09	48018.6	0	0	0	0
12	Phase wire AAAC Rabbit	Km	33770	0	0	0	0	0	0	3.09	104349.3	0	0



E.E. (TECHNICAL)

## Cost Analysis of one Kilometer of 11 KV Lines (Main & Spur)

w.e.f. 01.04.2011

Plains: 2011-12

S.No	Particulars	Unit	Rate (Rs.)	11 KV Lines			
				Main line with ACSR Rabbit Conductor 17 support/km		Spur line with ACSR Weasel Conductor 17 support/km	
				Qty.	Amt(Rs.)	Qty.	Amt.(Rs.)
1	2	3	4	5	6	7	8
1	PCC Support 8.5 Meter long	Nos	1976	17	33592	17	33592
2	Stone Pad 300x75 mm	Nos	88	17	1496	17	1496
3	X-arm M.S. Angle 65x65x6mm V Type 11 KV	Nos	522	17	8874	17	8874
4	Cross arms holding clamps with bolts & nuts	Nos	90	17	1530	17	1530
5	11 KV pin insulator with Pins	Nos	130	51	6630	51	6630
6	F-bracket for fitting top insulator with bolts & nuts	Nos	137	17	2329	17	2329
7	Phase wire 50 sq.mm ACSR Rabbit	Kms	27851	3.09	86060	0	0
8	Phase wire 30 sq.mm ACSR Weasel	Kms	18445	0	0	3.09	56995
9	Aluminium tape (0.77x6.4mm)	Kg	160	1	160	1	160
10	Aluminium binding wire (5mm dia)	Nos	130	2	260	2	260
11	Jointing sleeve for ACSR Rabbit	Nos	54	3	162	0	0
12	Jointing sleeve for ACSR Weasel	Nos	54	0	0	3	162
13	Danger Plate with clamps & bolts	Nos	240	17	4080	17	4080
14	Painting number mark with paint	Nos	15	17	255	17	255
15	Barbed wire GI	Kg.	84	5	420	5	420
16	Extra for stays at angle Location	Nos	1032	2	2064	2	2064
17	Extra with stays at Road crossing	Nos	1032	1	1032	1	1032
18	Extra for sectional D/P support Annexure -2	Nos	15710	1	15710	1	15710
19	Concreting of support 0.268CM/Pole	Nos	535	17	9095	17	9095
20	Earthing Complete	Nos	437	17	7429	17	7429
	Total				181178		152113
	Total (Say) Rs.				181180		152110

  
E.E.(TECHNICAL)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
13	Phase wire AAAC Weasel	Km	15540	0	0	0	0		0		0	1.03	16006
14	Natural cum earth wire (3S wire No 7/16 swg or 6 swg	Kg.	67	157	10519	157	10519	157	10519	157	10519	157	10519
15	Aluminium binding wire 6mm	Kg.	117	3	351	3	351	5	585	5	585	2	234
16	Jointing Sleeve for AAAC conductor Weasel/Rabbit	Kg.	49	0	0	0	0	2	98	2	98	4	196
17	Jointing sleeve for ACSR Conductor Weasel	Kg.	49	3	147	3	147	0	0	0	0	0	0
18	Spacer LT PVC	Nos	50	36	1800	36	1800	36	1800	36	1800	36	1800
19	Extra for stay at angle	Nos	1035	3	3105	3	3105	9	9315	9	9315	9	9315
20	Earthing complete	Nos	440	3	1320	3	1320	5	2200	5	2200	5	2200
21	Concreting of support	Nos	600	3	1800	3	1800	6	3600	6	3600	6	3600
	Total				132627.1				137435.6		193766.3		96867
	Total (Say)				132600				137400		193800		96900

*E.E.*  
E.E.(TECHNICAL)

6-

*SE*  
SE (RE)

**COST ANALYSIS OF 11/433 KV Sub-station upto 100 KVA**

Annexure -4

w.e.f. 01.04.2011  
Plains: 2011-12

Sl.No	Particular	Unit	Rate (Rs.)	25 KVA 11/0.433 on double pole PCC structure for			63 KVA 11/0.433 on double pole PCC structure for			100 KVA 11/0.433 on double pole PCC structure for					
				Village/Tow		Rural	Village/Town		Rural	Village/Town		Rural			
				Qty.	Amt (RS)	Qty.	Amt. (Rs.)	Qty.	Amt (RS)	Qty.	Amt (RS)	Qty.	Amt (RS)		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	PCC Poles 8.5 M.Long	Nos	1976	2	3952	2	3952	2	3952	2	3952	2	3952	2	3952
2	MS Channel 100x50x2028 mm(Dropper for fuse set)	Nos	960	1	960	1	960	2	1920	2	1920	2	1920	2	1920
3	Stone pad 300x300x75M	Nos	88	2	176	2	176	2	176	2	176	2	176	2	176
4	Clamps for LT Tee of with bolts & nuts	Nos	137	1	137	1	137	1	137	1	137	1	137	1	137
5	Holding clamps for top channel TPMO & fuse set etc. with bolts & nuts	Nos	158	10	1580	10	1580	12	1896	12	1896	12	1896	12	1896
6	MS angle 75x75x6x2028(T&F base)	Nos	676	2	1352	2	1352	2	1352	2	1352	2	1352	2	1352
7	MS Channel 125x65x2240(Top)	Nos	1492	1	1492	1	1492	1	1492	1	1492	1	1492	1	1492
8	11 KV Disc Insulator T&C type 4500 Kg. with fitting complete	Nos	380	3	1140	3	1140	3	1140	3	1140	3	1140	3	1140
9	MS Channel 125x65x1300mm(tee off)	Nos	848	1	848	1	848	1	848	1	848	1	848	1	848

*[Signature]*

**E.E (TECHNICAL)**

*[Signature]*  
**S.E.(RE)**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
10	11 KV Pin insulator with pins	Nos	130	3	390	3	390	3	390	3	390	3	390	3	390
11	11 KV/433 T/F 25 KVA	Nos	44369	1	44369	1	44369	0	0	0	0	0	0	0	0
12	11 KV/433 T/F 63 KVA	Nos	86649	0	0	0	0	1	86649	1	86649	0	0	0	0
13	11 KV/433 T/F 100 KVA	Nos	117481	0	0	0	0	0	0	0	0	1	117481	1	117481
14	11 KV TPMS	Nos	9465	1	9465	1	9465	1	9465	1	9465	1	9465	1	9465
15	11 KV Fuse Set	Nos	4400		0		0	1	4400	1	4400	1	4400	1	4400
16	LT incoming Panel with metering equipment & fixing arrangement (LS)	Nos	10000	1	10000	0	0	1	10000	0	0	1	10000	0	0
17	LT PVC cable 4x16 sq mm @ 160	M	160	8	1280	8	1280	0	0	0	0	0	0	0	0
18	LT PVC Cable 3.5x70/35 Sq.mm @ 220	M	220	0	0	0	0	8	1760	8	1760	0	0	0	0
19	LT PVC Cable 3.5x150/70 Sq.mm @ 326	M	326	0	0	0	0	0	0	0	0	8	2608	8	2608
20	Danger board Barbed wire including jumper	Nos	800	1	800	1	800	1	800	1	800	1	800	1	800
21	Stay complete	Nos	1032	2	2064	2	2064	2	2064	2	2064	2	2064	2	2064
22	Concreting of Pole	Nos	578	2	1156	2	1156	2	1156	2	1156	2	1156	2	1156
23	Earthing complete	Nos	437	2	874	2	874	2	874	2	874	2	874	2	874
	<b>Total</b>				<b>82035</b>		<b>72035</b>		<b>130471</b>		<b>120471</b>		<b>162151</b>		<b>152151</b>
	<b>Total (Say)</b>				<b>82040</b>		<b>72040</b>		<b>130470</b>		<b>120470</b>		<b>162150</b>		<b>152150</b>

*[Signature]*  
E.E (TECHNICAL)

PART - B

ABSTRACT OF various type of 33 KV lines

Plains 2011-12  
W.E.F 01.04.2011

Sl. No.	Name of works	Cost of material	cartage charges @8%	Erection charges @7%	Total of Col. 3,4,&5	3% contingencies on Col. 6	Total of Col. 6&7	1.5% T&P on Col. 8	31.5% of Estab. & AA Charges on Col. 8	Total of Col. 8,9&10	Reference
1	2	3	4	5	6	7	8	9	10	11	12
	<b>33 KV Lines (Per Kilometer)</b>										
1	On 11 M long STP with ACSR Dog conductor	4.754	0.380	0.333	5.467	0.164	5.631	0.084	1.774	7.489	Annex-5
2	On 9 M long PCC with ACSR Dog conductor	3.353	0.268	0.235	3.856	0.116	3.972	0.060	1.251	5.282	Annex-5
3	On 11 M long STP with ACSR Raccoon conductor	4.360	0.349	0.305	5.014	0.150	5.164	0.077	1.627	6.869	Annex-5
4	On 9 M long PCC with ACSR Raccoon conductor	2.772	0.222	0.194	3.188	0.096	3.283	0.049	1.034	4.367	Annex-5

Note: The cartage and erection charges have been taken @ 8% & 7% of the cost of material respectively. The actual charges may vary from site to site.

  
E.E.

## COST ANALYSIS OF ONE KILOMETER OF 33 KV LINE WITH ACSR 'DOG' and 'RACOON' Conductor

w.e.f. 01.04.2011  
Plans: 2011-12

S. No	Particular	Unit	Rate (Rs.)		ACSR Dog conductor				ACSR Racoon conductor			
			Rate (Rs.)		On STP11 M		On PCC Pole 9 M.		On STP 11 M		On PCC Pole 9 M.	
			Qty.	Amount (RS)	Qty.	Amount (RS)	Qty.	Amount (RS)	Qty.	Amount (RS)	Qty.	Amount (RS)
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Cost of single support											
	STP (Annex. 6)	Nos	18570	14	259980	0	0	18570	14	259980	0	0
	PCC (Annex. 7)	Nos	8170	0	0	16	130720	6910	0	0	16	110560
2	Extra cost of section and heavy angle points on double pole											
	STP (Annex. 8)	Nos	41350	0.5	20675	0	0	35770	0.5	17885	0	0
	PCC (Annex. 9)	Nos	34780	0	0	0.5	17390	30460	0	0	0.5	15230
3	Extra cost of stay at right angle	Nos	1730	2	3460	2	3460	1680	2	3360	2	3360
4	ACSR "Dog" conductor	Km	56133	3.09	173451	3.09	173451	0	0	0	0	0
5	ACSR : Racoon conductor	Km	0	0	0	0	0	44500	3.09	137505	3.09	137505
6	GI Earthwith 7/1.6 mm or 16 SWG	Kg	65	127	8255	0	0	59	127	7493	0	0
7	Alluminium jointing sleeves	Nos	49	3	147	3	147	49	3	147	3	147
8	Earthing complete	Nos	394	14	5516	16	6304	415	14	5810	16	6640
9	Extra cost of Road/ communication lines / 11kv lines	Nos	6430	0.5	3215	0.5	3215	6230	0.5	3115	0.5	3115
10	Tree cutting compensation	KM	660	1	660	1	660	660	1	660	1	660
	<b>Total Rs.</b>				<b>475359</b>		<b>335347</b>			<b>435955</b>		<b>277217</b>
	<b>Say Rs. in Lakhs</b>				<b>4.754</b>		<b>3.353</b>			<b>4.360</b>		<b>2.772</b>

S.E.

**Cost of single line support on ST Pole of 11 Meter inclusive of fitting**

Plains 2011-12  
w.e.f. 1.4.2011

Sl.N o.	Particulars	Unit	Rate (Rs.)	Qty.	Amt.(Rs)
1	2	3	4	5	6
1	ST Pole - SP-55	No.	13708	1	13708
2	X arm channel 100x50mm V type	No.	1045	1	1045
3	Clamps for above with bolts and nuts	No.	439	1	439
4	F-bracket for 33 KV	No.	227	1	227
5	33 KV Pin Insulators	No.	211	3	633
6	33 KV pin with nuts	No.	206	3	618
7	Earth wire clamp with bolts & nuts	No.	178	1	178
8	Armour rod with ferules	Set	145	3	435
9	Stone pad	No.	88	1	88
10	Number plates	No.	69	1	69
11	Danger board with clamp for 33 KV	No.	240	1	240
12	Barbed wire	Kg.	85	2	170
13	Bolts, Nuts & washers all sizes	Kg.	102	1	102
14	Alluminium paint	Ltr	200	1	200
15	Red oxide paint	Ltr	100	1	100
16	Alluminium binding wire 6 SWG	Kg.	130	0.5	65
17	Concreting of supports	Cub. M	569	0.44	250
	Total				18567
	<b>Total (say)</b>				<b>18570</b>

  
EE (TECHNICAL)

11-

  
SE (RE)



## Cost of single support on 9.0 M long PCC Pole including fittings

Plains 2011-12

w.e.f. 1.4.2011

S.No.	Particulars	Unit	Rate (Rs.)	Qty.	Amt.(Rs)
1	2	3	4	5	6
1	9.0 M. long PCC pole	No.	3130	1	3130
2	V type cross arm	No.	1045	1	1045
3	Cross arm holding clamp with bolts & nuts	No.	301	1	301
4	F-bracket	No.	226	1	226
5	33 KV Pin Insulators	No.	211	3	633
6	33 KV pin with nuts	No.	206	3	618
7	Armour Rod with Ferrule	Set	145	3	435
8	Stone pad	No.	88	1	88
9	Number plates with clamp for pcc poles	No.	69	1	69
10	Danger board with clamp for 33 KV	No.	240	1	240
11	Barbed wire	Kg.	84	2	168
12	Bolts, Nuts & washers	Kg.	102	1	102
13	Alluminium binding wire	Kg.	130	0.5	65
14	Earthing	No.	437	1	437
15	Concreting (0.285 Cub.M)	No.	2160	0.285	616
	<b>Total</b>				<b>8173</b>
	<b>Say</b>				<b>8170</b>

  
EE (TECHNICAL)

12-

  
SE (RE)

**Extra cost of sectional double pole structure with 11 M long Steel Tubular Pole in case of line on STP**

Plains 2011-12

w.e.f. 1.4.2011

Sl.N o.	Particulars	Unit	Rate (Rs.)	Qty.	Amt.(Rs)
1	2	3	4	5	6
1	STP-SP-55	No.	13708	2	27416
2	MS Angle Iron 65x65x6mm bracing with 4 clamps	No.	4391	1	4391
3	Top channel 125x65mm 3200 mm (10.70 kg/M)	No.	1594	1	1594
4	Stone pad	No.	88	2	176
5	11 KV Disc. insulators B&S type 7000 kg	No.	202	24	4848
6	Disc. fittings Dog/Racoon 7000 kg	No.	219	6	1314
7	33 KV Pin Insulators	No.	211	3	633
8	33 KV Pin with nuts	No.	206	3	618
9	Earth wire clamp with bolts & nuts	No.	175	1	175
10	PG clamps	No.	134	12	1608
11	E-bracket for 33 KV	No.	219	3	657
12	BNumber plates	No.	69	1	69
13	Danger board with clamp for KV	No.	240	1	240
14	Barbed wire	Kg.	84	4	336
15	Alluminium tape	Kg.	160	1	160
16	Alluminium paint	Ltr.	200	2	400
17	Bolts, nuts & washers	Kg.	102	3	306
18	Red oxide paints	Ltr.	100	2	200
19	Stay	No.	1730	8	13840
20	Concreting of supports	Cub.M	569	0.88	501
21	Earthing	No.	437	1	437
	<b>Total cost</b>				<b>59919</b>
	<b>Less Cost of single supports as per annexure 6 :-</b>				<b>18570</b>
	<b>Extra cost of section double pole in place of single support</b>				<b>41349</b>
				<b>Say</b>	<b>41350</b>

  
EE (TECHNICAL)

**Extra cost for sectional double pole structure with 9 meter long  
PCC Pole in case of line on PCC Pole**

Plains 2011-12  
w.e.f. 1.4.2011

Sl.N o.	Particulars	Unit	Rate (Rs.)	Qty.	Amt.(Rs)
1	2	3	4	5	6
1	9.0 M. long PCC pole	No.	3130	2	6260
2	MS Angle Iron 65x65x6mm bracing with 4 clamps	No.	4391	2	8782
3	Top channel 125x65mm 3200 mm (10.70 kg/M with clamp	No.	1594	1	1594
4	Stone pad	No.	88	2	176
5	11 KV Disc. insuiators B&S type 7000 kg	No.	202	24	4848
6	Disc. fittings Dog/Racoon 7000 kg	No.	219	6	1314
7	33 KV Pin Insulators	No.	211	3	633
8	33 KV Pin with nuts	No.	206	3	618
9	Earth wire clamp with bolts & nuts	No.	175	1	175
10	PG clamps for	No.	134	12	1608
11	E-bracket for 33 KV	No.	219	3	657
12	Number plates with clamp for pcc poles	No.	69	1	69
13	Danger board with clamp for 33 KV	No.	240	1	240
14	Barbed wire	Kg.	84	4	336
15	Alluminium tape	Kg.	160	1	160
16	Alluminium paint	Ltr.	200	1	200
17	Bolts, nuts & washers	Kg.	102	3	306
18	Stay	No.	1730	8	13840
19	Concreting of suppolrts (0.285 CU.M. each) @ Rs.1800/Cu.M	No.	569	2	1138
20	Earthing	No.		1	0
	<b>Total cost</b>				<b>42954</b>
	<b>Less cost for Single pole (Annexure-7)</b>				<b>8170</b>
	<b>Extra cost for sectional double pole in place of single pole:</b>				<b>34784</b>
	<b>Say</b>				<b>34780</b>

  
EE (TECHNICAL)

PART-C

ABSTRACT OF various type of 33/11 KV Sub station

Plains 2011-12  
W.E.F 01.04.2011  
Rs. in Lacs

Sl. No.	Name of works	Cost of material	cost of civil works	cartage charges @ 3%	Erection charges@ 4%	Total of Col. 3,4,5&6	3% contingencies on Col. 7	Total of Col. 7 & 8	1.5% T&P on Col. 9	31.5% of Estab. & AA Charges on Col. 9	Total of Col. 9,10 & 11	References
1	2	3	4	5	6	7	8	9	10	11	12	13
	<b>33 KV New Sub stations:-</b>											
1	1x5 MVA	59.329	26.220	1.780	2.373	89.702	2.691	92.393	1.386	29.104	122.883	Annex. 10
2	2x5 MVA	101.648	26.220	3.049	4.066	134.983	4.050	139.033	2.085	43.795	184.914	Annex. 10
3	1x8 MVA	77.841	26.220	2.335	3.114	109.510	3.285	112.795	1.692	35.530	150.018	Annex. 10
4	2x8 MVA	138.672	26.220	4.160	5.547	174.599	5.238	179.837	2.698	56.649	239.183	Annex. 10
5	1x10 MVA	72.267	26.220	2.168	2.891	103.546	3.106	106.652	1.600	33.595	141.847	Annex. 10
6	2x10 MVA	127.524	26.220	3.826	5.101	162.671	4.880	167.551	2.513	52.779	222.843	Annex. 10

Note: The cartage and erection charges have been taken @3% & 4% of the cost of material respectively . The actual charges may vary from site to site.

## Cost analysis of 33/11 KV sub-station

W.E.F 01.04.2011  
PLAINS : 2011-12

Sl. No.	Particulars	Unit	Rate (Rs)	1x5 MVA		2x5 MVA		1x8 MVA		2x8 MVA		1x10 MVA		2x10 MVA	
				Qty.	Amount (Rs)	Qty	Amount (Rs)	Qty	Amount (Rs)	Qty	Amount (Rs)	Qty	Amount (Rs)	Qty	Amount (Rs)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Terminal Gantry	Nos	94050	1	94050	1	94050	1	94050	1	94050	1	94050	1	94050
2	Main bus bar complete with structure	Nos	227128	1	227128	1	227128	1	227128	1	227128	1	227128	1	227128
3	33 KV Pin insulator with pins	Nos	472	3	1416	3	1416	3	1416	3	1416	3	1416	3	1416
4(I)	33 KV line Isolator	Nos	33151	1	33151	1	33151	1	33151	1	33151	1	33151	1	33151
(II)	33 KV bus type isolator	Nos	27877	1	27877	2	55754	1	27877	2	55754	1	27877	2	55754
(III)	Structure for above	Nos	14820	2	29640	3	44460	2	29640	3	44460	2	29640	3	44460
5(I)	33 KV post insulator	Nos	640	6	3840	6	3840	6	3840	6	3840	6	3840	6	3840
(II)	Structure for above	Nos	5395	2	10790	2	10790	2	10790	2	10790	2	10790	2	10790
6(I)	33 KV lightening arresters	Sets	4450	2	8900	3	13350	2	8900	3	13350	2	8900	3	13350
(II)	Structure for above	Nos	5395	2	10790	3	16185	2	10790	3	16185	2	10790	3	16185
7	Plinth & foundations for structure														
8	33 / 11KV transformers														
	5 MVA	Nos	2933000	1	2933000	2	5866000	0	0	0	0	0	0	0	0
	8 MVA	Nos	4784200	0	0	0	0	1	4784200	2	9568400	0	0	0	0
	10 MVA	Nos	4226800	0	0	0	0	0	0	0	0	1	4226800	2	8453600
9	90 lbs rail pieces for transformer (44.64kg/M)	M	3000	6.9	20760	14	41520	6.9	20760	14	41520	6.9	20760	14	41520
10	Plinth of transformer	Nos	75900	1	75900	2	151800	1	75900	2	151800	1	75900	2	151800

Included in the cost of structure

G. S. S. (TECHNICAL)

16-

SE (RE)

Sl. No.	Particulars	Unit	Rate (Rs)	1x5 MVA		2x5 MVA		1x8 MVA		2x8 MVA		1x10 MVA		2x10 MVA	
				Qty.	Amount (Rs)	Qty	Amount (Rs)	Qty	Amount (Rs)	Qty	Amount (Rs)	Qty	Amount (Rs)	Qty	Amount (Rs)
1	2	Nos	4	5	6	7	8	9	10	11	12	13	14	15	16
11(a)	33 KV VCB with single T/F control panel CT 200/100/1-A with CT structure	Nos	359248	1	359248	0	0	1	359248	0	0	1	359248	0	0
11(b)	33 KV VCB with double T/F control panel CT 200/100/1-A with CT structure	Nos	396841	0	0	1	396841	0	0	1	396841	0	0	1	396841
12	Pilinth & foundation of VCB	Nos	13662	1	13662	2	27324	1	13662	2	27324	1	13662	2	27324
13	11 KV VCB														
I)	600/300/5A, 350MVA I/C	Nos	291186	1	291186	2	582372	1	291186	2	582372	1	291186	2	582372
II)	Outgoing 200/100/5A 350 MVA	Nos	200724	4	802896	6	1204344	4	802896	6	1204344	4	802896	6	1204344
III)	Bus coupler 350/MVA	Nos	168946	0	0	1	168946	0	0	1	168946	0	0	1	168946
14	11 KV 3 core cable														
I)	300 mm sq. XLPE	M	919	60	55140	120	110280	60	55140	120	110280	60	55140	120	110280
II)	120mm sq XLPE	M	475	240	114000	360	171000	240	114000	360	171000	240	114000	360	171000
15	Laying of 11 KV cable including cost of sand & bricks	M	125	270	33750	420	52500	270	33750	420	52500	270	33750	420	52500
16	Making of 11 KV cable boxes mounted with switchgears and transformers	Nos	13200	6	79200	10	132000	6	79200	10	132000	6	79200	10	132000
17	11 KV cable jointing kit outdoor 120 sq.mm.	Nos	5244	4	20976	6	31464	4	20976	6	31464	4	20976	6	31464
18	24 volt battery and battery charger with Control Cable	Nos	40000	1	40000	1	40000	1	40000	1	40000	1	40000	1	40000
-1	4x2.5 mm sq	M	200	100	20000	200	40000	100	20000	200	40000	100	20000	200	40000
-2	2x2.5mm sq	M	115	100	11500	200	23000	100	11500	200	23000	100	11500	200	23000

EE (TECHNICAL)

Sl. No.	Particulars	Unit	Rate (Rs)	1x5 MVA		2x5 MVA		1x8 MVA		2x8 MVA		1x10 MVA		2x10 MVA	
				Qty.	Amount (Rs)	Qty	Amount (Rs)	Qty	Amount (Rs)	Qty	Amount (Rs)	Qty	Amount (Rs)	Qty	Amount (Rs)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
20	Earthing of substation				0		0		0		0		0		0
(a)	Outdoor equipment (earth mat)	Nos	264000	1	264000	1	264000	1	264000	1	264000	1	264000	1	264000
(b)	Indoor equipment	Nos	18370	1	18370	1.5	27555	1	18370	1.5	27555	1	18370	1.5	27555
21	Barbed wire fencing with gate etc (switchyard)	Nos	103100	1	103100	1	103100	1	103100	1	103100	1	103100	1	103100
22	Outdoor switchyard & Approach Road lighting	Nos	101710	1	101710	1	101710	1	101710	1	101710	1	101710	1	101710
23	63 KVA 11/0.4 KV T/F	Nos	86649	1	86649	1	86649	1	86649	1	86649	1	86649	1	86649
24	11KV TPMO switch with fixing clamps	Nos	9470	1	9470	1	9470	1	9470	1	9470	1	9470	1	9470
25	11 KV fuse set with fixing clamps	Nos	4550	1	4550	1	4550	1	4550	1	4550	1	4550	1	4550
26	Cost of accessories for mounting of 63 KVA T/F		16800	1	16800	1	16800	1	16800	1	16800	1	16800	1	16800
27	Painting of S/s structure		LS	-	6000	-	7000	-	6000	-	7000	-	6000	-	7000
28	Sundry stores		LS	-	3500	-	4500	-	3500	-	4500	-	3500	-	4500
	Total cost of material Rs.				5932949		10164849		7784149		13867249		7226749		12752449
	Say Rupees in Lacs				59.329		101.648		77.841		138.672		72.267		127.524

Note: 1- Provision of cost of Land 1.5 acre for substation has not been made. The same may be added as per actuals.

2- The stock issue rates of 8 MVA & 10 MVA are not propotinate. As such estimates may be prepared as per procurement rate by Discom.

  
EE (TECHNICAL)

Annexure -11  
**Cost of civil works for Conventional 33/11 KV Sub-station as intimated by civil wing Shakti**

Bhawani Extn., Lucknow

Plains 2011-12  
W.E.F 01.04.2011

Sl. No.	Type of building	Unit	Rate (Rs)	Conventional type S/s	
				Qty.	AMT. (Rs)
1	2	3	4	5	6
1	Switchgear Rooms	Nos	1587000	1	1587000
2	Road culvetts, Gate, fencing etc.	Nos	1035000	1	1035000
	<b>Total</b>				<b>2622000</b>
	<b>Say (Rs. in Lacs)</b>				<b>26.220</b>
3	Urban Area				
(i)	Double storey switch gear building, boundary wall etc.	Nos	5780820		
(ii)	Single storey, switch gear room, boundary wall, collection, room etc.	Nos	3967500		
(iii)	Double storey indoor 33/11KV S/s collection room, boundary wall etc.	Nos	9067980		

Note:-The above rates are exclusive of Rehtretment/Black cotton treatment (15%) and white ant protection (5%). These rates do T&P as well Establishment and AA charges.

  
**EE (TECHNICAL)**



**PART-D**

**ABSTRACT OF COST OF INCREASING CAPACITY OF 33/11 KV SUB STATION**

Plains 2011-12

W.E.F 01.04.2011

Rs. in Lacs

Sl. No.	Name of works	Cost of new material	cartage charges @ 3%	Erection charges @4%	Total of Col. 3, 4&5	3% contingencies on Col. 6	Total of Col. 6 & 7	1.5% T&P on Col. 8	31.5% of Estab. & AA Charges on Col. 8	Total of Col. 8+9+10 for turn key	Cost of material received back (to be adjusted)	Reference
1	2	3	4	5	6	7	8	9	10	11	12	13
1	1x3 to 1x5 MVA	35.760	1.073	1.430	38.263	1.148	39.411	0.591	12.415	52.417	18,200	Annex. 12
2	1x3 to 2x3 MVA	34.920	1.048	1.397	37.364	1.121	38.485	0.577	12.123	51.185	3,670	Annex. 12
3	1x3 to (3+5) MVA	46.140	1.384	1.846	49.370	1.481	50.851	0.763	16.018	67.632	3,670	Annex. 12
4	2x3 to (3+5) MVA	35.100	1.053	1.404	37.557	1.127	38.684	0.580	12.185	51.449	18,350	Annex. 12
5	2x3 to 2x5 MVA	70.260	2.108	2.810	75.178	2.255	77.433	1.161	24.391	102.985	36,550	Annex. 12
6	1x5 to (3+5) MVA	34.920	1.048	1.397	37.364	1.121	38.485	0.577	12.123	51.185	3,670	Annex. 12
7	1x5 to 2x5 MVA	45.712	1.371	1.828	48.912	1.467	50.379	0.756	15.869	67.004	3,670	Annex. 13
8	(3+5) to 2x5 MVA	35.060	1.052	1.402	37.514	1.125	38.639	0.580	12.171	51.390	18,200	Annex. 13

**Note:** The cartage of erection charges has been taken as 3% and 4% of cost of material respectively. The actual charges may vary from site to site.

*[Signature]*  
EE (TECHNICAL)

*[Signature]*  
SE (RE)

## Cost analysis of increasing capacity of 33/11 KV sub-station

W.E.F 01.04.2011  
PLAINS : 2011-12

Sl. No.	Particulars	Unit	Rate (Rs)	1x3 MVA to 1x5 MVA		1x3 MVA to 2x3 MVA		1x3 MVA to (5+3) MVA		2x3 MVA to (3+5) MVA		2x3 MVA to 2x5 MVA		1x5 MVA to (3+5) MVA	
				Qty	Amt. (Rs)	Qty	Amt. (Rs)	Qty	Amt. (Rs)	Qty	Amt. (Rs)	Qty	Amt. (Rs)	Qty	Amt. (Rs)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1(i)	33 KV bus type isolator	Nos	27877	0	0	2	55754	2	55754	0	0	0	0	2	55754
(ii)	Structure for above	Nos	14685	0	0	2	29370	2	29370	0	0	0	0	2	29370
2(i)	33 KV post insulator set	Nos	788	0	0	-3	-2364	-3	-2364	-6	-4728	-6	-4728	-3	-2364
(ii)	Structure for above	Nos	5350	0	0	-1	-5350	-1	-5350	-2	-10700	-2	-10700	-1	-5350
3	Transformers bus bar complete with structure	Nos	85700	0	0	1	85700	1	85700	0	0	0	0	1	85700
4(i)	33 KV lightening arestor	Nos	4450	0	0	1	4450	1	4450	0	0	0	0	1	4450
(ii)	Structure for above	Nos	5350	0	0	1	5350	1	5350	0	0	0	0	1	5350
5	33/11 KV Transformers														
(i)	3 MVA	Nos	1820000	-1	-1820000	1	1820000	0	0	-1	-1820000	-2	-3640000	1	1820000
(ii)	5 MVA	Nos	2933000	1	2933000	0	0	1	2933000	1	2933000	2	5866000	0	0
6	90lbs rail pieces 44.64 kg/M	M	2600	0	0	6	15600	6	15600	0	0	0	0	6	15600
7	Plinth & foundation for transformers		72700	0	0	1	72700	1	72700	1	72700	2	145400	1	72700
8(i)	33 KV VCB with single transformer control pannel and CT200/100/1A with structure	Nos	359248	1	359248	-1	-359248	-1	-359248	0	0	0	0	-1	-359248
(ii)	33 KV VCB with Double T/F control pannel and CT 200/100/1A with structure	Nos	396841	0	0	1	396841	1	396841	1	396841	1	396841	1	396841
(iii)	Plinth & foundation for VCB	Nos	13662	1	13662	1	13662	1	13662	1	13662	1	13662	1	13662
9	11 KV Switchgears														
(i)	Incomming of 400/200/5A/250MVA	Nos	218485	1	218485	1	218485	1	218485	0	0	0	0	1	218485
(ii)	Outgoing 100/50/5A/250MVA	Nos	200724	2	200724	2	401448	2	401448	0	0	2	401448	2	401448

EE (TECHNICAL)

SE (RE)

Sl. No.	Particulars	Unit	Rate (Rs)	1x3 MVA to 1x5 MVA		1x3 MVA to 2x3 MVA		1x3 MVA to (5+3) MVA		2x3 MVA to (3+5) MVA		2x3 MVA to 2x5 MVA		1x5 MVA to (3+5) MVA	
				Qty	Amt. (Rs)	Qty	Amt. (Rs)	Qty	Amt. (Rs)	Qty	Amt. (Rs)	Qty	Amt. (Rs)	Qty	Amt. (Rs)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
(iii)	Bus coupler	Nos	160081	0	0	1	160081	1	160081	0	0	0	0	1	160081
10	11KV 3 Core cable														
(i)	120 mm sq. XLPE	M	475	0	0	120	57000	120	57000	0	0	120	57000	120	57000
(ii)	185 mm sq. XLPE	M	623	120	74760	30	18690	0	0	0	0	0	0	30	18690
(iii)	300 mm sq. XLPE	M	919	50	45950	0	0	30	27570	60	55140	60	55140	0	0
11	Laying of 11 KV cable including cost of sand & bricks	M	125	170	21250	150	18750	150	18750	60	7500	180	22500	150	18750
12	Making of 11 KV cable boxes mounted with switchgears and T/F (Kit)	Nos	12500	2	25000	4	50000	4	50000	2	25000	4	50000	4	50000
13	11 KV cable jointing with 120 sq.mm.	Nos	6000	0	0	2	12000	2	12000	0	0	2	12000	2	12000
14	Control cable				0										
(i)	4x2.5 mm sq	M	257	100	25700	100	25700	100	25700	0	0	0	0	100	25700
(ii)	2x2.5mm sq	M	163	100	16300	100	16300	100	16300	0	0	0	0	100	16300
15	Earthing of indoor equipments	Nos	16550	0	0	0.5	8275	0.5	8275	0	0	0	0	0.5	8275
16	Painting of S/s structure (LS)	Nos	5000	0	0	1	5000	1	5000	1	5000	1	5000	1	5000
17	Sundries (LS)	Nos	1200	1	1200	1	1200	1	1200	1	1200	1	1200	1	1200
18	Total Cost of new materials				3576031		3492356		4614236		3510043		7026191		3492356
	Total Cost of new materials (Rs.in Lacs)				35.760		34.920		46.140		35.100		70.260		34.920
	Total cost of material received back				-1820000		-366962		-366962		-1835428		-3655428		-366962
	Total cost of material received back (Rs.in Lacs)				18.200		3.670		3.670		18.350		36.550		3.670

EE (TECHNICAL)

SE (RE)

## Cost analysis of increasing capacity of 33/11 KV Substation

PLAINS-2011-12

WEF 1.4.11

Sl. No.	Particulars	Unit	Rates Rs.	1x5 MVA to 2x5 MVA		(3+5) MVA to 2x5 MVA	
				Qty	Amount	Qty	Amount
1	2	3	4	5	6	7	8
1(i)	33 KV bus type isolator	Nos.	27877	1	27877	0	0
(ii)	Structure for above	Nos.	14685	1	14685	0	0
2(i)	33 KV Post insulator	Nos.	788	-3	-2364	0	0
(ii)	Structure for above	Nos.	5350	-1	-5350	0	0
3	Transformer bus complete with structure	Nos.	85700	1	85700	0	0
4(i)	33 KV lighting arrestor	Set	4450	1	4450	0	0
(ii)	Structure for above	Nos.	5350	1	5350	0	0
5	33/11 KV Transformer						
(i)	3 MVA	Nos.	1820000	0	0	-1	-1820000
(ii)	5 MVA	Nos.	2933000	1	2933000	1	2933000
6	90 lbs rail pieces (44.64kg/M)	M.	2600	6	15600	0	0
7	Plinth & foundation of transformer	Nos.	72200	1	72200	0	0
8(i)	33 KV VCB with single T/F control pannel and CT 200/100/1A with structure	Nos.	359248	-1	-359248	0	0
(ii)	33 KV /VCB with double T/F control pannel and CT 200/100/1A with structure	Nos.	396841	1	396841	0	0
9	Plinth & foundation of VCB	Nos.	13662	1	13662	0	0
10	11 KV VCB						
(i)	Incoming 400/200/5A 250 MVA	Nos.	218485	1	218485	0	0
(ii)	Outgoing 200/100/5A 350 MVA	Nos.	200724	2	401448	2	401448
(iii)	Bus coupler	Nos.	160081	1	160081	0	0
11	11 KV 3 core cable						
(i)	120 mm sq XLPE	M.	475	120	57000	120	57000
(ii)	300 mm sq XLPE	M.	919	30	27570	30	27570


 EE (TECHNICAL)

23-

SE (RE)

Sl. No.	Particulars	Unit	Rates Rs.	1x5 MVA to 2x5 MVA		(3+5) MVA to 2x5 MVA	
				Qty	Amount	Qty	Amount
1	2	3	4	5	6	7	8
12	Laying of 11 KV cable including cost of bricks and sand	M.	125	150	18750	150	18750
13	Making of 11 KV cable boxes mounted with switchgears and transformers (Kit)	Nos.	12500	4	50000	4	50000
14	11 KV cable jointing kit 120 mm	Nos.	6000	2	12000	2	12000
15	Control cable				0		0
(i)	4x2.5 mm sq	M.	257	100	25700	0	0
(ii)	2x2.5 mm sq.	M.	163	100	16300	0	0
16	Earthing of indoor equipments	Nos.	16550	0.5	8275	0	0
17	Painting of indoor equipments	LS	5000	1	5000	1	5000
18	Sundries	LS	1200	1	1200	1	1200
	<b>Total cost of new materials</b>				<b>4571174</b>		<b>3505968</b>
	<b>Say (Rs. in Lacs)</b>				<b>45.712</b>		<b>35.060</b>
	<b>Cost of materials received back</b>				<b>-366962</b>		<b>-1820000</b>
	<b>Cost of materials received back(Rs. In Lacs)</b>				<b>-3.670</b>		<b>-18.200</b>

  
EE (TECHNICAL)

24-

  
SE (RE)

**ESTIMATED COST OF ONE POLE WITH AVERAGE SPAN OF 40 METER OF 11 KV 3 PHASE WIRE SPUR LINE WITH WEASEL ACSR CONDUCTOR ON 8.5 METER LONG PCC POLE TO BE LAID INSIDE VILLAGES FOR VILLAGE ELECTRIFICATION.**

Sl. No.	Items	Unit	Qty.	Rate (Rs)	Amt.(Rs)
1	Pole PCC 8.5 Meter Long	No	1	1976.00	1976.00
2	Conductor Weasel ACSR	Meters	124	18.50	2294.00
3	11 KV Pin Insulators with pins	Nos	3	130.00	390.00
4	11 KV V-type Cross-arm (MS. angle 65x65x6 mm)	Nos	1	522.00	522.00
5	Guarding Cross-arm (M.S. angle 65x65x6mm/1.6 Meter long), 5.8kg./M=9.28kg.	Nos	1	475.00	475.00
6	L.T. Cross arm (MS angle 65x65x6mm, 1.00 Meter long)	Nos	1	350.00	350.00
7	F-bracket with bolt & nuts	Nos	1	137.00	137.00
8	G.I. wire 6 SWG and 10 SWG for guarding, lacing and street light cable catenary	Kg.	22	69.00	1518.00
9	L.T. PVC Al 2x4sq. mm cable for street light	Meters	50	38.00	1900.00
10	Clamp for fixing X-arms with bolts and nuts (3 No.X-arms)	Nos	3	90.00	270.00
11	Eye bolts for guard wires and LT cable catenary wires	Nos	3	30.00	90.00
12	Danger Board, number plate with fixing clamp, nuts and bolts	Set	1	307.00	307.00
13	G.I. Barbed wire	Kg.	1	84.00	84.00
14	Stone Pad (300x300x75mm)	No	1	88.00	88.00
15	Stay complete	No	0.50	1116.00	558.00
16	Earthing complete	No	1	437.00	437.00
17	Grouting of pole (0.268 cm) @ 1800	No	1	535.00	535.00
18	Total Cost of materials				11931.00
19	i) Cartage charges		1	1086.00	1086.00
	ii) Erection charges		1	1130.00	1130.00
20	Sub Total				14147.00
21	O.H. charges @ 36% on (20) above (31.5% Establishment +1.5% T&P +3% contingency)				5093.00
22	Grand Total				19240.00
				Say	19240

  
E.E. (TECHNICAL)

25-

  
S.E. (RE)

**ESTIMATED COST OF SECTIONAL POLE ON 8.5 METER LONG PCC POLES  
WITH 11 KV TPMO RURAL AREA FOR VILLAGE ELECTRIFICATION.**

Sl. No.	Items	Unit	Qty.	Rate (Rs)	Amt.(Rs)
1	Pole PCC 8.5 Meter Long	No	2	1976.00	3952.00
2	Stone Pad	No	2	88.00	176.00
3	M.S. Channel Cross Arm (100X50X75mm) Top Channel	No	1	1044.00	1044.00
4	Cross bracing M.S. Angle (50X50X6mm) 4.5 Kg/M with	Sets	1	2084.00	2084.00
5	Clamps with Nuts & Bolts Channel	Nos	2	158.00	316.00
6	Barbed wire GI	Kg.	2	84.00	168.00
7	Danger Board & Clamps with bolts &nuts	No.	1	240.00	240.00
8	Concreting Of poles (0.268 cm @1800)	No.	2	535.00	1070.00
9	Earthing complete	No.	2	437.00	874.00
10	"E" Bracket with nuts & bolts	No.	3	108.00	324.00
11	11 KV Disc insuiators with fittings	Sets	6	361.00	2166.00
12	11 KV pin insulators with pins	No.	3	130.00	390.00
13	PG Clamps for weasel	No.	6	79.00	474.00
14	Stay complete	No.	6.00	1032.00	6192.00
15(a)	11 KV TPMO with fixing clamps	No.	1	9605.00	9605.00
15(b)	11 KV Fuse Sets (drop out) with clamps	No.	1	4550.00	4550.00
16	Total Cost of materials				<b>33625.00</b>
17	i) Cartage charges				2463.00
	ii) Erection charges				3280.00
18	Sub Total				<b>39368.00</b>
19	O.H. charges @ 36% on (20) above (31.5% Establishment +1.5% T&P +3% contingency)				14172.00
20	<b>Grand Total</b>				<b>53540.00</b>
				<b>Say</b>	<b>53540</b>

  
E.E (TECHNICAL)

26-

  
S.E.(RE)

**ESTIMATED COST OF SINGLE POLE MOUNTED, 11 KV/230 V SINGLE PHASE 10 KVA TRANSFORMER SUB STATION FOR HVDS SYSTEM IN RURAL AREA FOR VILLAGE ELECTRIFICATION.**

Sl. No.	Particulars	Unit	Unit Rates Rs.	10 KVA	
				Qty	Amount
1	2	3	4	5	6
1	Transformers				
	10 KVA, 11 KV/230 V, 1 Ph. T/F.	Nos.	19525	1	19525
2	Distribution Box (D.B.)	Nos.	3030	1	3030
3	Clamps for D.B. (40x6mm)	Nos.	79	2	158
4	Clamps for T/F (75x8mm)	Nos.	330	2	660
5	ACSR Weasel Jumpers	M.	18.5	10	185
6	11 KV Pin Insulator with pins	Nos.	130	2	260
7	Eye bolts for service cables	Nos.	30	3	90
8	PVC Cables				0
	i) 10 Sq. MM single core	M.	25	5	125
	ii) 16 Sq. mm. single core	M.	30	0	0
9	Stay complete	Set	1116	1	1116
10	Earthing complete	Nos.	437	2	874
11	Total Cost of materials				26023
12	i) Cartage charges		LS		1041
	ii) Erection charges		LS		1312
13	Sub Total				28376
14	O.H. charges @ 36% on (13) above (31.5% Estt. +1.5% T&P +3% contingency)				10215
15	Grand Total				38591
			<b>SAY</b>	<b>Total</b>	<b>38590</b>

  
E.E (TECHNICAL)

27-

  
S.E.(RE)