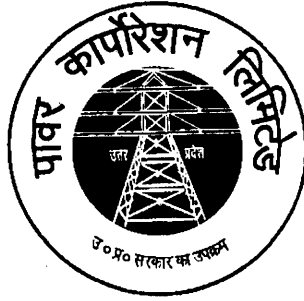
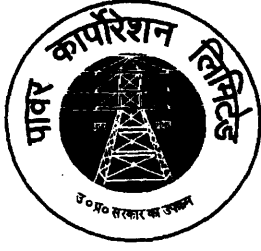


उत्तर प्रदेश पावर कारपोरेशन लिमिटेड



कास्ट शेडयूल (संशोधित)
2021-22

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



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

No: 3621-RESSPO/Tech./CS (2021-22)

Dated: 23 October, 2021

CORIGENDUM

In partial modification of Office Memorandum no.:- 3599/RESSPO/Tech./CS(2021-22) dated 22nd Oct. 2021, the cost schedule has been revised. The revised cost schedule is enclosed herewith.

Encl:- As above


Chief Engineer (DSM)

No.: 3621 -RESSPO/Tech./CS(2021-22) dated - 23-10-2021

Copy forwarded to the following for information and necessary action :

1. Managing Director, Vidyut Vitaran Nigam Ltd., Purvanchal-Varanasi/ Madhyanchal-Lucknow/ Dakshinanchal-Agra/ Paschimanchal-Meerut/ KESCo-Kanpur.
2. All Chief Engineers - Distribution Zones/LESA, UPPCL.


Chief Engineer (DSM)

No.: 3621 -RESSPO/Tech./CS(2021-22) dated - 23-10-2021

Copy forwarded to the following for information and necessary action :

3. Staff Officer to Chairman, UPPCL, Lucknow.
4. CE(MM)/CE(Commercial)/CE(CMUD), UPPCL, Lucknow
5. GM (Audit and Accounts)/(Budget and Cost), UPPCL, Lucknow.
6. Chief Engineer (IT), UPPCL, 5th Floor, Shakti Bhawan Extn, Lucknow with the remark that the previous cost schedule may be removed and revised cost schedule may be uploaded on UPPCL Website.


Chief Engineer (DSM)





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

No. 3599-RESSPO/Tech./CS(2021-22)

Date: 22 October, 2021

OFFICE MEMORANDUM

In supersession of all previous orders for the construction of 33 KV and LT lines, 11/0.4 KV sub-stations up to 400 KVA, 33/11 KV New Sub-stations and increasing capacity of 33/11 KV Sub-stations, HVDS system, the Cost Schedule, to be in effect till any further order, has been revised as per enclosed schedules:-

1. The rates of centralized materials (incl. GST) are as per revised stock issue rates finalized by Material Management Organization for the year 2021-22 as intimated vide letter No. 112/मुअं(सांप्रं)/स्टाक इश्यू रेट/उंप्रंपांकांलिं/2021-22 dt. 09-07-2021.
2. The rates of centralized and de-centralized materials (incl. GST) are based on the average of the rates received from different Discoms.
3. The Cartage and Erection charges have been calculated on estimated average basis and added to the cost of work. These may vary from area to area and the actual figures may be worked out at zonal level for adoption.
4. The total cost given in these schedules is inclusive of 3% Contingency, 1.5% T&P and 13.5% Establishment Audit & Accounts charges.
5. i) Cost of materials (col. 3) is inclusive of GST @ 18%.
ii) GST shall further be applicable on the total/final estimated cost for deposit works (i.e. construction/shifting of lines/transformers etc.) of individual/institutional/organizational consumers.
6. The schedules shall be used for formulation of schemes/projects only. Estimates should be prepared on actual basis as per the requirement of Discoms.
7. In case of any difference between Cost Schedule & Cost Data Book, consumers will be charged as per latest Cost Data Book, while for other purposes, estimation will be done as per Cost Schedule.

(Ashish Asthana)

Chief Engineer (DSM)

१२/१०/२१

No.3599 /RESSPO/Tech./CS(2021-22) dt.:22-10-2021

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

1. Managing Director, Vidyut Vitaran Nigam Ltd., Purvanchal - Varanasi/ Paschimanchal - Meerut/Madhyanchal - Lucknow / Dakshinanchal - Agra/KESCO - Kanpur.
2. All Chief Engineers - Distribution Zones/LESA, UPPCL with the remarks that Cost Schedule may be distributed to the Circles/Divisions at their end.

Encl: As above.



(Ashish Asthana)

Chief Engineer (DSM)



No. 3599 /RESSPO/Tech./CS(2021-22) dt. 22-10-2021

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

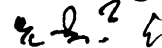
1. Staff Officer to Chairman, UPPCL, Lucknow.
2. CE (MM)/C.E.(Commercial)/ C.E. (CMUD), UPPCL, Lucknow.
3. GM (Audit and Accounts)/(Budget and Cost), UPPCL, Lucknow.
4. Superintending Engineer (IT), with the remark that the copy of Cost Schedule may be uploaded on UPPCL website.

Encl: As above.



(Ashish Asthana)

Chief Engineer (DSM)



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PART - A
ABSTRACT OF COST SCHEDULES FOR 11 KV & LT LINES

Plains : 2021-22

Sl. No.	Particulars	Cost of material (Incl. GST)	Cartage charges on non-GST material cost (7%)	Erection charges on non-GST material cost (8%)	Total of Col. 4 & 5	GST @ 18% on col. 6	Total of Col. 3,6&7	3% Contingency charges on Col. 8	1.5% T&P charges on Col. 8	Total of Col. 8+9+10	13.5% of Esttb. & AA Charges on Col. 11	Total of Col. 11&12	Total (Say)	References
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	LINES (Per Kilometer)													
1	11 KV Main line with Rabbit on PCC Pole	285540.00	16940.00	19360.00	36300.00	6534.00	328374.00	9851.00	4926.00	343151.00	46325.00	389476.00	389480	Annexure-1
2	11 KV Spur Line with ACSR Weasel on PCC Pole	231530.00	13730.00	15700.00	29430.00	5297.40	266257.40	7988.00	3994.00	278239.40	37562.00	315801.40	315800	Annexure-1
3	3 Phase L.T. Line with ACSR Weasel on PCC Poles for Rural Area	197200.00	11700.00	13370.00	25070.00	4512.60	226782.60	6803.00	3402.00	236987.60	31993.00	268980.60	268980	Annexure-3
4	3 Phase L.T. Line with ACSR Rabbit on PCC Poles for Rural Area	251200.00	14900.00	17030.00	31930.00	5747.40	288877.40	8666.00	4333.00	301876.40	40753.00	342629.40	342630	Annexure-3
5	3 Phase L.T Line with AAAC Weasel on PCC Pole for Rural Area	223400.00	13250.00	15150.00	28400.00	5112.00	256912.00	7707.00	3854.00	268473.00	36244.00	304717.00	304720	Annexure-3
6	3 Phase Distribution Line with AAAC Rabiit on PCC Pole	330300.00	19590.00	22390.00	41980.00	7556.40	379836.40	11395.00	5698.00	396929.40	53585.00	450514.40	450510	Annexure-3
7	1 Phase Distribution Line AAAC Weasel on PCC Pole	148400.00	8800.00	10060.00	18860.00	3394.80	170654.80	5120.00	2560.00	178334.80	24075.00	202409.80	202410	Annexure-3

Note :- i) Cost of materials i.e. centralized and de-centralized materials, is inclusive of GST. (col. 3)

ii) GST shall further be applicable on the total/final estimated cost (col. 14) for deposit works (i.e. construction/shifting of lines/transformers etc.) of individual/institutional/organizational consumers.

iii) Labour cess shall further be applicable as per rule.

27/10/21
E.E. (RESSPO)

1-

27/10/21
S.E. (RESSPO)

Sl. No.	Particulars	Cost of material (Incl. GST)	Cartage charges on non-GST material cost (7%)	Erection charges on non-GST material cost (8%)	Total of Col. 4 & 5	GST @ 18% on col. 6	Total of Col. 3,6&7	3% Contingency charges on Col. 8	1.5% T&P charges on Col. 8	Total of Col. 8+9+10	13.5% of Esttb. & AA Charges on Col. 11	Total of Col. 11&12	Total (Say)	References
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
B.	Sub Station (Village/Town)													
1	25 KVA 11/433 KV on Double Pole PCC Structure for:-													
	a) Village/Town	126200.00	7490.00	8560.00	16050.00	2889.00	145139.00	4354.00	2177.00	151670.00	20475.00	172145.00	172150	Annexure-4
	b) Rural	106000.00	6290.00	7190.00	13480.00	2426.40	121906.40	3657.00	1829.00	127392.40	17198.00	144590.40	144590	
2	63 KVA 11/433 KV on Double Poles PCC Structure:-													
	a) Village/Town	183700.00	10900.00	12450.00	23350.00	4203.00	211253.00	6338.00	3169.00	220760.00	29803.00	250563.00	250560	Annexure-4
	b) Rural	162700.00	9650.00	11030.00	20680.00	3722.40	187102.40	5613.00	2807.00	195522.40	26396.00	221918.40	221920	
3	100 KVA 11/433 KV on Double Pole PCC Structure For:-													
	a) Village/Town	236100.00	14010.00	16010.00	30020.00	5403.60	271523.60	8146.00	4073.00	283742.60	38305.00	322047.60	322050	Annexure-4
	b) Rural	212200.00	12590.00	14390.00	26980.00	4856.40	244036.40	7321.00	3661.00	255018.40	34427.00	289445.40	289450	

Note :- i) Cost of materials i.e. centralized and de-centralized materials, is inclusive of GST. (col. 3)

ii) GST shall further be applicable on the total/final estimated cost (col. 14) for deposit works (i.e. construction/shifting of lines/transformers etc.) of individual/institutional/organizational consumers.

iii) Labour cess shall further be applicable as per rule.


E.E. (RESSPO)

2-


S.E. (RESSPO)

**COST ANALYSIS OF ONE KILOMETER OF
11KV LINES (MAIN & SPUR)**

Plains: 2021-22

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.	2517	17	42789	17	42789
2	Stone Pad 300x300x75 mm	Nos.	85	17	1445	17	1445
3	X-arm M.S. Angle 65x65x6mm V-Type 11 KV	Nos.	818	17	13906	17	13906
4	Cross arms holding clamps with bolts & nuts	Nos.	107	17	1819	17	1819
5	11 KV Pin Insulator	Nos.	141	51	7191	51	7191
6	11 KV pin with nut	Nos.	78	51	3978	51	3978
7	F-bracket for fitting top insulator with bolts & nuts	Nos.	151	17	2567	17	2567
8	Phase wire 50 sq.mm ACSR Rabbit	Kms.	46001	3.09	142143	0	0
9	Phase wire 30 sq.mm ACSR Weasel	Kms.	28521	0	0	3.09	88130
10	Aluminium binding wire (6mm dia)	Kg.	226	2	452	2	452
11	Aluminium Jointing sleeve for ACSR Rabbit	Nos.	214	3	642	0	0
12	Aluminium Jointing sleeve for ACSR Weasel	Nos.	214	0	0	3	642
13	Danger Plate with clamps & bolts	Nos.	99	17	1683	17	1683
14	Painting number mark with paint	Nos.	33	17	561	17	561
15	Barbed wire GI	Kg.	102	8	816	8	816
16	Extra for stays at angle Location(stay rod 16x1800mm,stay wire 5 kg,stay clamp,bolt &nut with grouting)	Nos.	2157	2	4314	2	4314
17	Extra with stays at Road crossing(as per sl.no.16)	Nos.	2157	1	2157	1	2157
18	Extra for sectional D/P support (Annexure -2)	Nos.	27401	1	27401	1	27401
19	Concreting of support 0.268CM/Pole	Nos.	942	17	16007	17	16007
20	Earthing of pole by MS earthing rod of 20x2500 mm. and 6 SWG earthing wire etc.	Nos.	922	17	15671	17	15671
Total					285542		231529
Total (Say) Rs.					285540		231530

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

Plains: 2021-22

Sl.No.	Items	Unit	Rate (Rs.)	Qty.	Amount (Rs.)
1	2	3	4	5	6
1	PCC Pole 8.5 M Long	Nos	2517	2	5034
2	Stone Pad 300x300x75mm	Nos	85	2	170
3	MS Channel cross arms 100x50x2240mm(Top Channel)	Nos	909	1	909
4	M.S. Angle Iron 65x65x6 mm,2700 mm long bracing with 4 clamp	Set	2517	1	2517
5	Clamps with Nuts & Bolts for top channel	Nos	126	2	252
6	Barbed wire GI	Kg.	87	2	174
7	Danger board & clamps with bolts & nuts	Nos	160	1	160
8	Concreting of poles (0.268 Cu.m. each)	Nos	942	2	1884
9	Earthing of pole by MS earthing rod of 20x2500 mm. and 6 SWG earthing wire etc.	Nos	922	2	1844
10	E Bracket with bolts & nuts	Nos	151	3	453
11	11 KV Disc Insulator T&C type (45 KN)	Nos	121	6	726
12	11 KV Disc fitting (45KN,T&C)	Nos	123	6	738
13	11 KV Pin Insulators	Nos	141	3	423
14	11 KV pin with nut	Nos	78	3	234
15	PG Clamps	Nos	124	6	744
16	Stay complete (stay rod 16x1800mm,stay wire 5 kg,stay clamp,bolt &nut with grouting)	Nos	2230	6	13378
Sub-Total		(A)			29640
	Less (Cost of one PCC Pole with fitting)				
1	PCC Pole 8.5 M Long	Nos	2517	1	2517
2	Stone Pad 300x300x75mm	Nos	85	1	85
3	11 KV Steel X-arm "V" type	Nos	671	1	671
4	Cross arm holding clamps with bolts & nuts	Nos	107	1	107
5	11 KV Pin Insulators	Nos	141	3	423
6	11 KV pin with nut	Nos	78	3	234
7	F-bracket with bolts & nuts	Nos	192	1	192
8	Earthing of pole by MS earthing rod of 20x2500 mm. and 6 SWG earthing wire etc.	Nos	922	1	922
Sub-Total		(B)			5151
Extra cost of section D/P complete in place of single pole		(A-B)			24489
Total				Say	24490

[Handwritten Signature]
27/11/21
S.E. (RESSPO)

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

Plains: 2021-22

Sl.No	Particulars	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			
				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 M. Long	Nos	2517	20	50340	20	50340	20	50340	20	50340	20	50340
2	Stone Pad 300x300x75mm	Nos	85	20	1700	20	1700	20	1700	20	1700	20	1700
3	LT Clamp with nuts & bolts for PCC Pole with Neutral	Nos	153	80	12240	80	12240	80	12240	80	12240	40	6120
4	Earth wire clamps for PCC Pole	Nos	124	20	2480	20	2480	20	2480	20	2480	20	2480
5	LT Shackel Insulator 100x115 mm	Nos	60	80	4800	80	4800	80	4800	80	4800	40	2400
6	Bolts & nuts for shackle	Kg.	106	30	3180	30	3180	30	3180	30	3180	13	1410
7	LT Shackel strip with bolt & nut for LT section pole	Kg.	59	5	295	5	295	5	295	5	295	2	118
8	Loop Guard complete 3-phase	Nos	89	40	3560	40	3560	40	3560	40	3560	0	0
9	Loop Guard complete 1-phase	Nos	89	0	0	0	0	0	0	0	0	40	3560
10	Phase wire ACSR Weasel	Km	28521	3	88130	0	0	3	0	0	0	0	0
11	Phase wire ACSR Rabbit	Km	46001	0	0	3	142143	0	0	0	0		
12	Phase wire AAAC Weasel	Km	31219	0	0	0	0	3	96467	0	0	0	0
13	Phase wire AAAC Rabbit	Km	65809	0	0	0	0	0	0	3	203349	0	0



27/10/21
E.E. (RESSPO)



27/10/21
S.E. (RESSPO)

Sl.No	Particulars	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		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
14	Phase wire AAAC Weasel	Km	31219	0	0	0	0		0		0	1	32156
15	Neutral cum earth wire GI wire 7.16mm or 16SWG	Kg.	77	157	12089	157	12089	157	12089	157	12089	157	12089
16	Aluminium binding wire 6mm	Kg.	226	3	678	3	678	5	1130	5	1130	2	452
17	Aluminium Jointing Sleeve for AAAC conductor Weasel/Rabbit	Kg.	236	0	0	0	0	2	472	2	472	4	944
18	Aluminium Jointing sleeve for ACSR Conductor Weasel/Rabbit	Kg.	214	3	642	3	642	0	0	0	0	0	0
19	Spacer LT PVC	Nos	139	36	5004	36	5004	36	5004	36	5004	36	5004
20	Extra for stays at angle Location(stay rod 16x1800mm,stay wire 5 kg,stay clamp,bolt &nut with grouting)	Nos	2157	3	6471	3	6471	9	19414	9	19414	9	19414
21	Earthing of pole by MS earthing rod of 20x2500 mm. and 6 SWG earthing wire etc.	Nos	922	3	2765	3	2765	5	4609	5	4609	5	4609
22	Concreting of poles (0.268 Cu.m. each)	Nos	942	3	2825	3	2825	6	5650	6	5650	6	5650
Total					197199		251213		223430		330311		148446
Total (Say)					197200		251200		223400		330300		148400

23/1/24
E.E. (RESSPO)

6-

23.10.21
S.E. (RESSPO)

COST ANALYSIS OF 11/0.4 KV SUB-STATION UPTO 100 KVA

Plains: 2021-22

Sl.No	Particular	Unit	Rate (Rs.)	25 KVA 11/0.4 KV on double pole PCC structure for				63 KVA 11/0.4 KV on double pole PCC structure for				100 KVA 11/0.4 KV on double pole PCC structure for			
				Village/Town		Rural		Village/Town		Rural		Village/Town		Rural	
				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	PCC Poles 8.5 M.Long	Nos	2517	2	5034	2	5034	2	5034	2	5034	2	5034	2	5034
2	MS Channel (Dropper) 100X50x2028 mm (for fuse set)	Nos	823	1	823	1	823	2	1646	2	1646	2	1646	2	1646
3	Stone pad 300x300x75mm	Nos	85	2	170	2	170	2	170	2	170	2	170	2	170
4	Clamps for LT T- off with bolts & nuts	Nos	99	1	99	1	99	1	99	1	99	1	99	1	99
5	Holding clamps for top channel TPMO & fuse set etc. with bolts & nuts	Nos	213	10	2130	10	2130	12	2556	12	2556	12	2556	12	2556
6	MS angle 75x75x6x2028 mm with clamp & bolt and nut (T/F base)	Nos	1956	2	3912	2	3912	2	3912	2	3912	2	3912	2	3912
7	M.S. Top Channel (125x65x2240 mm.)	Nos	915	1	915	1	915	1	915	1	915	1	915	1	915
8	11 KV Disc Insulator T&C type 4500 Kg.	Nos	121	3	363	3	363	3	363	3	363	3	363	3	363
9	11 KV Disc fitting	Nos	123	3	369	3	369	3	369	3	369	3	369	3	369
10	MS Channel 125x65x1300mm(T- off)	Nos	526	1	526	1	526	1	526	1	526	1	526	1	526

23/10/21
E.E. (RESSPO)

23/10-21
S.E. (RESSPO)

Sl.No	Particular	Unit	Rate (Rs.)	25 KVA 11/0.4 KV on double pole PCC structure for				63 KVA 11/0.4 KV on double pole PCC structure for				100 KVA 11/0.4 KV on double pole PCC structure for			
				Village/Town		Rural		Village/Town		Rural		Village/Town		Rural	
				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
11	11 KV Pin insulator	Nos	141	3	423	3	423	3	423	3	423	3	423	3	423
12	11 KV Pin with nut	Nos	78	3	234	3	234	3	234	3	234	3	234	3	234
13	11/0.4 KV T/F 25 KVA	Nos	59364	1	59364	1	59364	0	0	0	0	0	0	0	0
14	11 /0.4KV T/F 63 KVA	Nos	113162	0	0	0	0	1	113162	1	113162	0	0	0	0
15	11/0.4 KV T/F 100 KVA	Nos	160639	0	0	0	0	0	0	0	0	1	160639	1	160639
16	11 KV TPMO	Nos	20121.2	1	20121	1	20121	1	20121	1	20121	1	20121	1	20121
17	11 KV Fuse Set	Nos	1167		0		0	1	1167	1	1167	1	1167	1	1167
18	LT incoming Panel with metering equipment & fixing arrangement (LS)	Nos	17700	1	17700	0	0	1	17700	0	0	1	17700	0	0
19	LT PVC cable 4x16 sq mm @ 160	M	204	20	4080	8	1632	0	0	0	0	0	0	0	0
20	LT PVC Cable 3.5x70/35 Sq.mm @ 220	M	270	0	0	0	0	20	5400	8	2160	0	0	0	0
21	LT PVC Cable 3.5x150/70 Sq.mm @ 326	M	516	0	0	0	0	0	0	0	0	20	10320	8	4128
22	Danger board Barbed wire including jumper	Nos	1702	1	1702	1	1702	1	1702	1	1702	1	1702	1	1702
23	Stay complete (stay rod 16x1800mm,stay wire 5 kg,stay clamp,bolt &nut with grouting)	Nos	2230	2	4459	2	4459	2	4459	2	4459	2	4459	2	4459
24	Concreting of poles (0.268 Cu.m. each)	Nos	942	2	1883	2	1883	2	1883	2	1883	2	1883	2	1883
25	Earthing of pole by MS earthing rod of 20x2500 mm. and 6 SWG earthing wire etc.	Nos	922	2	1844	2	1844	2	1844	2	1844	2	1844	2	1844
Total					126151		106003		183685		162745		236082		212190
Total (Say)					126200		106000		183700		162700		236100		212200

22/10/21
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PART- A (1)

ABSTRACT OF VARIOUS TYPE OF 11/0.4 KV SUB-STATION UPTO 400 KVA

Plains: 2021-22

(Rs. in Lacs)

Sl. No.	Name of works	Cost of material (Incl. GST)	Cartage charges on non-GST material cost @ 3%	Erection charges on non-GST material cost @ 4%	Total of Col. 4 & 5	GST @ 18% on col. 6	Total of Col. 3,6&7	3% Contingency charges on Col.8	1.5% T&P charges on Col. 8	Total of Col. 8+9+10	13.5% of Esttb. & AA Charges on Col. 11	Total of Col. 11 & 12	References
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	11 KV New Sub stations:-												
1	1x250 KVA	6.74	0.17	0.23	0.40	0.07	7.21	0.22	0.11	7.53	1.02	8.55	Annexure-4(1)
2	1x400 KVA	9.47	0.24	0.32	0.56	0.10	10.13	0.30	0.15	10.59	1.43	12.01	Annexure-4(1)

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

ii) Cost of materials i.e. centralized and de-centralized materials, is inclusive of GST. (col. 3)

iii) GST shall further be applicable on the total/final estimated cost (col. 13) for deposit works (i.e. construction/shifting of lines/transformers etc.) of individual/institutional/organizational consumers.

iv) Labour cess shall further be applicable as per rule.

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COST ANALYSIS OF 11/0.4 KV SUB-STATION UPTO 400 KVA

Plains: 2021-22

Sl.No	Particulars	Unit	Rate (Rs.)	250 KVA 11/0.4 KV on double pole structure		400 KVA 11/0.4 KV on double pole structure	
				Qty.	Amt. (Rs.)	Qty.	Amt. (Rs.)
1	2	3	4	5	6	7	8
1	STP 11 M Long	Nos	19141	2	38282	2	38282
2	MS Channel (Dropper) 100x50x2028 mm	Nos	823	1	823	2	1646
3	Stone pad 300x300x75mm	Nos	85	2	170	2	170
4	Clamps for LT (T- off) with bolts & nuts	Nos	99	1	99	1	99
5	Holding clamps for top channel TPMO & fuse set etc. with bolts & nuts	Nos	213	12	2556	12	2556
6	MS Top channel (125x65x2240 mm)	Nos	915	1	915	1	915
7	11 KV Disc Insulator T&C type 4500 Kg.	Nos	121	3	363	3	363
8	11 KV Disc fitting	Nos	123	3	369	3	369
9	MS Channel 125x65x1300mm(T- off)	Nos	526	1	526	1	526
10	11 KV Pin insulator	Nos	141	3	423	3	423
11	11 KV Pin with nut	Nos	78	3	234	3	234
12	11/0.4 KV T/F 250 KVA	Nos	502227	1	502227	0	0
13	11 /0.4KV T/F 400 KVA	Nos	779046	0	0	1	779046
14	11 KV TPMO	Nos	19800	1	19800	1	19800
15	11 KV Fuse Set	Nos	1167		0	1	1167
16	LT incoming Panel with metering equipment & fixing arrangement (LS)	Nos	17700	1	17700	1	17700
17	Copper L-Piece 50x225x10mm (LS)	Nos	1210	4	4840	4	4840

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Sl.No	Particulars	Unit	Rate (Rs.)	250 KVA 11/0.4 KV on double pole structure		400 KVA 11/0.4 KV on double pole structure	
				Qty.	Amt. (Rs.)	Qty.	Amt. (Rs.)
1	2	3	4	5	6	7	8
18	Copper L-Piece 62x225x12mm (LS)	Nos	1320	4	5280	4	5280
19	LT PVC cable AI 3.5x400 sq mm	M	1447	15	21705	0	0
20	LT PVC cable AI 1x400 sq mm	M	382	0	0	30	11460
21	LT PVC cable AI 1x240 sq mm	M	235	0	0	15	3525
22	AI Leg long barrel, off size (LS)	Nos	55	24	1320	40	2200
23	4 core LT MCB with box (LS)	Nos	22000	1	22000	1	22000
24	Danger board barbed wire including jumper	Nos	1702	1	1702	1	1702
25	Stay complete (Stay rod 16x1800mm, stay wire 5 Kg., stay clamp, bolt & nut with grouting)	Nos	2230	2	4460	2	4460
26	Concreting of poles (0.880 Cu.m.each)	Nos	3080	2	6160	2	6160
27	Earthing of pole by MS earthing rod of 20x2500mm & 6SWG earthing wire etc.	Nos	922	2	1844	2	1844
28	Red oxide paint	Lt.	324	2	648	2	648
29	Aluminium paint	Lt.	387	2	774	2	774
30	Plinth for size 2x2x1.5M				0		0
	1) Cement	Bag	385	14	5390	14	5390
	2) Fine Sand	Cu.mtr	1349	3	4047	3	4047
	3) Coarse sand	Cu.mtr	2913	1.2	3496	1.2	3496
	4) Brick Ballast	Cu.mtr	1320	0.45	594	0.45	594
	5) 1st Class Bricks	Per 1000 Nos.	6790	6	41	6	41
	6) Stone Ballast (40mm)	Cu.mtr	2203	0.4	881	0.4	881
	7) MS Channel 125x65mm	Kg.	46	48	2202	48	2202
	8) MS Twisted bar of size 20mm	Kg.	48	40	1728	40	1901
	Total				673598		946740
	Total (Say)				6.74		9.47

27/10/21
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(27/10/21)
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PART - B
ABSTRACT OF VARIOUS TYPES OF 33KV LINES

Plains 2021-22

Rs. in Lacs

Sl. No.	Name of works	Cost of material (Incl. GST)	Cartage charges on non-GST material cost @5%	Erection charges on non-GST material cost @10%	Total of Col. 4 & 5	GST @ 18% on col. 6	Total of Col. 3,6&7	3% Contingency charges on Col. 8	1.5% T&P charges on Col. 8	Total of Col. 8+9+10	13.5% of Esttb. & AA Charges on Col. 11	Total of Col. 11&12	References
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	33 KV Lines (Per Kilometer)												
1	On 11 M long STP with ACSR Dog conductor	7.09	0.30	0.60	0.90	0.16	8.16	0.24	0.12	8.52	1.15	9.67	Annexure-5
2	On 11 M long STP with ACSR Racocon conductor	6.56	0.28	0.56	0.83	0.15	7.55	0.23	0.11	7.89	1.06	8.95	Annexure-5
3	On 9 M long PCC with ACSR Dog conductor	5.05	0.21	0.43	0.64	0.12	5.81	0.17	0.09	6.07	0.82	6.89	Annexure-5
4	On 9 M long PCC with ACSR Racocon conductor	4.52	0.19	0.38	0.57	0.10	5.20	0.16	0.08	5.43	0.73	6.17	Annexure-5

Note:- i) The cartage and erection charges have been taken @ 5% & 10% of the cost of material respectively. The actual charges may vary from site to site.


ii) Cost of materials i.e. centralized and de-centralized materials, is inclusive of GST. **(col. 3)**

iii) GST shall further be applicable on the total estimated cost **(col. 13)** for deposit works (i.e. construction/shifting of lines/transformers etc.) of individual/institutional/organizational consumers.

iv) Labour cess shall further be applicable as per rule.


E.E. (RESSPO)

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

Plains: 2021-22

Sl. No.	Particulars	Unit	Rate (Rs.)	ACSR Dog conductor				ACSR Racocon conductor			
				On STP 11 M		On PCC Pole 9 M		On STP 11 M		On PCC Pole 9 M	
				Qty.	Amt. (Rs.)	Qty.	Amt. (Rs.)	Qty.	Amt. (Rs.)	Qty.	Amt. (Rs.)
1	2	3	4	5	6	7	8	9	10	11	12
1	Cost of single support										
	STP (Annex-6)	Nos	26580	14	372120	0	0	14	372120	0	0
	PCC (Annex-7)	Nos	11350	0	0	16	181600	0	0	16	181600
2	Extra cost of section and heavy angle points on double pole										
	STP (Annex-8)	Nos	56800	0.5	28400	0	0	0.5	28400	0	0
	PCC (Annex-9)	Nos	45450	0	0	0.5	22725	0	0	0.5	22725
3	Extra cost of stay at right angle	Nos	2230	2	4460	2	4460	2	4460	2	4460
4	ACSR "Dog" conductor	kM	88510	3.09	273496	3.09	273496	0	0	0	0
5	ACSR "Racocon" conductor	kM	71343	0	0	0	0	3.09	220450	3.09	220450
6	Neutral-cum-Earth wire G.I. 6SWG	Kg	77	127	9779	0	0	127	9779	0	0
7	Aluminium jointing sleeves	Nos	214	3	642	3	642	3	642	3	642
8	Earthing complete	Nos	922	14	12905	16	14749	14	12905	16	14749
9	Extra cost of Road/communication lines /11kv lines crossing	Nos	12427	0.5	6213	0.5	6213	0.5	6213	0.5	6213
10	Tree cutting compensation	kM	1208	1	1208	1	1208	1	1208	1	1208
	Total (Rs.)				709223		505093		656177		452047
	Total (Say) Rs. in Lakhs				7.09		5.05		6.56		4.52

23/10/21
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**COST OF SINGLE LINE SUPPORT ON ST POLE OF 11 METER
(INCLUSIVE OF FITTING)**

Plains: 2021-22

Sl. No.	Particulars	Unit	Rate (Rs.)	Qty.	Amt. (Rs.)
1	2	3	4	5	6
1	11 meter ST Pole - SP-55	No.	19141	1	19141
2	33 KV 'V' type Cross arm 100x50x6 mm, M.S. Channel (7.9 Kg./M)	No.	984	1	984
3	Cross arm holding clamps with bolts and nuts	No.	107	1	107
4	F-bracket for 33 KV	No.	192	1	192
5	33 KV Pin Insulators	No.	250	3	750
6	33 KV pin with nut	No.	235	3	705
7	Earth wire clamp with bolts & nuts	No.	124	1	124
8	Armour rod with ferules	Set	266	3	798
9	Stone pad (300x300x75 mm)	No.	85	1	85
10	Number plates with clamp and nut & bolt	No.	430	1	430
11	Danger board with clamp for 33 KV	No.	160	1	160
12	Barbed wire GI	Kg.	102	2	204
13	Bolts, Nuts & washers all sizes	Kg.	216	1	216
14	Aluminium paint	Ltr	387	1	387
15	Red oxide paint	Ltr	324	1	324
16	Aluminium binding wire 6 SWG	Kg.	226	0.5	113
17	Earthing of pole by MS earthing rod of 20x2500 mm. and 6 SWG earthing wire etc.	No.	922	1	922
18	Concreting of supports (0.268cu.m/Pole)	No.	942	1	942
Total					26584
Total (say)					26580

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23.10.22
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**COST OF SINGLE LINE SUPPORT ON PCC POLE OF 9 METER
(INCLUSIVE OF FITTING)**

Plains: 2021-22

Sl. No.	Particulars	Unit	Rate (Rs.)	Qty.	Amt. (Rs.)
1	2	3	4	5	6
1	9.0 M long PCC pole	No.	4744	1	4744
2	33KV 'V' type Cross arm 100x50x6 mm, M.S. Channel (7.9 Kg./M)	No.	984	1	984
3	Cross arm holding clamp with bolts & nuts	No.	107	1	107
4	F-bracket for 33 KV	No.	192	1	192
5	33 KV Pin Insulators	No.	250	3	750
6	33 KV pin with nut	No.	235	3	705
7	Armour Rod with Ferrules	Set	266	3	798
8	Stone pad (300x300x75mm)	No.	85	1	85
9	Number plates with clamp for PCC poles	No.	430	1	430
10	Danger board with clamp for 33 KV	No.	160	1	160
11	Barbed wire GI	Kg.	102	2	204
12	Bolts, Nuts & washers	Kg.	216	1	216
13	Aluminium binding wire 6SWG	Kg.	226	0.5	113
14	Earthing of pole by MS earthing rod of 20x2500 mm. and 6 SWG earthing wire etc.	No.	922	1	922
15	Concreting of support (0.268 Cub.M/Pole)	No.	942	1	942
Total					11352
Total (Say)					11350


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E.E. (RESSPO)

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23.10.21
S.E. (RESSPO)

**EXTRA COST OF SECTIONAL DOUBLE POLE STRUCTURE
WITH 11 M LONG STP IN CASE OF LINE ON STP**

Plains: 2021-22

Sl. No.	Particulars	Unit	Rate (Rs.)	Qty.	Amt. (Rs.)
1	2	3	4	5	6
1	11 meter ST Pole - SP-55	No.	19141	2	38282
2	M.S. Angle Iron 65x65x6mm, 4300 mm long bracing with clamp	No.	3475	1	3475
3	Top channel 125x65mm 3200 mm (10.70 kg/M)	No.	1751	1	1751
4	Stone pad (300x300x75mm)	No.	85	2	170
5	Disc insulators B&S type 7000 kg	No.	407	24	9768
6	Disc fittings Dog/Racoon 7000 kg	No.	440	6	2640
7	33 KV Pin Insulators	No.	250	3	750
8	33 KV Pin with nuts	No.	235	3	705
9	Earth wire clamp with bolts & nuts	No.	124	1	124
10	PG clamps	No.	124	12	1488
11	F-bracket for 33 KV	No.	192	3	576
12	Number plates	No.	145	1	145
13	Danger board with clamp for 33 KV	No.	160	1	160
14	Barbed wire GI	Kg.	102	4	408
15	Aluminium Binding wire-6 SWG	Kg.	226	1	226
16	Aluminium paint	Ltr.	387	2	774
17	Bolts, nuts & washers	Kg.	216	3	648
18	Red oxide paints	Ltr.	324	2	648
19	Complete Stay (GI stay rod 20x1800mm, stay wire 7/8 SWG 10 Kg, stay clamp, bolt, nut & washer with concrete grouting)	No.	2230	8	17840
20	Concreting of supports (0.268cu.m/Pole)	No.	942	2	1883
21	Earthing of pole by MS earthing rod of 20x2500 mm. and 6 SWG earthing wire etc.	No.	922	1	922
Total cost					83383
Less Cost of single supports as per Annexure-6					26580
Extra Cost of section double pole in place of single support					56803
Total (Say)					56800


27/10/21
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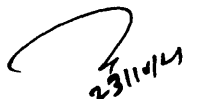
16-


S.E. (RESSPO)

**EXTRA COST OF SECTIONAL DOUBLE POLE STRUCTURE WITH 9 M
LONG PCC POLE IN CASE OF LINE ON PCC POLE**

Plains: 2021-22

Sl. No.	Particulars	Unit	Rate (Rs.)	Qty.	Amt. (Rs.)
1	2	3	4	5	6
1	9.0 M long PCC pole	No.	4744	2	9488
2	MS Angle Iron 65x65x6mm bracing with 4 clamps	No.	3475	2	6950
3	Top channel 125x65x 3200 mm with clamp	No.	1751	1	1751
4	Stone pad (300x300x75mm)	No.	85	2	170
5	Disc insulators B&S type 7000 kg	No.	407	24	9768
6	Disc fittings Dog/Racoon 7000 kg	No.	440	6	2640
7	33 KV Pin Insulators	No.	250	3	750
8	33 KV Pin with nuts	No.	235	3	705
9	Earth wire clamp with bolts & nuts	No.	124	1	124
10	PG clamps for Raccoon/Dog	No.	124	12	1488
11	F-bracket for 33 KV	No.	192	3	576
12	Number plates	No.	145	1	145
13	Danger board with clamp for 33 KV	No.	160	1	160
14	Barbed wire GI	Kg.	102	4	408
15	Aluminium paint	Ltr.	387	1	387
16	Bolts, nuts & washers	Kg.	216	3	648
17	Complete Stay (GI stay rod 20x1800mm, stay wire 7/8 SWG 10 Kg, stay clamp, bolt, nut & washer with concrete grouting)	No.	2230	8	17840
18	Concreting of supports (0.268 cu.m each)	No.	942	2	1883
19	Earthing of pole by MS earthing rod of 20x2500 mm. and 6 SWG earthing wire etc.	No.	922	1	922
Total cost					56803
Less cost for Single pole (Annexure-7)					11350
Extra Cost for sectional double pole in place of single pole					45453
Total (Say)					45450


23/11/21
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PART-C
ABSTRACT OF VARIOUS TYPES OF 33/11 KV SUB-STATION

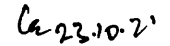
Plains: 2021-22

Rs. in Lacs

Sl. No.	Name of works	Cost of material (Incl. GST)	Cost of civil works (Incl. GST)	Cartage charges on non-GST material cost @ 3%	Erection charges on non-GST material cost @ 4%	Total of Col. 5 & 6	GST @ 18% on col. 7	Total of Col. 3,4,7&8	3% Contingency charges on Col. 9	1.5% T&P charges on Col. 9	Total of Col. 9+10+11	13.5% of Esttb. & AA Charges on Col. 12	Total of Col. 12 & 13	References
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	33 KV New Sub stations													
1	1x5 MVA	90.76	71.87	2.31	3.08	5.38	0.97	168.98	5.07	2.53	176.59	23.84	200.43	Annexure-10
2	2x5 MVA	153.46	71.87	3.90	5.20	9.10	1.64	236.07	7.08	3.54	246.69	33.30	280.00	Annexure-10
3	1x8 MVA	100.73	71.87	2.56	3.41	5.98	1.08	179.65	5.39	2.69	187.73	25.34	213.08	Annexure-10
4	2x8 MVA	173.39	71.87	4.41	5.88	10.29	1.85	257.40	7.72	3.86	268.98	36.31	305.30	Annexure-10
5	1x10 MVA	115.55	71.87	2.94	3.92	6.85	1.23	195.51	5.87	2.93	204.31	27.58	231.89	Annexure-10
6	2x10 MVA	203.04	71.87	5.16	6.88	12.04	2.17	289.12	8.67	4.34	302.13	40.79	342.92	Annexure-10

- Note: i) 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.
 ii) Cost of materials i.e. centralized and de-centralized materials, is inclusive of GST. (col. 3)
 iii) GST shall further be applicable on the total/final estimated cost (col. 14) for deposit works (i.e. construction/shifting of lines/transformers etc.) of individual/institutional/organizational consumers.
 iv) Labour cess shall further be applicable as per rule.


E.E. (RESSPO)


S.E. (RESSPO)

COST ANALYSIS OF 33/11 KV SUB-STATION

Plains: 2021-22

Sl. No.	Particulars	Unit	Rate (Rs)	1x5 MVA		2x5 MVA		1x8 MVA		2x8 MVA		1x10 MVA		2x10 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	Terminal Gantry	Nos	199939	1	199939	1	199939	1	199939	1	199939	1	199939	1	199939
2	Main bus bar complete with structure	Nos	365791	1	365791	1	365791	1	365791	1	365791	1	365791	1	365791
3	33 KV Pin insulator	Nos	250	3	750	3	750	3	750	3	750	3	750	3	750
4	33 KV Pin with nut	Nos	235	3	705	3	705	3	705	3	705	3	705	3	705
4(I)	33 KV line Isolator	Nos	36404	1	36404	1	36404	1	36404	1	36404	1	36404	1	36404
(II)	33 KV bus isolator	Nos	30648	1	30648	2	61296	1	30648	2	61296	1	30648	2	61296
(III)	Structure for above	Nos	23865	2	47729	3	71594	2	47729	3	71594	2	47729	3	71594
5(I)	33 KV post insulator	Nos	1015	6	6090	6	6090	6	6090	6	6090	6	6090	6	6090
(II)	Structure for above	Nos	11469	2	22937	2	22937	2	22937	2	22937	2	22937	2	22937
6(I)	33 KV lightning arresters	Sets	4000	2	8000	3	12000	2	8000	3	12000	2	8000	3	12000
(II)	Structure for above	Nos	9558	2	19116	3	28674	2	19116	3	28674	2	19116	3	28674
7	Plinth & foundations for structure	Included in the cost of structure													
8	33 /11KV transformers														
	5 MVA	Nos	4265838	1	4265838	2	8531676	0	0	0	0	0	0	0	0
	8 MVA	Nos	5262620	0	0	0	0	1	5262620	2	10525240	0	0	0	0
	10 MVA	Nos	6744894	0	0	0	0	0	0	0	0	1	6744894	2	13489788
9	90 lbs rail pieces for transformer (44.64kg/M)	M	3845	6.92	26604	13.8	53208	6.92	26604	13.8	53208	6.92	26604	13.8	53208
10	Plinth of transformer	Nos	148167	1	148167	2	296333	1	148167	2	296333	1	148167	2	296333

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Sl. No.	Particulars	Unit	Rate (Rs)	1x5 MVA		2x5 MVA		1x8 MVA		2x8 MVA		1x10 MVA		2x10 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
11(a)	33 KV VCB with single T/F control panel and CT 200/100/1A with structure (i) 33 KV VCB (ii) control panel I/C for 33KV single T/F (iii) CT 200/100/1-1A (iv) steel structure	Nos	357090	1	357090	0	0	1	357090	0	0	1	357090	0	0
11(b)	33 KV /VCB with double T/F control panel and CT 200/100/1A with structure (i) 33 KV VCB (ii) control panel I/C for 33KV double T/F (iii) CT 200/100/1-1A (iv) steel structure	Nos	439252	0	0	1	439252	0	0	1	439252	0	0	1	439252
12	Plinth & foundation of VCB	Nos	27832	1	27832	2	55664	1	27832	2	55664	1	27832	2	55664
13	11 KV VCB														
(I)	600/300/5A,350MVA I/C	Nos	365585	1	365585	2	731170	1	365585	2	731170	1	365585	2	731170
(II)	Outgoing 200/100/5A	Nos	314019	4	1256076	6	1884114	4	1256076	6	1884114	4	1256076	6	1884114
(III)	Bus coupler 350MVA	Nos	244903	0	0	1	244903	0	0	1	244903	0	0	1	244903
14	11 KV 3 core cable			0	0	0	0	0	0	0	0	0	0	0	
I)	300 mm sq. XLPE	M	1546	60	92760	120	185520	60	92760	120	185520	60	92760	120	185520
II)	120mm sq XLPE	M	887	240	212880	360	319320	240	212880	360	319320	240	212880	360	319320
15	Laying of 11 KV cable including cost of sand & bricks	M	250	270	67419	420	104874	270	67419	420	104874	270	67419	420	104874
16	Making of 11 KV cable boxes mounted with switchgears and transformers	Nos	23385	6	140309	10	233849	6	140309	10	233849	6	140309	10	233849
17	11 KV cable jointing kit outdoor 120 sq.mm.	Nos	4746	4	18984	6	28476	4	18984	6	28476	4	18984	6	28476
18	24 Volt battery and battery charger with cabinet	Nos	124276	1	124276	1	124276	1	124276	1	124276	1	124276	1	124276
19	Control Cable														
(I)	4x2.5 mm sq	M	322	100	32230	200	64460	100	32230	200	64460	100	32230	200	64460
(II)	2x2.5mm sq	M	183	100	18260	200	36520	100	18260	200	36520	100	18260	200	36520

Sl. No.	Particulars	Unit	Rate (Rs)	1x5 MVA		2x5 MVA		1x8 MVA		2x8 MVA		1x10 MVA		2x10 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
20	Earthing of substation				0		0		0		0		0		0
(a)	Outdoor equipment (earth mat)	Nos	560458	1	560458	1	560458	1	560458	1	560458	1	560458	1	560458
(b)	Indoor equipment	Nos	39054	1	39054	1.5	58582	1	39054	1.5	58582	1	39054	1.5	58582
21	Barbed wire fencing with gate etc (switchyard)	Nos	219030	1	219030	1	219030	1	219030	1	219030	1	219030	1	219030
22	Outdoor switchyard & Approach Road lighting	Nos	180216	1	180216	1	180216	1	180216	1	180216	1	180216	1	180216
23	63 KVA 11/0.4 KV T/F	Nos	113162	1	113162	1	113162	1	113162	1	113162	1	113162	1	113162
24	11KV TPMO switch with fixing clamps	Nos	19800	1	19800	1	19800	1	19800	1	19800	1	19800	1	19800
25	11 KV fuse set with fixing clamps	Nos	1167	1	1167	1	1167	1	1167	1	1167	1	1167	1	1167
26	Cost of accessories for mounting of 63 KVA T/F		35706	1	35706	1	35706	1	35706	1	35706	1	35706	1	35706
27	Painting of S/s structure		LS	-	9500	-	11200	-	9500	-	11200	-	9500	-	11200
28	Sundry stores		LS	-	5300	-	6600	-	5300	-	6600	-	5300	-	6600
	Total cost of material Rs.				9075812		15345716		10072594		17339280		11554868		20303828
	Say Rupees in Lacs				90.76		153.46		100.73		173.39		115.55		203.04

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

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COST OF CIVIL WORKS FOR CONVENTIONAL 33/11 KV SUB-STATION

Plains 2021-22

Sl. No.	Type of building	Unit	Rate (Rs)	GST @ 18%	Total of col. 4&5	Conventional type S/s	
						Qty.	Amt. (Rs)
1	2	3	4	5	6	7	8
	Rural Area						
1	Switchgear Rooms	Nos	3691349.00	664442.82	4355791.82	1	4355791.82
2	Road, culverts, Gate, fencing etc.	Nos	2399377.00	431887.86	2831264.86	1	2831264.86
	Total						7187056.68
	Say (Rs. in Lacs)						71.87
3	Urban Area						
(I)	Double storey switch gear building, boundary wall etc.	Nos	12758896.00	2296601.28	15055497.28	1	15055497.28
(ii)	Single storey, switch gear room, boundary wall, collection, room etc.	Nos	8831555.00	1589679.90	10421234.90	1	10421234.90
(iii)	Double storey indoor 33/11KV s/s collection room, boudary wall etc.	Nos	20186700.00	3633606.00	23820306.00	1	23820306.00

Note:-The above rates are exclusive of Retreatment/Black cotton treatment (15%) and white ant protection (5%). These rates do not include contingency, T&P as well as establishment and AA charges.

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PART- D

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

Plains: 2021-22

Rs. in Lacs

Sl. No.	Name of works	Cost of material (Incl. GST)	Cartage charges on non-GST material cost @ 3%	Erection charges on non-GST material cost @4%	Total of Col. 4 & 5	GST @ 18% on col. 6	Total of Col. 3,6&7	3% Contingency charges on Col. 8	1.5% T&P charges on Col. 8	Total of Col. 8+9+10	13.5% of Esttb. & AA Charges on Col. 11	Total of Col. (11+12)	Cost of material received back (to be adjusted)	References
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1x3 to 1x5 MVA	60.08	1.53	2.04	3.56	0.64	64.28	1.93	0.96	67.18	9.07	76.25	-22.02	Annexure-12
2	1x3 to 2x3 MVA	47.48	1.21	1.61	2.82	0.51	50.81	1.52	0.76	53.09	7.17	60.26	-3.72	Annexure-12
3	1x3 to (3+5) MVA	68.22	1.73	2.31	4.05	0.73	73.00	2.19	1.10	76.29	10.30	86.58	-3.72	Annexure-12
4	2x3 to (3+5) MVA	50.48	1.28	1.71	2.99	0.54	54.01	1.62	0.81	56.44	7.62	64.06	-22.31	Annexure-12
5	2x3 to 2x5 MVA	102.82	2.61	3.49	6.10	1.10	110.02	3.30	1.65	114.97	15.52	130.49	-44.33	Annexure-12
6	1x5 to (3+5) MVA	47.48	1.21	1.61	2.82	0.51	50.81	1.52	0.76	53.09	7.17	60.26	-3.72	Annexure-12
7	1x5 to 2x5 MVA	67.84	1.72	2.30	4.02	0.72	72.59	2.18	1.09	75.86	10.24	86.10	-3.57	Annexure-13
8	(3+5) to 2x5 MVA	51.99	1.32	1.76	3.08	0.56	55.63	1.67	0.83	58.13	7.85	65.98	-22.02	Annexure-13

Note: i) 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.

ii) Cost of materials i.e. centralized and de-centralized materials, is inclusive of GST. (col. 3)

iii) GST shall further be applicable on the total/final estimated cost (col. 13) for deposit works (i.e. construction/shifting of lines/transformers etc.) of individual/institutional/organizational consumers.

iv) Labour cess shall further be applicable as per rule.

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COST ANALYSIS OF INCREASING CAPACITY OF 33/11KV SUB-STATION (1/2)

Plains: 2021-22

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	30648	0	0	2	61296	2	61296	0	0	0	0	2	61296
(ii)	Structure for above	Nos	23865	0	0	2	47729	2	47729	0	0	0	0	2	47729
2(i)	33 KV post insulator set	Nos	1015	0	0	-3	-3045	-3	-3045	-6	-6090	-6	-6090	-3	-3045
(ii)	Structure for above	Nos	11469	0	0	-1	-11469	-1	-11469	-2	-22937	-2	-22937	-1	-11469
3	Transformers bus bar complete with structure	Nos	181987	0	0	1	181987	1	181987	0	0	0	0	1	181987
4(i)	33 KV lightning arestor	Nos	4000	0	0	1	4000	1	4000	0	0	0	0	1	4000
(ii)	Structure for above	Nos	9558	0	0	1	9558	1	9558	0	0	0	0	1	9558
5	33/11 KV Transformers														
(i)	3 MVA	Nos	2202200	-1	-2202200	1	2202200	0	0	-1	-2202200	-2	-4404400	1	2202200
(ii)	5 MVA	Nos	4265838	1	4265838	0	0	1	4265838	1	4265838	2	8531676	0	0
6	90lbs rail pieces 44.64 kg/M	M	3845	0	0	6	23067	6	23067	0	0	0	0	6	23067
7	Plinth & foundation for transformers		148167	0	0	1	148167	1	148167	1	148167	2	296333	1	148167
8(i)	33 KV VCB with single T/F control panel and CT 200/100/1A with structure (i) 33 KV VCB (ii) control panel I/C for 33KV single T/F (iii) CT 200/100/1-1A (iv) steel structure	Nos	357090	1	357089.7	-1	-357090	-1	-357090	0	0	0	0	-1	-357090
(ii)	33 KV VCB with double T/F control panel and CT 200/100/1A with structure (i) 33 KV VCB (ii) control panel I/C for 33KV double T/F (iii) CT 200/100/1-1A (iv) steel structure	Nos	439252	0	0	1	439252	1	439252	1	439252	1	439252	1	439252
(iii)	Plinth & foundation for VCB	Nos	27832	1	27832.2	1	27832	1	27832	1	27832	1	27832	1	27832
9	11 KV VCB														
(i)	11KV VCB I/C CTR 400/200/5A ,350MVA,630A	Nos	365585	1	365585	1	365585	1	365585	0	0	0	0	1	365585
(ii)	11 KV VCB O/G FDR CTR 200/100/5A,250MVA	Nos	314019	2	628038	2	628038	2	628038	0	0	2	628038	2	628038

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 350 MVA	Nos	244903	0	0	1	244903	1	244903	0	0	0	0	1	244903
10	11KV 3 Core cable														
(i)	120 mm sq. XLPE	M	887	0	0	120	106440	120	106440	0	0	120	106440	120	106440
(ii)	185 mm sq. XLPE	M	1200	120	144000	30	36000	0	0	0	0	0	0	30	36000
(iii)	300 mm sq. XLPE	M	1546	50	77300	0	0	30	46380	60	92760	60	92760	0	0
11	Laying of 11 KV cable including cost of sand & bricks	M	250	170	42449	150	37455	150	37455	60	14982	180	44946	150	37455
12	Making of 11 KV cable boxes mounted with switchgears and T/F (Kit)	Nos	23385	2	46769.8	4	93540	4	93540	2	46770	4	93540	4	93540
13	11 KV cable jointing with 120 sq.mm.	Nos	4746	0	0	2	9492	2	9492	0	0	2	9492	2	9492
14	Control cable				0										
(i)	4x2.5 mm sq	M	322	100	32230	100	32230	100	32230	0	0	0	0	100	32230
(ii)	2x2.5mm sq	M	183	100	18260	100	18260	100	18260	0	0	0	0	100	18260
15	Earthing of indoor equipments	Nos	39054	0	0	0.5	19527	0.5	19527	0	0	0	0	0.5	19527
16	Painting of S/s structure (LS)	Nos	9500	0	0	1	9500	1	9500	1	9500	1	9500	1	9500
17	Sundries (LS)	Nos	2400	1	2400	1	2400	1	2400	1	2400	1	2400	1	2400
Total Cost of new materials					6007792		4748458		6822476		5047501		10282209		4748458
Total Cost of new materials (Rs.in Lacs)					60.08		47.48		68.22		50.48		102.82		47.48
Total cost of material received back					-2202200		-371604		-371604		-2231227		-4433427		-371604
Total cost of material received back (Rs.in Lacs)					-22.02		-3.72		-3.72		-22.31		-44.33		-3.72

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COST ANALYSIS OF INCREASING CAPACITY OF 33/11 KV SUB-STATION (2/2)

Plains: 2021-22

Sl. No.	Particulars	Unit	Rates (Rs.)	1x5 MVA to 2x5 MVA		(3+5) MVA to 2x5 MVA	
				Qty.	Amt. (Rs.)	Qty.	Amt. (Rs.)
1	2	3	4	5	6	7	8
1(i)	33 KV bus isolator	Nos.	30648	1	30648	0	0
(ii)	Structure for above	Nos.	23865	1	23865	0	0
2(i)	33 KV Post insulator set	Nos.	1015	3	3045	0	0
(ii)	Structure for above	Nos.	11469	1	11469	0	0
3	Transformer bus complete with structure	Nos.	181987	1	181987	0	0
4(i)	33 KV lightning arrester	Set	4000	1	4000	0	0
(ii)	Structure for above	Nos.	11469	1	11469	0	0
5	33/11 KV Transformer						
(i)	3 MVA	Nos.	2202200	0	0	-1	-2202200
(ii)	5 MVA	Nos.	4265838	1	4265838	1	4265838
6	90 lbs rail pieces (44.64kg/M)	M.	3845	6	23067	0	0
7	Plinth & foundation of transformer	Nos.	148167	1	148167	0	0
8(i)	33 KV VCB with single T/F control panel and CT 200/100/1A with structure (i) 33 KV VCB (ii) control panel I/C for 33KV single T/F (iii) CT 200/100/1-1A (iv) steel structure	Nos	357090	-1	-357090	0	0
(ii)	33 KV /VCB with double T/F control panel and CT 200/100/1A with structure (i) 33 KV VCB (ii) control panel I/C for 33KV double T/F (iii) CT 200/100/1-1A (iv) steel structure	Nos	439252	1	439252	0	0
9	Plinth & foundation of VCB	Nos.	27832	1	27832	0	0
10	11 KV VCB						
(i)	Incoming CTR 400/200/5A 350 MVA	Nos.	365585	1	365585	0	0
(ii)	Outgoing CTR 200/100/5A 250 MVA	Nos.	314019	2	628038	2	628038
(iii)	Bus coupler 350 MVA	Nos.	244903	1	244903	0	0
11	11 KV 3 core cable						
(i)	120 mm sq XLPE	M.	887	120	106440	120	106440
(ii)	300 mm sq XLPE	M.	1546	30	46380	30	46380

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Sl. No.	Particulars	Unit	Rates (Rs.)	1x5 MVA to 2x5 MVA		(3+5) MVA to 2x5 MVA	
				Qty.	Amt. (Rs.)	Qty.	Amt. (Rs.)
1	2	3	4	5	6	7	8
12	Laying of 11 KV cable including cost of bricks and sand	M.	250	150	37455	150	37455
13	Making of 11 KV cable boxes mounted with switchgears and transformers (Kit)	Nos.	23385	4	93540	4	93540
14	11 KV cable jointing kit 120 sq.mm	Nos.	4746	2	9492	2	9492
15	Control cable				0		0
(i)	4x2.5 mm sq	M.	322.3	100	32230	0	0
(ii)	2x2.5 mm sq.	M.	182.6	100	18260	0	0
16	Earthing of indoor equipments	Nos.	39054	0.5	19527	0	0
17	Painting of indoor equipments	LS	9500	1	9500	1	9500
18	Sundries	LS	2400	1	2400	1	2400
Total cost of new materials					6784389		5199083
Say (Rs. in Lacs)					67.84		51.99
Cost of materials received back					-357090		-2202200
Say (Rs. in Lacs)					-3.57		-22.02

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PART - E

HVDS (1/3)

**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.**

Plains: 2021-22

Sl. No.	Items	Unit	Rate (Rs.)	Qty.	Amt. (Rs.)
1	Pole PCC 8.5 Meter Long	No	2517	1	2517
2	Conductor Weasel ACSR	Meters	28.521	185	5276
3	11 KV Pin Insulators	Nos	141	3	423
4	11 KV Pin with nut	Nos	78	3	234
5	11 KV V-type Cross-arm (MS. angle 65x65x6 mm)	Nos	671	1	671
6	Guarding Cross-arm (M.S. angle 65x65x6mm/1.6 Meter long), 5.8kg./M=9.28kg.	Nos	512	1	512
7	L.T. Cross arm (MS angle 65x65x6mm, 1.00 Meter long)	Nos	320	1	320
8	E-bracket with bolt & nuts	Nos	151	1	151
9	G.I. wire 6 SWG and 10 SWG for guarding, lacing and street light cable catenary	Kg.	68	22	1496
10	L.T. PVC Al. 2x4sq. mm cable for street light	Meters	68	50	3400
11	X-arms holding clamps with bolts and nuts (3 No.X-arms)	Nos	107	3	321
12	Eye bolts for guard wires and LT cable catenary wires	Nos	64	3	192
13	Danger Board, number plate with fixing clamp, nuts and bolts	Set	160	1	160
14	G.I. Barbed wire	Kg.	102	1	102
15	Stone Pad (300x300x75mm)	No	85	1	85
16	Stay complete (stay rod 16x1800mm, stay wire 5 kg, stay clamp, bolt & nut with grouting)	No	2230	0.50	1115
17	Earthing of pole by MS earthing rod of 20x2500 mm. and 6 SWG earthing wire etc.	No	922	1	922
18	Grouting of pole (0.268 cu.m) @ 1800	No	942	1	942
Total Cost of materials (Incl. GST)					18839
19	i) Cartage charges @ 7%		1318.73	1	1319
	ii) Erection charges @ 8%		1507.12	1	1507
Sub Total					21665
20	O.H. charges @ 18% on (19) above (13.5% Establishment +1.5% T&P +3% contingency)				3900
Grand Total					25565
Total (Say)					25560

Note - Labour cess as per rule, if applicable.



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HVDS (2/3)

Plains: 2021-22

Sl. No.	Items	Unit	Rate (Rs)	Qty.	Amt.(Rs)
1	Pole PCC 8.5 Meter Long	No	2517	2	5034
2	Stone Pad (300x300x75 mm)	No	85	2	170
3	M.S. Channel Cross Arm (100X50X75mm) Top Channel	No	811	1	811
4	Cross bracing M.S. Angle (50X50X6mm) 4.5 Kg/M with clamp	Sets	817	1	817
5	Clamps with Nuts & Bolts for top Channel	Nos	126	2	252
6	Barbed wire GI	Kg.	102	2	204
7	Danger Board & Clamps with bolts & nuts	No.	160	1	160
8	Concreting Of poles (0.268 cm)	No.	942	2	1884
9	Earthing of pole by MS earthing rod of 20x2500 mm. and 6 SWG earthing wire etc.	No.	922	2	1844
10	"E" Bracket with nuts & bolts	No.	151	3	453
11	11 KV Disc Insulators T&C Type	No.	121	6	726
12	11 KV Disc fittings 45 KN	No.	123	6	738
13	11 KV pin insulators	No.	141	3	423
14	11 KV pin with nut	No.	78	3	234
15	PG Clamps	No.	124	6	744
16	Stay complete (stay rod 16x1800mm, stay wire 5 kg, stay clamp, bolt & nut with grouting)	No.	2230	6	13380
17(a)	11 KV TPMO with fixing clamps	No.	19800	1	19800
17(b)	11 KV Fuse Sets (drop out) with clamps	No.	1167	1	1167
Total Cost of materials (Incl. GST)					48841
18	i) Cartage charges @ 7%		3419	1	3419
	ii) Erection charges @ 8%		3907	1	3907
Sub Total					56167
19	O.H. charges @ 18% on (18) above (13.5% Establishment +1.5% T&P +3% contingency)				10110
Grand Total					66277
Total (Say)					66280

Note - Labour cess as per rule, if applicable.

27/10/22
E.E. (RESSPO)

27.10.21
S.E. (RESSPO)

HVDS (3/3)

Plains: 2021-22

Sl. No.	Particulars	Unit	Rates (Rs.)	10 KVA	
				Qty.	Amt. (Rs.)
1	2	3	4	5	6
1	Transformers				
	10 KVA, 11/0.4 KV, 1 Ph.T/F.	Nos.	33220	1	33220
2	Distribution Box (D.B.)	Nos.	6442	1	6442
3	Clamps for D.B. (40x6mm)	Nos.	334	2	668
4	Clamps for T/F (75x8mm)	Nos.	334	2	668
5	ACSR Weasel Jumpers	M.	53	10	530
6	11 KV Pin Insulator	Nos.	141	2	282
7	11 KV Pins with nut	Nos.	78	2	156
8	Eye bolts for service cables	Nos.	64	3	192
9	PVC Cables				
	i) 10 Sq. mm single core	M.	45	5	225
	ii) 16 Sq. mm. single core	M.	53	0	0
10	Stay complete (stay rod 16x1800mm, stay wire 5 kg, stay clamp, bolt & nut with grouting)	Set	2230	1	2230
11	Earthing of pole by MS earthing rod of 20x2500 mm. and 6 SWG earthing wire etc.	Nos.	922	2	1844
Total Cost of materials (Incl. GST)					46457
12	i) Cartage charges @ 7%		3252	1	3252
	ii) Erection charges @ 8%		3717	1	3717
Sub Total					53426
13	O.H. charges @ 18% on (12) above (13.5% Estt. +1.5% T&P +3% contingency)				9617
Grand Total					63042
Total (Say)					63042

Note - Labour cess as per rule, if applicable.

23/10/21
E.E. (RESSPO)

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23.10.21
S.E. (RESSPO)