ANNEXURE- I

SCOPE-II:

- (A) SUPPLY PART:
- (B) ERECTION PART

Construction of 33kV FEEDER WORK with accessories, as per technical specification and scope of work.

	BROAD REQUIREMENT FOR INFORMATION		20 (Sum from 1 to 19)
1	33kV Line with 13mtr long WPB Pole	Km	192.30
2	33kV Line with H-Pole 13mtr	Km	43.72
3	33kV line on Underground Cable	Mtr.	20250.00
4	PC '+6' Tower Requirement for River crossing on 33kV Line	No's.	4

	Tata Power Central Odisha Distribution Limited (TPCODL)						
Eng	gineering, Supply, Erection and Commissioning of 33/11 kV Sub-Stations, 33k	V. 11kV	. LT Lines.				
2,	LVRT and DTR with associated 11kV Interlinking Lines Under CM		, ET Emes,				
	Supply of Materials Required for Construction of 33kV line						
N	OTICE INVITING TENDER- NIT NO- TPCODL/P&S/1000000364/2023-24	. Date:0	5.04.2023				
		, 2					
SL. No.	DESCRIPTION OF ITEMS						
1101	SUPPLY OF FOLLOWING EQUIPMENTS/ MATERIALS (As per technical specification and scope of work.)	UNITS	Total Quantity	BASIC PRICE PER UNIT (Taxable Value) In Rs	CGST @ 9% PER UNIT (INTRA- STATE)	OGST @ 9% PER UNIT (INTRA- STATE)	TOTAL PRICE PER UNIT (In Rs)
		Circle					
	BROAD REQUIREMENT FOR INFORMATION		20 (Sum from 1 to 19)	21	22= (21*9%)	23= (21*9%)	24= {21+22+23}
1	33kV Line with 13mtr long WPB Pole	Km	192.30				,
2	33kV Line with H-Pole 13mtr	Km	43.72				
3	33kV line on Underground Cable	Mtr.	20250.00				
4	PC '+6' Tower Requirement for River crossing on 33kV Line	No's.	4				
	DETAIL REQUIREMENT (To be quoted)						
1	Supply of Material required for Construction of Line using 232sqmm conductor on 13 Mtr. long WPB Pole, as per technical specification and scope of work.						
Sl. No.	Description of Materials	Unit					
	MATERIALS FOR 33 KV DP Without Isolator						
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	330				
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 3.25 mtr., 2 no's channel required =(2x9.56x3.25)	KG	10253.10				
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	654.19				
4	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.96 Mtr., 5 no's channel required = (5x7.14x1.96)	KG	11545.38				
5	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 3.432 mtr., 4 nos angle required = (4*4.5*3.432)	KG	10193.04				
6	Danger Plate, 2 no's.	No's.	330				
7	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	99.30				
8	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	330				
9	H.T. Stay set (Complete)	Set	330				
	H.T. Stay Insulator Type-C (2 No's.)	No's.	660				
11	7/8 SWG Stay Wire 15kg /stay	KG	4950.00				

12	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	165	I	1	1	
	50x6mm GI Flat for earthing, 2.36kg/mtr., (2.5 mtr. For mesh formation and 2.5 mtr. For raising)=	NOS.	103				
	5x2.36	KG	1947.00				
14	GI barbed wire anticlimbing device 3 Kg. Per support	KG	990.00				
	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510)	KG	397.19				
	33KV pin insulator polymer	No's.	495				
	H W fitting(B&S) 90KN,4 Bolt	No's.	990				
18	Disc insulator (B&S) 90 KN polymer	No's.	990				
	PG Clamp for 232 sq.mm AAA conductor	No's.	990				
	GI Nut, Bolt & Washer of different sizes (12.261 Kg each DP without Isolator)	KG	2023.07				
	Black Paint	Ltr	165.00				
22	Yellow Colour Paint for Background	Ltr	330.00				
	MATERIALS FOR 33 KV DP With Isolator						
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	38				
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 4.3 mtr., 2 no's channel required =(2x9.56x4.3)	KG	1562.10				
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	75.33				
4	Insulator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 1 no's channel required =(1x7.14x4.3)	KG	583.34				
3	Isolator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 2 no's channel required =(2x7.14x4.3)	KG	1166.68				
6	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 4 no's channel required =(4x7.14x4.3)	KG	2333.35				
1/	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 4.927 mtr., 4 nos angle required = (4*4.5*4.927)	KG	1685.03				
8	Isolator Operating Down Pipe Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 0.8 Mtr., 1 no's channel required =(1x7.14x0.8)	KG	108.53				
9	Down Pipe Diagonal Support Angle, 4.5Kg./mtr., each angle length 0.388mtr., 1 nos angle required = (1*4.5*0.388)	KG	33.17				
10	Down Pipe Base Support Angle, 4.5Kg./mtr., each angle length 0.34mtr., 1 nos angle required = (1*4.5*0.340)	KG	29.07				
	Isolator Support Side Cahnnel 100X50X6mm, 9.56 KG/Mtr., each channel length 0.5 mtr., 2 no's channel required =(2x9.56x0.5)	KG	181.64				
12	Danger Plate, 2 no's.	No's.	38				
12	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 2 no's = $(2x0.59x0.510)$	KG	11.43				
	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	38				
	H.T. Stay set (Complete)	Set	38				
16	H.T. Stay Insulator Type-C (2 No's.)	No's.	76				
17	7/8 SWG Stay Wire 15kg /stay	KG	570.00				
18	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	38				

					1	
19	50x6mm GI Flat for earthing, 2.36kg/mtr., (15 Mtr. For L.A, 4 Mtr for Isolator Body, 2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 24x2.36	KG	1076.16			
20	GI barbed wire anticlimbing device 3 Kg. Per support	KG	114.00			
21	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510)	KG	45.74			
22	Lightning Arrester(30KV,10KA) (Station Class,class-2)	EA	57			
23	33 KV 1250 AMP Double break (Turn & twist center rotating) isolator without earth switch with Pl(Polymer)	Set	19			
24	33KV pin insulator polymer	No's.	57			
25	H W fitting(B&S) 90KN,4 Bolt	No's.	114			
26	Disc insulator (B&S) 90 KN polymer	No's.	114			
27	PG Clamp for 232 sq.mm AAA conductor	No's.	114			
28	GI Nut, Bolt & Washer of different sizes (22.15 Kg each DP with Isolator)	KG	420.85			
29	Black Paint	Ltr	19.00			
30	Yellow Colour Paint for Background	Ltr	38.00			
	MATERIALS FOR 33 KV Cut Point with 180 Degree Angle					
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	193			
2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 2 No's of Channel = (2x 9.56x1.7)	KG	6273.27			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 8 no's required = (8x2.36x0.280)	KG	1020.28			
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 2 No's of Channel = (2x 9.56x0.306)	KG	1129.19			
5	Danger Plate, 1 no's.	No's.	193			
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	58.07			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	579.00			
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	232.29			
9	33KV pin insulator polymer	No's.	579			
10	H W fitting(B&S)90KN,4 Bolt	No's.	1158			
11	Disc insulator (B&S)90 KN polymer	No's.	1158			
12	Earthing of Support (Coil Type)	EA	193			
13	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	50.57			
14	PG Clamp for 232 sq.mm AAA conductor	No's.	1158			
15	GI Nut, Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point)	KG	941.65			
16	Black Paint	Ltr	193.00			
17	Yellow Colour Paint for Background	Ltr	386.00			
	MATERIALS FOR 33 KV Cut Point with 90 Degree Angle					
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	162			
2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 4 No's of Channel = (4x 9.56x1.7)	KG	10531.30			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280)	KG	1712.79			
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 4 No's of Channel = (4x 9.56x0.306)	KG	1895.63			
5	Danger Plate, 1 no's.	No's.	162			

6		Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's =				
Sack Clamp for anticlimbing device 252 Xi mm. Int. 0.99kg Mtr. Flat of 0.510mtr length 4 no's =	6	(1x0.59x0.510)	KG	48.75		
194,0580,510 194,058 194,	7		KG	486.00		
10 H. Writing B&Sp0KNA Bolt Nos. 972	8		KG	194.98		
11 Disc insulator (1848)90 KN polymer No's 972	9	33KV pin insulator polymer (4 No's each 90 Deg. Cut point)	No's.	648		
12 Earthing of Support (Coil Type) No's. 162 13 No-8 of Giver (Dia 4.6mm) 0.131 KG/ Mfr2 Mfr. For connecting pole with Coil earthing KG 14 PG Clamp for 232 sq.mm AAA conductor No's. 15 H.T. Stay clamp, 5088 mm. flat, 3.14Kg/Mfr., 0.511 Mfr. Length, 2 no's qty. required (1 Pair) Pair 16 H.T. Stay set (Complete) Set 162 17 H.T. Stay set (Complete) Set 162 18 78 SWG Stay Wire 1Stg /stay KG 2430.00 19 GI Nut, Bulk & Washer of different sizes (11.31 Kg each 90 deg. Cut point) KG 2430.00 19 GI Nut, Bulk & Washer of different sizes (11.31 Kg each 90 deg. Cut point) KG 1832.22 19 GI Nut, Bulk & Washer of different sizes (11.31 Kg each 90 deg. Cut point) Lrr 162.00 19 GI Nut, Bulk & Washer of different sizes (11.31 Kg each 90 deg. Cut point) Lrr 162.00 10 WPB 160x152 (13Mtr. Long, 30.44KG/Mfr.) No's. 2147 2 33 KV V cross Arm (Gir) 22Kg each No's. 2147 3 Top bracket 100x50x6mm GI channel (2 kg each) No's. 2147 4 Danger Plate, I no's. No's. 2147 5 Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = KG 646.03 6 Gi barbed wire anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = KG 6441.00 6 Gi barbed wire anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = KG 502.51 7 GANG, 59x0.510 KG 502.51 8 33KV pin insulator polymer No's. 6441 9 Salver (Dang for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = KG 502.51 10 No's Gi wire (Dia 4.6mm) 0.131 KG/Mtr2 Mtr. For connecting pole with Coil earthing KG 502.51 10 GI Nut, Barber (Gifferent sizes (1.45 Kg/Pin Point) KG 502.51 10 Salver (Dia 4.6mm) 0.131 KG/Mtr2 Mtr. For connecting pole with Coil earthing KG 502.51 10 WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.) No's. 28 1417.00 10 WPB 160x152 (13Mtr. Long, 30.44KG/Mt			No's.	972		
12 Earthing of Support (Coil Type) No's. 162 13 No-8 of Giver (Dia 4.6mm) 0.131 KG/ Mfr2 Mfr. For connecting pole with Coil earthing KG 14 PG Clamp for 232 sq.mm AAA conductor No's. 15 H.T. Stay clamp, 5088 mm. flat, 3.14Kg/Mfr., 0.511 Mfr. Length, 2 no's qty. required (1 Pair) Pair 16 H.T. Stay set (Complete) Set 162 17 H.T. Stay set (Complete) Set 162 18 78 SWG Stay Wire 1Stg /stay KG 2430.00 19 GI Nut, Bulk & Washer of different sizes (11.31 Kg each 90 deg. Cut point) KG 2430.00 19 GI Nut, Bulk & Washer of different sizes (11.31 Kg each 90 deg. Cut point) KG 1832.22 19 GI Nut, Bulk & Washer of different sizes (11.31 Kg each 90 deg. Cut point) Lrr 162.00 19 GI Nut, Bulk & Washer of different sizes (11.31 Kg each 90 deg. Cut point) Lrr 162.00 10 WPB 160x152 (13Mtr. Long, 30.44KG/Mfr.) No's. 2147 2 33 KV V cross Arm (Gir) 22Kg each No's. 2147 3 Top bracket 100x50x6mm GI channel (2 kg each) No's. 2147 4 Danger Plate, I no's. No's. 2147 5 Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = KG 646.03 6 Gi barbed wire anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = KG 6441.00 6 Gi barbed wire anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = KG 502.51 7 GANG, 59x0.510 KG 502.51 8 33KV pin insulator polymer No's. 6441 9 Salver (Dang for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = KG 502.51 10 No's Gi wire (Dia 4.6mm) 0.131 KG/Mtr2 Mtr. For connecting pole with Coil earthing KG 502.51 10 GI Nut, Barber (Gifferent sizes (1.45 Kg/Pin Point) KG 502.51 10 Salver (Dia 4.6mm) 0.131 KG/Mtr2 Mtr. For connecting pole with Coil earthing KG 502.51 10 WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.) No's. 28 1417.00 10 WPB 160x152 (13Mtr. Long, 30.44KG/Mt	11	Disc insulator (B&S)90 KN polymer	No's.	972		
14 PG Clamp for 232 sq.mm AAA conductor	12	Earthing of Support (Coil Type)	No's.	162		
15 H.T. Stay clamp, 50×8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	13	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	42.44		
H.T. Stay set (Complete)	14	PG Clamp for 232 sq.mm AAA conductor	No's.	972		
H.T. Stay Insulator Type-C (2 No's.)	15	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	162		
18	16	H.T. Stay set (Complete)	Set	162		
19 GI Nut. Bolt & Washer of different sizes (11.31 Kg cach 90 deg. Cut point) Ltr 162.00	17	H.T. Stay Insulator Type-C (2 No's.)	No's.	162		
Description				2430.00		
Description	19	GI Nut, Bolt & Washer of different sizes (11.31 Kg each 90 deg. Cut point)	KG	1832.22		
MATERIALS FOR 33 KV Pin Points			Ltr	162.00		
1 WPB 160x152 (13Mtr. Long. 30.44KG/Mtr.)	21	Yellow Colour Paint for Background	Ltr	324.00		
2 33 KV V cross Arm (Gl) 22Kg each						
2 33 KV V cross Arm (Gl) 22Kg each	1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	2147		
3 Top bracket 100x50x6mm Gl channel (2kg each)			No's.	2147		
4 Danger Plate, 1 no's. No's. 2147			No's.			
Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's =	4		No's.	2147		
Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)		Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's =	KG	646.03		
(4x0.59x0.510)	6	GI barbed wire anticlimbing device 3 Kg. Per support	KG	6441.00		
9 Earthing of Support (Coil Type)	7		KG	2584.13		
10 No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing KG 562.51 11 GI Nut , Bolt & Washer of different sizes (1.45 Kg/ Pin Point) KG 3113.15 12 232 sq.mm AAA conductor Km 455.16 13 Black Paint Ltr 2147.00 14 Yellow Colour Paint for Background Ltr 4294.00 2 Supply of Material required for Construction of Line using 148sqmm conductor on 13 Mtr. long WPB Pole, as per technical specification and scope of work. 1 WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.) No's. 28 2 Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 3.25 mtr., 2 no's channel required = (8	33KV pin insulator polymer	No's.	6441		
11 GI Nut , Bolt & Washer of different sizes (1.45 Kg/ Pin Point) KG 3113.15 12 232 sq.mm AAA conductor Km 455.16 13 Black Paint Ltr 2147.00 14 Yellow Colour Paint for Background Ltr 4294.00 2 Supply of Material required for Construction of Line using 148sqmm conductor on 13 Mtr. long WPB Pole, as per technical specification and scope of work. 1 WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.) No's. 28 2 Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 3.25 mtr., 2 no's channel required = (9	Earthing of Support (Coil Type)	No's.	2147		
12 232 sq.mm AAA conductor Km 455.16 13 Black Paint Ltr 2147.00 14 Yellow Colour Paint for Background Ltr 4294.00 2 Supply of Material required for Construction of Line using 148sqmm conductor on 13 Mtr. long WPB Pole, as per technical specification and scope of work.	10	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	562.51		
12 232 sq.mm AAA conductor Km 455.16 13 Black Paint Ltr 2147.00 14 Yellow Colour Paint for Background Ltr 4294.00 2 Supply of Material required for Construction of Line using 148sqmm conductor on 13 Mtr. long WPB Pole, as per technical specification and scope of work.	11	GI Nut, Bolt & Washer of different sizes (1.45 Kg/ Pin Point)	KG	3113.15		
14 Yellow Colour Paint for Background	12	232 sq.mm AAA conductor	Km	455.16		
2 Supply of Material required for Construction of Line using 148sqmm conductor on 13 Mtr. long WPB Pole, as per technical specification and scope of work. MATERIALS FOR 33 KV DP Without Isolator	13	Black Paint	Ltr	2147.00		
WPB Pole, as per technical specification and scope of work. MATERIALS FOR 33 KV DP Without Isolator	14		Ltr	4294.00		
1 WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.) No's. 28 2 Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 3.25 mtr., 2 no's channel required = (KG 2x9.56x3.25) KG 869.96 3 Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280) KG 55.51 4 Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.96 Mtr., 5 no's KG 970.61	2					
2 Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 3.25 mtr., 2 no's channel required = (2x9.56x3.25) 3 Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280) 4 Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.96 Mtr., 5 no's						
2 2x9.56x3.25) 3 Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280) 4 Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.96 Mtr., 5 no's	1		No's.	28		
Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.96 Mtr., 5 no's	2		KG	869.96		
	3		KG	55.51		
	4		KG	979.61		

Danger Plate, 2 no/s. No/s. 28 No/s. 29 No/s. 29 No/s. 29 No/s. 29 No/s. 24 No/s. 29 No/s. 24 No/s. 29 No/s. 24 No/s. 29 No/s. 24 No/s. 20 No/s.	5	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 3.432 mtr., 4 nos angle required =	KG	864.86		
Rack Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's =		(4*4.5*3.432)				
R. Say Champ, 50x8 mm. flat, 5.14Kg/Mtr., 0.511 Mtr. Length, 2 nov qty. required (1 Pair)	-		INUS.	20		
H.T. Stay set (Complete)	7		KG	8.43		
10	8	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	28		
11 7.8 SWG Stay Wire 15kg /siny	_		Set			
12 Gi Pipe Eurthing 40nm. 3 Mr. Long No's. 14			No's.	56		
13 50.6mm Gl Flat for earthing, 2.36kg/mtr., (2.5 mtr. For mesh formation and 2.5 mtr. For raising)= KG 165.20 14 Gl barbed wire anticlimbing device 3 Kg. Per support KG 84.00 15 Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/mtr. Flat of 0.510mtr length 8 no's = (80.595x0.510) 16 33 KV pin insulator polymer No's. 42 17 H W fitting/BRS) 90KN-y Bolt No's. 84 18 Disc insulator (BRS) 90 KN polymer No's. 84 19 PG Clamp for 148 sq.mm AAA conductor No's. 84 10 Gl Nur, Johl & Washer of different sizes (12.261 Kg each DP without Isolator) KG 171.65 11 Black Paint Ltr 14.00 12 Yellow Colour Paint for Background Ltr 28.00 14 Sq. matter Sq. matter	11	7/8 SWG Stay Wire 15kg /stay	KG	420.00		
13 S.2.36 S.2.3	12	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	14		
Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = KG 33.70	13		KG	165.20		
Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = KG 33.70	14	GI barbed wire anticlimbing device 3 Kg. Per support	KG	84.00		
17 H W fitting(18&S) 90KN/4 Bolt Nos. 84		Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's =	KG	33.70		
17 H W fitting(18&S) 90KN/4 Bolt Nos. 84	16	33KV pin insulator polymer	No's.	42		
18 Disc insulator (B&S) 90 KN polymer	17	H W fitting(B&S) 90KN,4 Bolt	No's.	84		
19 PG Clamp for 148 sq.mm AAA conductor			No's.	84		
20 Gi Nut , Bolt & Washer of different sizes (12.261 Kg each DP without Isolator) KG 171.65			No's.			
21 Black Paint Ltr 14.00 Ltr 28.00			KG			
2 Yellow Colour Paint for Background						
WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)						
WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)						
2 Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 4.3 mtr., 2 no's channel required = (1		No's.	6		
Signature Sign	2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 4.3 mtr., 2 no's channel required =(
Insulator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 1 no's channel required = (1x7.14x4.3)	3		KG	11.89		
Isolator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 2 no's channel required = (2x7.14x4.3) KG Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 4 no's channel required = (4x7.14x4.3) KG 368.42		Insulator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 1 no's channel				
Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 4 no's channel required = (4x7.14x4.3) Sox50x6mm.Gl Bracing Angle, 4.5Kg./mtr., each angle length 4.927 mtr., 4 nos angle required = (4*4.5*4.927) Bisolator Operating Down Pipe Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 0.8 Mtr., 1 no's channel required = (1x7.14x0.8) Down Pipe Diagonal Support Angle, 4.5Kg./mtr., each angle length 0.388mtr., 1 nos angle required = (1*4.5*0.388) Down Pipe Base Support Angle, 4.5Kg./mtr., each angle length 0.34mtr., 1 nos angle required = (1*4.5*0.340) Bisolator Support Side Cahnnel 100X50X6mm, 9.56 KG/Mtr., each channel length 0.5 mtr., 2 no's channel required = (2x9.56x0.5) KG 266.06 KG 17.14 KG 4.59 KG 4.59 KG 28.68	5	Isolator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 2 no's channel	KG	184.21		
(4*4.5*4.927) RG 266.06	6	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 4 no's	KG	368.42		
Mtr., 1 no's channel required = (1x7.14x0.8) Down Pipe Diagonal Support Angle, 4.5Kg./mtr., each angle length 0.388mtr., 1 nos angle required = (1*4.5*0.388) Down Pipe Base Support Angle, 4.5Kg./mtr., each angle length 0.34mtr., 1 nos angle required = (1*4.5*0.340) Isolator Support Side Cahnnel 100X50X6mm, 9.56 KG/Mtr., each channel length 0.5 mtr., 2 no's channel required = (2x9.56x0.5) KG Mtr., 1 no's channel required = (1x7.14x0.8) KG 5.24 LSG 4.59 KG 28.68	7		KG	266.06		
10 Down Pipe Base Support Angle, 4.5Kg./mtr., each angle length 0.34mtr., 1 nos angle required = KG 4.59	8		KG	17.14		
10 (1*4.5*0.340) 11 Isolator Support Side Cahnnel 100X50X6mm, 9.56 KG/Mtr., each channel length 0.5 mtr., 2 no's channel required = (2x9.56x0.5) KG 4.59 KG 28.68	9	(1*4.5*0.388)	KG	5.24		
channel required =(2x9.56x0.5)	10		KG	4.59		
12 Danger Plate, 2 no's. No's. 6	11		KG	28.68		
	12	Danger Plate, 2 no's.	No's.	6		

13	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	1.81		
14	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	6		
15	H.T. Stay set (Complete)	Set	6		
	H.T. Stay Insulator Type-C (2 No's.)	No's.	12		
	7/8 SWG Stay Wire 15kg /stay	KG	90.00		
	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	6		
19	50x6mm GI Flat for earthing, 2.36kg/mtr., (15 Mtr. For L.A, 4 Mtr for Isolator Body, 2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 24x2.36	KG	169.92		
20	GI barbed wire anticlimbing device 3 Kg. Per support	KG	18.00		
21	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510)	KG	7.22		
22	Lightning Arrester(30KV,10KA) (Station Class,class-2)	EA	9		
23	33 KV 1250 AMP Double break (Turn & twist center rotating) isolator without earth switch with Pl(Polymer)	Set	3		
24	33KV pin insulator polymer	No's.	9		
	H W fitting(B&S) 90KN,4 Bolt	No's.	18		
26	Disc insulator (B&S) 90 KN polymer	No's.	18		
27	PG Clamp for 148 sq.mm AAA conductor	No's.	18		
28	GI Nut, Bolt & Washer of different sizes (22.15 Kg each DP with Isolator)	KG	66.45		
29	Black Paint	Ltr	3.00		
30	Yellow Colour Paint for Background	Ltr	6.00		
	MATERIALS FOR 33 KV Cut Point with 180 Degree Angle				
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	8		
2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 2 No's of Channel = (2x 9.56x1.7)	KG	260.03		
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 8 no's required = (8x2.36x0.280)	KG	42.29		
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 2 No's of Channel = (2x 9.56x0.306)	KG	46.81		
5	Danger Plate, 1 no's.	No's.	8		
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	2.41		
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	24.00		
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	9.63		
9	33KV pin insulator polymer	No's.	24		
10	H W fitting(B&S)90KN,4 Bolt	No's.	48		
11	Disc insulator (B&S)90 KN polymer	No's.	48		
	Earthing of Support (Coil Type)	EA	8		
	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	2.10		
	PG Clamp for 148 sq.mm AAA conductor	No's.	48		
15	GI Nut, Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point)	KG	39.03		
16	Black Paint	Ltr	8.00		
17	Yellow Colour Paint for Background	Ltr	16.00		
	MATERIALS FOR 33 KV Cut Point with 90 Degree Angle				

1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	10		I	
	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 4 No's of		-			
2	Channel = $(4x 9.56x1.7)$	KG	650.08			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280)	KG	105.73			
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 4 No's of Channel = (4x 9.56x0.306)	KG	117.01			
5	Danger Plate, 1 no's.	No's.	10			
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	3.01			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	30.00			
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	12.04			
9	33KV pin insulator polymer (4 No's each 90 Deg. Cut point)	No's.	40			
10	H W fitting(B&S)90KN,4 Bolt	No's.	60			
11	Disc insulator (B&S)90 KN polymer	No's.	60			
12	Earthing of Support (Coil Type)	No's.	10			
13	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	2.62			
14	PG Clamp for 148 sq.mm AAA conductor	No's.	60			
15	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	10			
16	H.T. Stay set (Complete)	Set	10			
17	H.T. Stay Insulator Type-C (2 No's.)	No's.	10			
18	7/8 SWG Stay Wire 15kg /stay	KG	150.00			
19	GI Nut, Bolt & Washer of different sizes (11.31 Kg each 90 deg. Cut point)	KG	113.10			
20	Black Paint	Ltr	10.00			
21	Yellow Colour Paint for Background	Ltr	20.00			
	MATERIALS FOR 33 KV Pin Points					
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	140			
2	33 KV V cross Arm (GI) 22Kg each	No's.	140			
3	Top bracket 100x50x6mm GI channel (2kg each)	No's.	140			
4	Danger Plate, 1 no's.	No's.	140			
5	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	42.13			
6	GI barbed wire anticlimbing device 3 Kg. Per support	KG	420.00			
7	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	168.50			
8	33KV pin insulator polymer	No's.	420			
9	Earthing of Support (Coil Type)	No's.	140			
10	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	36.68			
11	GI Nut, Bolt & Washer of different sizes (1.45 Kg/ Pin Point)	KG	203.00			
12	148 sq.mm AAA conductor	Km	21.63		1	
13	Black Paint	Ltr	140.00			
14	Yellow Colour Paint for Background	Ltr	280.00			
3	Supply of Material required for Construction of Line using 241sqmm conductor on 13 Mtr. long WPB Pole, as per technical specification and scope of work.		200.00			
	MATERIALS FOR 33 KV DP Without Isolator					

1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	126		
	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 3.25 mtr., 2 no's channel required =(
2	2x9.56x3.25)	KG	3914.82		
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	249.78		
4	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.96 Mtr., 5 no's	IZ C	4400.24		
4	channel required =(5x7.14x1.96)	KG	4408.24		
5	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 3.432 mtr., 4 nos angle required =	KG	3891.89		
	(4*4.5*3.432)				
6	Danger Plate, 2 no's.	No's.	126		
7	Back Clamp for danger Plate $25X3$ mm. flat, $0.59Kg/Mtr$. Flat of $0.510mtr$ length 2 no's = $(2x0.59x0.510)$	KG	37.91		
8	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	126		
9	H.T. Stay set (Complete)	Set	126		
	H.T. Stay Insulator Type-C (2 No's.)	No's.	252		
	7/8 SWG Stay Wire 15kg/stay	KG	1890.00		
12	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	63		
13	50x6mm GI Flat for earthing, 2.36kg/mtr., (2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 5x2.36	KG	743.40		
14	GI barbed wire anticlimbing device 3 Kg. Per support	KG	378.00		
15	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510)	KG	151.65		
16	33KV pin insulator polymer	No's.	189		
17	Non Metallic Ties 33KV (For covered conductor)	No's.	189		
18	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	252		
19	IPC for 241 sq.mm AAA conductor (For covered conductor)	No's.	378		
20	H W fitting(B&S)90KN,4 Bolt	No's.	378		
21	Disc insulator (B&S) 90 KN polymer	No's.	378		
22	GI Nut, Bolt & Washer of different sizes (12.261 Kg each DP without Isolator)	KG	772.44		
23	Black Paint	Ltr	63.00		
24	Yellow Colour Paint for Background	Ltr	126.00		
	MATERIALS FOR 33 KV DP With Isolator				
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	24		
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 4.3 mtr., 2 no's channel required =(2x9.56x4.3)	KG	986.59		
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	47.58		
4	Insulator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 1 no's channel required =(1x7.14x4.3)	KG	368.42		
5	Isolator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 2 no's channel required = (2x7.14x4.3)	KG	736.85		
6	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 4 no's channel required =(4x7.14x4.3)	KG	1473.70		
7	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 4.927 mtr., 4 nos angle required = (4*4.5*4.927)	KG	1064.23		

				 	1
8	Isolator Operating Down Pipe Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 0.8 Mtr., 1 no's channel required =(1x7.14x0.8)	KG	68.54		
9	Down Pipe Diagonal Support Angle, 4.5Kg./mtr., each angle length 0.388mtr., 1 nos angle required = (1*4.5*0.388)	KG	20.95		
10	Down Pipe Base Support Angle, 4.5Kg./mtr., each angle length 0.34mtr., 1 nos angle required = (1*4.5*0.340)	KG	18.36		
11	Isolator Support Side Cahnnel 100X50X6mm, 9.56 KG/Mtr., each channel length 0.5 mtr., 2 no's channel required =(2x9.56x0.5)	KG	114.72		
12	Danger Plate, 2 no's.	No's.	24		
13	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	7.22		
14	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	24		
15	H.T. Stay set (Complete)	Set	24		
	H.T. Stay Insulator Type-C (2 No's.)	No's.	48		
	7/8 SWG Stay Wire 15kg /stay	KG	360.00		
	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	24		
19	50x6mm GI Flat for earthing, 2.36kg/mtr., (15 Mtr. For L.A, 4 Mtr for Isolator Body, 2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 24x2.36	KG	679.68		
20	GI barbed wire anticlimbing device 3 Kg. Per support	KG	72.00		
21	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510)	KG	28.89		
22	Lightning Arrester(30KV,10KA) (Station Class,class-2)	EA	36		
23	33 KV 1250 AMP Double break (Turn & twist center rotating) isolator without earth switch with Pl(Polymer)	Set	12		
24	33KV pin insulator polymer	No's.	36		
25	Non Metallic Ties 33KV (For covered conductor)	No's.	36		
26	IPC for 241 sq.mm AAA conductor (For covered conductor)	No's.	72		
27	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	48		
28	H W fitting(B&S)90KN,4 Bolt	No's.	72		
29	Disc insulator (B&S) 90 KN polymer	No's.	72		
30	GI Nut, Bolt & Washer of different sizes (22.15 Kg each DP with Isolator)	KG	265.80		
31	Black Paint	Ltr	12.00		
32	Yellow Colour Paint for Background	Ltr	24.00		
	MATERIALS FOR 33 KV Cut Point with 180 Degree Angle				
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	44		
2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 2 No's of Channel = (2x 9.56x1.7)	KG	1430.18		
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 8 no's required = (8x2.36x0.280)	KG	232.60		
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 2 No's of Channel = (2x 9.56x0.306)	KG	257.43		
5	Danger Plate, 1 no's.	No's.	44		
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	13.24		

7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	132.00		
	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's =	NU	132.00		
8	(4x0.59x0.510)	KG	52.96		
9	33KV pin insulator polymer	No's.	132		
10	Non Metallic Ties 33KV (For covered conductor)	No's.	132		
11	IPC for 241 sq.mm AAA conductor (For covered conductor)	No's.	264		
12	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	88		
13	H W fitting(B&S)90KN,4 Bolt	No's.	264		
14	Disc insulator (B&S)90 KN polymer	No's.	264		
15	Earthing of Support (Coil Type)	EA	44		
16	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	11.53		
17	GI Nut, Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point)	KG	214.68		
18	Black Paint	Ltr	44.00		
19	Yellow Colour Paint for Background	Ltr	88.00		
	MATERIALS FOR 33 KV Cut Point with 90 Degree Angle				
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	38		1
2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 4 No's of	KG	2470.30		
<u> </u>	Channel = (4x 9.56x1.7)	****	101 ==		
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280)	KG	401.77		
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 4 No's of Channel = (4x 9.56x0.306)	KG	444.65		
5	Danger Plate, 1 no's.	No's.	38		
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	11.43		
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	114.00		
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	45.74		
9	33KV pin insulator polymer (4 No's each 90 Deg. Cut point)	No's.	152		
10	H W fitting(B&S)90KN,4 Bolt	No's.	228		
11	Disc insulator (B&S)90 KN polymer	No's.	228		
12	Non Metallic Ties 33KV (For covered conductor)	No's.	152		
13	IPC for 241 sq.mm AAA conductor (For covered conductor)	No's.	228		
14	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	76		
15	Earthing of Support (Coil Type)	No's.	38		
16	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	9.96		
17	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	38		
18	H.T. Stay set (Complete)	Set	38		
19	H.T. Stay Insulator Type-C (2 No's.)	No's.	38		
20	7/8 SWG Stay Wire 15kg /stay	KG	570.00		
21	GI Nut, Bolt & Washer of different sizes (11.31 Kg each 90 deg. Cut point)	KG	429.78		
22	Black Paint	Ltr	38.00		1
23	Yellow Colour Paint for Background	Ltr	76.00	 	+
	1 one of colour raint for Background	Lu	70.00		

	MATERIALS FOR 33 KV Pin Points			1		
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	Mala	(52			
1	33 KV V cross Arm (GI) 22Kg each	No's.	653 653		-	
2	Top bracket 100x50x6mm GI channel (2kg each)	No's.	653			
3		No's.			+	
4	Danger Plate, 1 no's.	No's.	653			
5	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	196.49			
6	GI barbed wire anticlimbing device 3 Kg. Per support	KG	1959.00			
7	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	785.95			
8	33KV pin insulator polymer	No's.	1959			
9	Non Metallic Ties 33KV (For covered conductor)	No's.	1959			
10	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	1306			
11	Earthing of Support (Coil Type)	No's.	653			
12	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	171.09			
13	GI Nut, Bolt & Washer of different sizes (1.45 Kg/Pin Point)	KG	946.85			
14	241 sq.mm AAA conductor	Km	117.42			
15	Black Paint	Ltr	653.00			
16	Yellow Colour Paint for Background	Ltr	1306.00			
4	Supply of Material required for Construction of Line using 232sqmm conductor on 13 Mtr. long H-Pole, as per technical specification and scope of work.					
	MATERIALS FOR 33 KV DP Without Isolator				+	
1	13 Mtr. Long H-Pole	No's.	112			
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 3.25 mtr., 2 no's channel required = (2x9.56x3.25)	KG	3479.84			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	222.03			
4	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.96 Mtr., 5 no's channel required =(5x7.14x1.96)	KG	3918.43			
5	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 3.432 mtr., 4 nos angle required = (4*4.5*3.432)	KG	3459.46			
6	Danger Plate, 2 no's.	No's.	112			
7	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	33.70			
8	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	112			
9	H.T. Stay set (Complete)	Set	112			
10	H.T. Stay Insulator Type-C (2 No's.)	No's.	224			
11	7/8 SWG Stay Wire 15kg /stay	KG	1680.00			
12	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	56			
13	50x6mm GI Flat for earthing, 2.36kg/mtr., (2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 5x2.36	KG	660.80			
14	GI barbed wire anticlimbing device 3 Kg. Per support	KG	336.00			
15	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510)	KG	134.80			
16	33KV pin insulator polymer	No's.	168			
				-	 	

17	H W fitting(B&S) 90KN,4 Bolt	No's.	336	ı	T	1
18	Disc insulator (B&S) 90 KN polymer	No's.	336		+	
19	PG Clamp for 232 sq.mm AAA conductor	No's.	336			
20	GI Nut, Bolt & Washer of different sizes (12.261 Kg each DP without Isolator)	KG	686.62		+	
21	Black Paint	Ltr				
			56.00		+	-
22	Yellow Colour Paint for Background MATERIALS FOR 33 KV DP With Isolator	Ltr	112.00			
1		NT 1	26		1	
- 1	13 Mtr. Long H-Pole	No's.	36			
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 4.3 mtr., 2 no's channel required = (2x9.56x4.3)	KG	1644.32			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	79.29			
4	Insulator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 1 no's channel required =(1x7.14x4.3)	KG	614.05			
5	Isolator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 2 no's channel required = (2x7.14x4.3)	KG	1228.08			
6	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 4 no's channel required =(4x7.14x4.3)	KG	2456.15			
7	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 4.927 mtr., 4 nos angle required = (4*4.5*4.927)	KG	1773.72			
8	Isolator Operating Down Pipe Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 0.8 Mtr., 1 no's channel required =(1x7.14x0.8)	KG	114.25			
9	Down Pipe Diagonal Support Angle, 4.5Kg./mtr., each angle length 0.388mtr., 1 nos angle required = (1*4.5*0.388)	KG	34.92			
10	Down Pipe Base Support Angle, 4.5Kg./mtr., each angle length 0.34mtr., 1 nos angle required = (1*4.5*0.340)	KG	30.60			
11	Isolator Support Side Cahnnel 100X50X6mm, 9.56 KG/Mtr., each channel length 0.5 mtr., 2 no's channel required =(2x9.56x0.5)	KG	191.20			
12	Danger Plate, 2 no's.	No's.	40			
13	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	12.05			
14	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	100			
15	H.T. Stay set (Complete)	Set	40			
16	H.T. Stay Insulator Type-C (2 No's.)	No's.	68			
17	7/8 SWG Stay Wire 15kg /stay	KG	600.00			
18	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	40			
19	50x6mm GI Flat for earthing, 2.36kg/mtr., (15 Mtr. For L.A, 4 Mtr for Isolator Body, 2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 24x2.36	KG	1132.80			
20	GI barbed wire anticlimbing device 3 Kg. Per support	KG	120.00			
21	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510)	KG	48.14			
22	Lightning Arrester(30KV,10KA) (Station Class,class-2)	EA	60			
23	33 KV 1250 AMP Double break (Turn & twist center rotating) isolator without earth switch with Pl(Polymer)	Set	18			
24	33KV pin insulator polymer	No's.	60			
	H W fitting(B&S) 90KN,4 Bolt	No's.	120			
	6 /			l	1	

20 Disc instalator (1865) Vol. N. Polymer	2.	Int. 1. (Dog) committee	1 37 1 1	100	· · · · · · · · · · · · · · · · · · ·	1
Section	26	Disc insulator (B&S) 90 KN polymer	No's.	120		
1 18.00						
1 36,000 3 3 3 3 3 3 3 3						
3			Ltr	18.00		
20 10 10 10 10 10 10 10	30	Yellow Colour Paint for Background	Ltr	36.00		
MATERIALS FOR 33 KV Cut Point with 180 Degree Angle	31		Set	2.00		
MATERIALS FOR 33 KV Cut Point with 180 Degree Angle	32		Set	2.00		
1 13 Mrt. Long H-Pole		,				
Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 2 No's of Channel = (2x 9.56x1.7)	1		No's.	49		
Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 8 no's required = (8x2.36x0.280) KG 259.03	2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 2 No's of	KG	-		
Straight Cross Arm Top Channel 1 (DN x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr, 2 KG	3		KG	259.03		
Danger Plate, 1 no's.		Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 2				
Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = KG	5		No's	49		
The first of the state of the		Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's =				
Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	7		K.C.	147.00		
Solution Solution			NU	147.00		
10 H W fitting(B&S)90KN,4 Bolt		(4x0.59x0.510)				
Disc insulator (B&S)90 KN polymer						
12 Earthing of Support (Coil Type) EA 49	10		No's.	294		
13 No-8 G Wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing KG 12.84 14 PG Clamp for 232 sq.mm AAA conductor No's. 294 15 GI Nut, Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point) KG 239.07 16 Black Paint Ltr 49.00 17 Yellow Colour Paint for Background Ltr 98.00 18 WATERIALS FOR 33 KV Cut Point with 90 Degree Angle Ltr 98.00 1	11		No's.	294		
14 PG Clamp for 232 sq.mm AAA conductor No's. 294	12		EA	49		
15 GI Nut , Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point) KG 239.07	13	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	12.84		
16 Black Paint Ltr 49.00 17 Yellow Colour Paint for Background Ltr 98.00 18 MATERIALS FOR 33 KV Cut Point with 90 Degree Angle 19 MATERIALS FOR 33 KV Cut Point with 90 Degree Angle 10 MATERIALS FOR 33 KV Cut Point with 90 Degree Angle 10 MATERIALS FOR 33 KV Cut Point with 90 Degree Angle 10 MATERIALS FOR 33 KV Cut Point with 90 Degree Angle 10 MATERIALS FOR 33 KV Cut Point with 90 Degree Angle 10 MATERIALS FOR 33 KV Cut Point with 90 Degree Angle 11 MIT. Long H-Pole No's. 18 2 Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 4 No's of Channel = (4x 9.56x1.7) KG 1170.14 3 Fish Plate 50x6 mm, 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280) KG 190.31 4 Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 4 No's of Channel = (4x 9.56x0.306) KG 210.63 5 Danger Plate, 1 no's. No's. 18 6 Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) KG 54.00 7 GI barbed wire anticlimbing device 3 Kg. Per support KG 54.00 8 Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510) KG 21.66 9 33KV pin insulator polymer (4 No's each 90 Deg. Cut point) No's. 72	14	PG Clamp for 232 sq.mm AAA conductor	No's.	294		
16 Black Paint Ltr 49.00 17 Yellow Colour Paint for Background Ltr 98.00 18 MATERIALS FOR 33 KV Cut Point with 90 Degree Angle 19 MATERIALS FOR 33 KV Cut Point with 90 Degree Angle 10 MATERIALS FOR 33 KV Cut Point with 90 Degree Angle 10 MATERIALS FOR 33 KV Cut Point with 90 Degree Angle 10 MATERIALS FOR 33 KV Cut Point with 90 Degree Angle 10 MATERIALS FOR 33 KV Cut Point with 90 Degree Angle 10 MATERIALS FOR 33 KV Cut Point with 90 Degree Angle 11 MIT. Long H-Pole No's. 18 2 Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 4 No's of Channel = (4x 9.56x1.7) KG 1170.14 3 Fish Plate 50x6 mm, 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280) KG 190.31 4 Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 4 No's of Channel = (4x 9.56x0.306) KG 210.63 5 Danger Plate, 1 no's. No's. 18 6 Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) KG 54.00 7 GI barbed wire anticlimbing device 3 Kg. Per support KG 54.00 8 Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510) KG 21.66 9 33KV pin insulator polymer (4 No's each 90 Deg. Cut point) No's. 72	15	GI Nut, Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point)	KG	239.07		
MATERIALS FOR 33 KV Cut Point with 90 Degree Angle 1 13 Mtr. Long H-Pole No's. 18 18 18 19 19 19 1	16		Ltr	49.00		
MATERIALS FOR 33 KV Cut Point with 90 Degree Angle 1 13 Mtr. Long H-Pole No's. 18 18 18 19 19 19 1	17	Yellow Colour Paint for Background	Ltr	98.00		
1 13 Mtr. Long H-Pole No's. 18 2 Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 4 No's of Channel = (4x 9.56x1.7) KG 1170.14 3 Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280) KG 190.31 4 Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 4 No's of Channel = (4x 9.56x0.306) KG 210.63 5 Danger Plate, 1 no's. No's. 18 6 Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) KG 5.42 7 GI barbed wire anticlimbing device 3 Kg. Per support KG 54.00 8 Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510) KG 21.66 9 33KV pin insulator polymer (4 No's each 90 Deg. Cut point) No's. 72			1			
2 Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 4 No's of Channel = (4x 9.56x1.7) KG 1170.14 3 Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280) KG 190.31 4 Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 4 No's of Channel = (4x 9.56x0.306) KG 210.63 5 Danger Plate, 1 no's. No's. 18 6 Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) KG 5.42 7 GI barbed wire anticlimbing device 3 Kg. Per support KG 54.00 8 Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510) KG 21.66 9 33KV pin insulator polymer (4 No's each 90 Deg. Cut point) No's. 72	1		No's.	18		
Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280) KG 190.31	2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 4 No's of	KG	1170.14		
4 Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 4	3	,	KG	190.31		
5 Danger Plate, 1 no's. No's. 18 6 Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) KG 5.42 7 GI barbed wire anticlimbing device 3 Kg. Per support KG 54.00 8 Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510) KG 21.66 9 33KV pin insulator polymer (4 No's each 90 Deg. Cut point) No's. 72		Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 4				
6 Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) KG 5.42 7 GI barbed wire anticlimbing device 3 Kg. Per support KG 54.00 8 Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510) KG 21.66 9 33KV pin insulator polymer (4 No's each 90 Deg. Cut point) No's. 72	- 5		No'e	19		
(1x0.59x0.510) 7 GI barbed wire anticlimbing device 3 Kg. Per support 8 Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510) 9 33KV pin insulator polymer (4 No's each 90 Deg. Cut point) KG 54.00 21.66		Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's =				
8 Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510) 9 33KV pin insulator polymer (4 No's each 90 Deg. Cut point) No's. 72		/				
8 (4x0.59x0.510) RG 21.06 9 33KV pin insulator polymer (4 No's each 90 Deg. Cut point) No's. 72	7		KG	54.00		
	8	(4x0.59x0.510)	KG	21.66		
10 H W fitting(B&S)90KN,4 Bolt No's. 108			No's.	72		
	10	H W fitting(B&S)90KN,4 Bolt	No's.	108		

1.1	D: : 1 ((D 6 000 VA) 1	37.1	100	1	1	
	Disc insulator (B&S)90 KN polymer	No's.	108			
	Earthing of Support (Coil Type)	No's.	18			
	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	4.72			
14	PG Clamp for 232 sq.mm AAA conductor	No's.	108			
15	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	18			
16	H.T. Stay set (Complete)	Set	18			
	H.T. Stay Insulator Type-C (2 No's.)	No's.	18			
18	7/8 SWG Stay Wire 15kg /stay	KG	270.00			
19	GI Nut, Bolt & Washer of different sizes (11.31 Kg each 90 deg. Cut point)	KG	203.58			
20	Black Paint	Ltr	18.00			
21	Yellow Colour Paint for Background	Ltr	36.00			
	MATERIALS FOR 33 KV Pin Points					
1	13 Mtr. Long H-Pole	No's.	701			
2	33 KV V cross Arm (GI) 22Kg each	No's.	701			
	Top bracket 100x50x6mm GI channel (300mm each)	No's.	701			
	Danger Plate, 1 no's.	No's.	701			
	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	210.93			
6	GI barbed wire anticlimbing device 3 Kg. Per support	KG	2103.00			
	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's =	KO	2103.00			
/	(4x0.59x0.510)	KG	843.72			
	33KV pin insulator polymer	No's.	2103			
	Earthing of Support (Coil Type)	No's.	701			
	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	183.66			
11	GI Nut, Bolt & Washer of different sizes (1.45 Kg/ Pin Point)	KG	1016.45			
12	232 sq.mm AAA conductor	Km	103.52			
	Black Paint	Ltr	701.00			
	Yellow Colour Paint for Background	Ltr	1402.00			
5	Supply of Material required for Construction of Line using 148sqmm conductor on 13 Mtr. long H-Pole, as per technical specification and scope of work.					
	MATERIALS FOR 33 KV Cut Point with 90 Degree Angle					
1	13 Mtr. Long H-Pole	No's.	2			
2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 4 No's of Channel = (4x 9.56x1.7)	KG	130.02			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280)	KG	21.15			
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 4 No's of Channel = (4x 9.56x0.306)	KG	23.40			
5	Danger Plate, 1 no's.	No's.	2			
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	0.60			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	6.00			
	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's =					
8	(4x0.59x0.510)	KG	2.41			
	33KV pin insulator polymer (4 No's each 90 Deg. Cut point)	No's.	8			
10	H W fitting(B&S)90KN,4 Bolt	No's.	12			

1.1	D::	M.J.	10	1 1	1	
11	Disc insulator (B&S)90 KN polymer	No's.	12			
12	Earthing of Support (Coil Type)	No's.	2			
	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	0.52			
14	PG Clamp for 148 sq.mm AAA conductor	No's.	48			
15	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	2			
16	H.T. Stay set (Complete)	Set	2			
17	H.T. Stay Insulator Type-C (2 No's.)	No's.	2			
18	7/8 SWG Stay Wire 15kg /stay	KG	30.00			
19	GI Nut, Bolt & Washer of different sizes (11.31 Kg each 90 deg. Cut point)	KG	22.62			
20	Black Paint	Ltr	2.00			
21	Yellow Colour Paint for Background	Ltr	4.00			
	MATERIALS FOR 33 KV Pin Points					
1	13 Mtr. Long H-Pole	No's.	4			
2	33 KV V cross Arm (GI) 22Kg each	No's.	4			
3	Top bracket 100x50x6mm GI channel (300mm each)	No's.	4			
4	Danger Plate, 1 no's.	No's.	4			
5	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	1.20			
	GI barbed wire anticlimbing device 3 Kg. Per support	KG	12.00			
6		KG	12.00	+		
7	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	4.81			
8	33KV pin insulator polymer	No's.	12			
9	Earthing of Support (Coil Type)	No's.	4			
10	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	1.05			
11	GI Nut, Bolt & Washer of different sizes (1.45 Kg/ Pin Point)	KG	5.80			
12	148 sq.mm AAA conductor	Km	0.69			
13	Black Paint	Ltr	4.00			
14	Yellow Colour Paint for Background	Ltr	8.00			
6	Supply of Material required for Construction of Line using 241sqmm conductor on 13 Mtr. long H-Pole, as per technical specification and scope of work.					
	MATERIALS FOR 33 KV DP Without Isolator					
1	13 Mtr. Long H-Pole	No's.	40			
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 3.25 mtr., 2 no's channel required = (2x9.56x3.25)	KG	1242.80			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	79.30			
	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.96 Mtr., 5 no's	17.0	17.50	+ +		
4	channel required =(5x7.14x1.96)	KG	1399.44			
5	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 3.432 mtr., 4 nos angle required = (4*4.5*3.432)	KG	1235.52			
6	Danger Plate, 2 no's.	No's.	40			
7	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	12.04			
8	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	40			
9	H.T. Stay set (Complete)	Set	40			

10	H.T. Stay Insulator Type-C (2 No's.)	No's.	80		
11	7/8 SWG Stay Wire 15kg /stay	KG	600.00		
12	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	20		
13	50x6mm GI Flat for earthing, 2.36kg/mtr., (2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 5x2.36	KG	236.00		
14	GI barbed wire anticlimbing device 3 Kg. Per support	KG	120.00		
15	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510)	KG	48.14		
16	33KV pin insulator polymer	No's.	60		
17	Non Metallic Ties 33KV (For covered conductor)	No's.	60		
18	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	80		
	IPC for 241 sq.mm AAA conductor (For covered conductor)	No's.	120		
	H W fitting(B&S)90KN,4 Bolt	No's.	120		
	Disc insulator (B&S) 90 KN polymer	No's.	120		
	GI Nut, Bolt & Washer of different sizes (12.261 Kg each DP without Isolator)	KG	245.22		
	Black Paint	Ltr	20.00		
24	Yellow Colour Paint for Background	Ltr	40.00		
	MATERIALS FOR 33 KV DP With Isolator				
1	13 Mtr. Long H-Pole	No's.	12		
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 4.3 mtr., 2 no's channel required =(2x9.56x4.3)	KG	493.30		
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	23.79		
4	Insulator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 1 no's channel required =(1x7.14x4.3)	KG	184.21		
5	Isolator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 2 no's channel required =(2x7.14x4.3)	KG	368.42		
6	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 4 no's channel required = (4x7.14x4.3)	KG	736.85		
7	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 4.927 mtr., 4 nos angle required = (4*4.5*4.927)	KG	532.12		
8	Isolator Operating Down Pipe Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 0.8 Mtr., 1 no's channel required =(1x7.14x0.8)	KG	34.27		
9	Down Pipe Diagonal Support Angle, 4.5Kg./mtr., each angle length 0.388mtr., 1 nos angle required = (1*4.5*0.388)	KG	10.48		
10	Down Pipe Base Support Angle, 4.5Kg./mtr., each angle length 0.34mtr., 1 nos angle required = (1*4.5*0.340)	KG	9.18		
11	Isolator Support Side Cahnnel 100X50X6mm, 9.56 KG/Mtr., each channel length 0.5 mtr., 2 no's channel required =(2x9.56x0.5)	KG	57.36		
	Danger Plate, 2 no's.	No's.	12		
13	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	3.61		
	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	12		
	H.T. Stay set (Complete)	Set	12		
16	H.T. Stay Insulator Type-C (2 No's.)	No's.	24		

18	17	7/8 SWG Stay Wire 15kg /stay	KG	180.00		
Street S	18		No's.	12		
Rada Clamp for anticlimbing device 2533 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 8 no's = 1 (8x0.59x5.10) Rada Clamp for anticlimbing device 2533 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 8 no's = 1 (8x0.59x5.10) Rada Clamp for anticlimbing device 25x3 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 4 no's = 1 (8x0.59x5.10) Rada Clamp for anticlimbing device 25x3 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 4 no's = 1 (8x0.59x5.10) Rada Clamp for anticlimbing device 25x3 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 4 no's = 1 (8x0.59x0.510) Rada Clamp for anticlimbing device 25x3 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 4 no's = 1 (8x0.59x0.510) Rada Clamp for anticlimbing device 25x3 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 4 no's = 1 (8x0.59x0.510) Rada Clamp for anticlimbing device 25x3 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 4 no's = 1 (8x0.59x0.510) Rada Clamp for anticlimbing device 25x3 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 4 no's = 1 (8x0.59x0.510) Rada Clamp for anticlimbing device 25x3 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 4 no's = 1 (8x0.59x0.510) Rada Clamp for anticlimbing device 25x3 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 4 no's = 1 (8x0.50x0.510) Rada Clamp for anticlimbing device 25x3 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 4 no's = 1 (8x0.50x0.510) Rada Clamp for anticlimbing device 25x3 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 4 no's = 1 (8x0.50x0.510) Rada Clamp for anticlimbing device 25x3 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 4 no's = 1 (8x0.50x0.510) Rada Clamp for anticlimbing device 25x3 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 4 no's = 1 (8x0.50x0.510) Rada Clamp for anticlimbing device 25x3 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 4 no's = 1 (8x0.50x0.510) Rada Clamp for anticlimbing device 25x3 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 4 no's = 1 (8x0.50x0.510) Rada Clamp for anticlimbing device 25x3 mm. flut, 0.59kg/Mtr. Flut of 0.510mr length 4 no's = 1 (8x0.50x0.510) Rada Clamp for	19		KG	339.84		
14.44	20	GI barbed wire anticlimbing device 3 Kg. Per support	KG	36.00		
23 33 KV 1250 AMP Double break (Turn & twist center rotating) isolator without earth switch with Set 2 P PoPopmer)	21		KG	14.44		
1	22		EA	18		
24 PipRolymer Set 4	23	· ·	Set	2		
26	24	Pl(Polymer)	Set	4		
27 Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 24	25	1 1 1	No's.	18		
28 IPC for 241 sq.mm AAA conductor (For covered conductor) No's. 36	26	Non Metallic Ties 33KV (For covered conductor)	No's.	18		
1 Witting(B&S)90KN/4 Bolt Nos. 36	27	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	24		
30 Disc insulator (B&S) 90 KN polymer	_		No's.			
31 GI Nut , Bolt & Washer of different sizes (22.15 Kg each DP with Isolator) KG 132.90 32 Black Paint			No's.			
32 Black Paint						
33 Yellow Colour Paint for Background Ltr 12.00	31		KG			
13 Mtr. Long H-Pole						
1 13 Mtr. Long H-Pole	33		Ltr	12.00		
Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 2 No's of Channel = (2x 9.56x1.7)						
Channel = (2x 9.56x1.7)	1		No's.	20		
Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 2 KG 117.01 No's of Channel = (2x 9.56x0.306) No's. Channel = (2x 9.56x0.306) No's. 20 Sack Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) KG 6.02 (1x0.59x0.510) KG 6.02 (1x0.59x0.510) KG 6.00 Channel = (1x0.59x0.510) Chann		Channel = $(2x 9.56x1.7)$	KG	650.08		
No's of Channel = (2x 9.56x0.306) No's 117.01	3		KG	105.73		
6 Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) KG 6.02 7 GI barbed wire anticlimbing device 3 Kg. Per support KG 60.00 8 Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510) KG 24.07 9 33KV pin insulator polymer No's. 60 10 Non Metallic Ties 33KV (For covered conductor) No's. 60 11 IPC for 241 sq.mm AAA conductor (For covered conductor) No's. 120 12 Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 40 13 H W fitting(B&S)90KN,4 Bolt No's. 120 14 Disc insulator (B&S)90 KN polymer No's. 120 15 Earthing of Support (Coil Type) EA 20 16 No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing KG 5.24 17 GI Nut , Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point) KG 97.58	4		KG	117.01		
Column C	5	Danger Plate, 1 no's.	No's.	20		
8 Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510) KG 24.07 9 33KV pin insulator polymer No's. 60 10 Non Metallic Ties 33KV (For covered conductor) No's. 60 11 IPC for 241 sq.mm AAA conductor (For covered conductor) No's. 120 12 Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 40 13 H W fitting(B&S)90KN,4 Bolt No's. 120 14 Disc insulator (B&S)90 KN polymer No's. 120 15 Earthing of Support (Coil Type) EA 20 16 No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr2 Mtr. For connecting pole with Coil earthing KG 5.24 17 GI Nut , Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point) KG 97.58	6		KG	6.02		
8 (4x0.59x0.510) KG 24.07 9 33KV pin insulator polymer No's. 60 10 Non Metallic Ties 33KV (For covered conductor) No's. 60 11 IPC for 241 sq.mm AAA conductor (For covered conductor) No's. 120 12 Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 40 13 H W fitting(B&S)90KN,4 Bolt No's. 120 14 Disc insulator (B&S)90 KN polymer No's. 120 15 Earthing of Support (Coil Type) EA 20 16 No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing KG 5.24 17 GI Nut , Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point) KG 97.58	7		KG	60.00		
10 Non Metallic Ties 33KV (For covered conductor) No's. 60 11 IPC for 241 sq.mm AAA conductor (For covered conductor) No's. 120 12 Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 40 13 H W fitting(B&S)90KN,4 Bolt No's. 120 14 Disc insulator (B&S)90 KN polymer No's. 120 15 Earthing of Support (Coil Type) EA 20 16 No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing KG 5.24 17 GI Nut , Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point) KG 97.58	8		KG	24.07		
11 IPC for 241 sq.mm AAA conductor (For covered conductor) 12 Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) 13 H W fitting(B&S)90KN,4 Bolt 14 Disc insulator (B&S)90 KN polymer 15 Earthing of Support (Coil Type) 16 No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing 17 GI Nut , Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point) No's. 10 HW fitting(B&S)90KN,4 Bolt No's. 110 No's. 120 EA 20 Set 40 Set	9	33KV pin insulator polymer	No's.	60		
12 Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 40 13 H W fitting(B&S)90KN,4 Bolt No's. 120 14 Disc insulator (B&S)90 KN polymer No's. 120 15 Earthing of Support (Coil Type) EA 20 16 No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing KG 5.24 17 GI Nut , Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point) KG 97.58	10	Non Metallic Ties 33KV (For covered conductor)	No's.	60		
13 H W fitting(B&S)90KN,4 Bolt No's. 120 14 Disc insulator (B&S)90 KN polymer No's. 120 15 Earthing of Support (Coil Type) EA 20 16 No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing KG 5.24 17 GI Nut , Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point) KG 97.58	11	IPC for 241 sq.mm AAA conductor (For covered conductor)	No's.	120		
14 Disc insulator (B&S)90 KN polymer No's. 120 15 Earthing of Support (Coil Type) EA 20 16 No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing KG 5.24 17 GI Nut , Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point) KG 97.58	12		Set	40		
15 Earthing of Support (Coil Type) EA 20 16 No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing KG 5.24 17 GI Nut, Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point) KG 97.58	13	H W fitting(B&S)90KN,4 Bolt	No's.	120		
15 Earthing of Support (Coil Type) EA 20 16 No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing KG 5.24 17 GI Nut, Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point) KG 97.58	14	Disc insulator (B&S)90 KN polymer	No's.	120		
17 GI Nut, Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point) KG 97.58	15	Earthing of Support (Coil Type)	EA	20		
				5.24		
18 Black Paint Ltr 20.00	17	GI Nut, Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point)	KG	97.58		
	18	Black Paint	Ltr	20.00		

1.3 Mr. Long H-Obe	19	Yellow Colour Paint for Background	Ltr	40.00		
1 1 1 1 1 1 1 1 1 1	- 17		Eti	10.00		+
Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mirr, each channel length 1.7 Mir., 4 Nov of Channel - (4x 9.561.7)	1		No's.	20		†
Spike Spik	2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 4 No's of	KG	1300.16		
Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9 56 KG/mtr, each channel length 0.306 Mtr. 4 KG 234.03	3		KG	211.46		
Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mrr. Flat of 0.510mtr length 1 no's = (150 Ms) 5.10 GI barbed wire anticlimbing device 25X6 per support	4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 4	KG	234.03		
10 (txt) 59x0 510	5	Danger Plate, 1 no's.	No's.	20		
Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4.059x0.510)	6		KG	6.02		
Act Act	7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	60.00		
10 H W fitting(B&S)90KN A Bolt	8		KG	24.07		
11 Disc insulator (R&S)90 KN polymer		33KV pin insulator polymer (4 No's each 90 Deg. Cut point)	No's.	80		
Non Metallic Ties 33KV (For covered conductor)	10		No's.	120		
13 IPC for 241 sq.mm AAA conductor (For covered conductor)	11		No's.	120		
14 Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 40	12			80		
15 Earthing of Support (Coil Type)	13	IPC for 241 sq.mm AAA conductor (For covered conductor)	No's.	120		
16 No-8 Gl wire (Dia 4.6mm) 0.131 KG/Mtr 2 Mtr. For connecting pole with Coil earthing KG 5.24	14	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	40		
H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	15	Earthing of Support (Coil Type)	No's.	20		
H.T. Stay set (Complete) Set 20	16	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	5.24		
H.T. Stay Insulator Type-C (2 No's.)	17	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	20		
20 7/8 SWG Stay Wire 15kg /stay KG 300.00	18	H.T. Stay set (Complete)	Set	20		
21 GI Nut , Bolt & Washer of different sizes (11.31 Kg each 90 deg. Cut point) KG 226.20	19	H.T. Stay Insulator Type-C (2 No's.)	No's.	20		
22 Black Paint Ltr 20.00	20		KG	300.00		
23 Yellow Colour Paint for Background	21	GI Nut, Bolt & Washer of different sizes (11.31 Kg each 90 deg. Cut point)	KG	226.20		
1 13 Mtr. Long H-Pole	22	Black Paint	Ltr	20.00		
1 13 Mtr. Long H-Pole	23		Ltr	40.00		
2 33 KV V cross Arm (GI) 22Kg each No's. 188 3 Top bracket 100x50x6mm GI channel (2kg each) No's. 188 4 Danger Plate, 1 no's. No's. 188 5 Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) KG 56.57 6 GI barbed wire anticlimbing device 3 Kg. Per support KG 564.00 7 Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510) KG 226.28 8 33KV pin insulator polymer No's. 564 9 Non Metallic Ties 33KV (For covered conductor) No's. 630 10 Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 376						
Top bracket 100x50x6mm GI channel (2kg each)						
Danger Plate, 1 no's. No's. 188						
Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) GI barbed wire anticlimbing device 3 Kg. Per support Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510) Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510) No's. 564 No's. 564 Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 376						
Comparison of the content of the c	4		No's.	188		4
Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = KG (4x0.59x0.510) 8 33KV pin insulator polymer No's. 564 9 Non Metallic Ties 33KV (For covered conductor) No's. 630 10 Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 376	5	(1x0.59x0.510)	KG	56.57		
(4x0.59x0.510) KG 226.28 8 33KV pin insulator polymer No's. 564 9 Non Metallic Ties 33KV (For covered conductor) No's. 630 10 Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 376	6		KG	564.00		
9 Non Metallic Ties 33KV (For covered conductor) No's. 630 10 Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 376	7	(4x0.59x0.510)	KG	226.28		
10 Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 376		· · · · ·		564		
	9	Non Metallic Ties 33KV (For covered conductor)	No's.	630		
11 Earthing of Support (Coil Type) No's. 188	10	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	376		
	11	Earthing of Support (Coil Type)	No's.	188		

12	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	49.26		
13	GI Nut, Bolt & Washer of different sizes (1.45 Kg/ Pin Point)	KG	272.60		
14	241 sq.mm AAA conductor	Km	30.90		
15	Black Paint	Ltr	188.00		
16	Yellow Colour Paint for Background	Ltr	376.00		
10	Supply of Material for 33kV Line on 1CX 630sqmm UG Cable, as per technical specification and	Lu	3/0.00		
7	scope of work.				
1	Supply of materials for 33kV, 1Core, 630sqmm Aluminium, XLPE insulation UG Cable with accessories				
a	Length of 33kV 1C, 630sqmm cable (open trench) (Mtr.)				
b	Length of 33kV 1C, 630sqmm cable (HDD) (Mtr)				
1.1	Supply of 33kV, 1Core, 630sqmm Aluminium, XLPE insulation UG Cable (SC rating of cable in kA-59.4kA and SC rating of Armour in kA-20kA)	Mtr.	60480.00		
1.2	Supply of Straight through jointing kits Heat Shrinkable type suitable for 33kV, 1Core, 630sqmm, aluminium UG Cable kits for 1Core	Set	182		
1.3	Supply of Outdoor termination kits Heat Shrinkable type suitable for 33kV, 1Core, 630sqmm, HT UG Cable kits for 1Core	Set	141		
1.4	Supply of Indoor termination kits Heat Shrinkable type suitable for 33kV, 1Core, 630sqmm, HT UG Cable kits for 1Core	Set	102		
1.5	Supply of materials for High Density Polyethelene (HDPE) pipe 110mm diameter, PE 80- PN8 for laying of 33kV UG cable	Mtr.	43548.00		
2	Supply of 33kV RMU				
2.1	Supply of RMU 33KV 4WAY 630A (2ISLTR+2 BKR) (LLVV)	No's.	9		
3	Earthing				
3.1	Earthing Conductor: 50X6 mm (2.4kg./mtr.) GI Flat for equipment, structure etc.)	KG	118.80		
3.2	Pipe Earthing 40mm. GI Pipe	No's.	18		
4	Supply of Standard FRTU 4Way with FRTU networking Equipment consisting of Fibre Optic switch (Mono mode along wilh associate LlU unit for connection of FO Cable. for 3 Way & 4 way RMU.	No's.	8		
8	Supply of Material for 33kV Line on 3CX 400sqmm UG Cable, as per technical specification and scope of work.				
1	Supply of materials for 33kV, 3Core, 400sqmm Aluminium, XLPE insulation UG Cable with accessories				
a	Length of 33kV 3C, 400sqmm cable (open trench) (Mtr)				
b	Length of 33kV 3C, 400sqmm cable (HDD) (Mtr)				
1.1	Supply of 33kV, 3Core, 400sqmm Aluminium, XLPE insulation UG Cable with spare (SC rating of cable in kA- 37.7kA and SC rating of Armour in kA-20kA)	Mtr.	180.00		
1.2	Supply of Outdoor termination kits Heat Shrinkable type suitable for 33kV, 3Core, 400sqmm, HT UG Cable kits	Set	6		
1.3	Supply of Indoor termination kits Heat Shrinkable type suitable for 33kV, 3Core, 400sqmm, HT UG Cable kits	Set	6		
1.4	Supply of materials for High Density Polyethelene (HDPE) pipe 160mm diameter, PE 80- PN8 for laying of 33kV UG cable	Mtr.	180.00		
2	Supply of 33kV RMU				
2.1	Supply of RMU 33KV 3WAY 630A (2ISLTR+ 1BKR) (LLV)	No's.	1		
3	Earthing				

3.1	Earthing Conductor: 50X6 mm (2.4kg./mtr.) GI Flat for equipment, structure etc.)	KG	13.20	<u> </u>	1	
3.2	Pipe Earthing 40mm. GI Pipe	No's.	2			
4	Supply of Standard FRTU 4Way with FRTU networking Equipment consisting of Fibre Optic switch (Mono mode along wilh associate LlU unit for connection of FO Cable. for 3 Way & 4 way RMU.	No's.	1			
9	Supply of GI PC '+6' EHT Tower for River crossing including all types of materials, as per technical specification and scope of work.					
1	GI PC '+6' Tower super structure G.I (Main + Extention +Stub + Template), as per technical specification and scope of work.					
i)	PC Tower	MT	49.71			
ii)	'+6' Mtr. Extention	MT	18.74			
iii)	Template	MT	15.23			
2	GI Nut, Bolt & Washer of different sizes, as per technical specification and scope of work.					
i)	PC Tower	MT	13.23			
ii)	'+6' Mtr. Extention	MT	4.74			
3	Supply of Conductor and Accessories, as per technical specification and scope of work.					
i	232 mm2 AAAC, as per technical specification and scope of work.	Km	1.85			
ii	Earth wire 7/1.5 G.I, as per technical specification and scope of work.	Km	0.62			
iii	Double tension Hardware Fittings suitable for Conductor size.	Set	96			
iv	Disc insulator (B&S) 120 KN polymer type.	No's.	192			
v	Tension fittings suitable for Earth wire.	Set	16			
vi.	Vibration damper suitable for earth wire	No's.	16			
vii.	Vibration damper suitable for conductor size.	No's.	96			
viii	Copper flexible bond	No's.	8			
ix	Phase Plate (R,Y,B)	Set	48			
х	GI Tower Number Plate	No's.	16			
xi	Circuit Plate	No's.	16			
xii	Earthing Device & Associated Accessories (Heavy duty GI Perforated Pipe of ID=40mm & OD=50mm with 3000mm long for treated Earth Pit), as per technical specification and scope of work.	No's.	16			
xiii	Earthing Conductor: 50X6 mm (2.4Kg./Mtr.) GI Flat for Raiser from the burial earth mat to equipment, structure etc), as per technical specification and scope of work.	KG	800.00			
xiv	GI Danger Board	No's.	16			
XV	Bird Guard	No's.	96			
xvi	Anticlimbing Device (G.I)	KG	844.80			
xvii	Loop Connector	No's.	48			
Т	OTAL OF SUPPLY COMPONENT OF THE WORKS CONTRACT FOR 33kV LINE (Rs.)					

TOTAL PRICE FOR THE TENDER QUANTITY (RS.)	
25= {20 X 24}	

-
1
1
-

1
1
-
-

1	
\vdash	

_

	٦		
	-		
	4		
	_		
	_		
	_		
	<u> </u>		
	-		
	†		
	-		
	†		
	-		
	-		
	-		
	-		
	-		
	4		
	-		
	-		
	4		
	4		
	4		
	4		
	4		
	4		
	_		

1	

	1		
	-		
	1		
	1		
	1		
	1		
1			
	1		
1			
	1		
	1		
	1		
1			
	1		
	1		
	1		

	\neg		
	\dashv		
	_		
	_		
	_		
	_		
	\neg		
	\neg		
	\dashv		
	\dashv		
	\dashv		
	_		
	_		
	\dashv		
	\dashv		
	\dashv		
	\dashv		
	\dashv		
	\dashv		
	\dashv		

<u> </u>
<u> </u>
]
l
<u> </u>

-
ļ
1

	٦		
	-		
	-		
	_		
	_		
	_		
	7		
	1		
	1		
	-		
	1		
	†		
	1		
	-		
	-		
	-		
	-		
	-		
	4		
	_		
	_		
	_		
	4		
	4		
	_		
	_		
<u> </u>			

	Tata Power Central Odisha Distribution Limited (TPCC	DI)				<u> </u>		
Eng	neering, Supply, Erection and Commissioning of 33/11 kV Sub-Sta		LV 11LV					
	tion, Civil & Services of Equipment/Materials Required for Consti							
Erec	, <u>1 1</u>							
	NOTICE INVITING TENDER- NIT NO- TPCODL/P&S/100000	0364/202	3-24,					
SL.	DESCRIPTION OF ITEMS							
	ERECTION, TESTING & COMMISSIONING INCLUDING CIVIL WORKS OF FOLLOWING EQUIPMENTS (As per technical specification and scope of work.)	UNITS	Total Quantity	BASIC PRICE PER UNIT (Taxable Value) In Rs	CGST @ 9% PER UNIT (INTRA-STATE)	OGST @ 9% PER UNIT (INTRA-STATE)	TOTAL PRICE PER UNIT (In Rs)	TOTAL PRICE FOR THE TENDER QUANTITY (RS.)
		Circle						
	BROAD REQUIREMENT FOR INFORMATION		20 (Sum from 1 to 19)	21	22= (21*9%)	23= (21*9%)	24= {21+22+23}	25= {20 X 24}
1	33kV Line with 13mtr long WPB Pole	Km	192.30					
2	33kV Line with H-Pole 13mtr	Km	43.72					
3	33kV line on Underground Cable	Mtr.	20250.00					
4	PC '+6' Tower Requirement for River crossing on 33kV Line	No's.	4					
	DETAIL REQUIREMENT (To be quoted)							
1	Erection, Testing & Commissioning of Material required for Construction of Line using 232sqmm conductor on 13 Mtr. long WPB Pole, as per technical specification and scope of work.							
Sl. No.	Description of Materials	Unit						
	MATERIALS FOR 33 KV DP Without Isolator							
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	330					
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 3.25 mtr., 2 no's channel required =(2x9.56x3.25)	KG	10253.10					
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	654.19					
4	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.96 Mtr., 5 no's channel required =(5x7.14x1.96)	KG	11545.38					
5	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 3.432 mtr., 4 nos angle required = (4*4.5*3.432)	KG	10193.04					
6	Danger Plate, 2 no's.	No's.	330					
7	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 2 no's = $(2x0.59x0.510)$	KG	99.30					
8	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	330					
9	H.T. Stay set (Complete)	Set	330					
10	H.T. Stay Insulator Type-C (2 No's.)	No's.	660					
11	7/8 SWG Stay Wire 15kg /stay	KG	4950.00					

12	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	165			
13	50x6mm GI Flat for earthing, 2.36kg/mtr., (2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 5x2.36	KG	1947.00			
14	GI barbed wire anticlimbing device 3 Kg. Per support	KG	990.00			
15	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510)	KG	397.19			
16	33KV pin insulator polymer	No's.	495			
17	H W fitting(B&S) 90KN,4 Bolt	No's.	990			
18	Disc insulator (B&S) 90 KN polymer	No's.	990			
19	PG Clamp for 232 sq.mm AAA conductor	No's.	990			
20	GI Nut, Bolt & Washer of different sizes (12.261 Kg each DP without Isolator)	KG	2023.07			
21	Black Paint	Ltr	165.00			
22	Yellow Colour Paint for Background	Ltr	330.00			
	MATERIALS FOR 33 KV DP With Isolator					
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	38			
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 4.3 mtr., 2 no's channel required = (2x9.56x4.3)	KG	1562.10			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	75.33			
4	Insulator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 1 no's channel required = (1x7.14x4.3)	KG	583.34			
5	Isolator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 2 no's channel required =(2x7.14x4.3)	KG	1166.68			
6	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 4 no's channel required = (4x7.14x4.3)	KG	2333.35			
7	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 4.927 mtr., 4 nos angle required = (4*4.5*4.927)	KG	1685.03			
8	Isolator Operating Down Pipe Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 0.8 Mtr., 1 no's channel required =(1x7.14x0.8)	KG	108.53			
9	Down Pipe Diagonal Support Angle, 4.5Kg./mtr., each angle length 0.388mtr., 1 nos angle required = (1*4.5*0.388)	KG	33.17			
10	Down Pipe Base Support Angle, 4.5Kg./mtr., each angle length 0.34mtr., 1 nos angle required = (1*4.5*0.340)	KG	29.07			
11	Isolator Support Side Cahnnel 100X50X6mm, 9.56 KG/Mtr., each channel length 0.5 mtr., 2 no's channel required =(2x9.56x0.5)	KG	181.64			

12	Danger Plate, 2 no's.	No's.	38			
13	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	11.43			
14	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	38			
15	H.T. Stay set (Complete)	Set	38			
16	H.T. Stay Insulator Type-C (2 No's.)	No's.	76			
17	7/8 SWG Stay Wire 15kg /stay	KG	570.00			
18	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	38			
19	50x6mm GI Flat for earthing, 2.36kg/mtr., (15 Mtr. For L.A, 4 Mtr for Isolator Body, 2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 24x2.36	KG	1076.16			
20	GI barbed wire anticlimbing device 3 Kg. Per support	KG	114.00			
21	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510)	KG	45.74			
22	Lightning Arrester(30KV,10KA) (Station Class,class-2)	EA	57			
23	33 KV 1250 AMP Double break (Turn & twist center rotating) isolator without earth switch with Pl(Polymer)	Set	19			
24	33KV pin insulator polymer	No's.	57			
25	H W fitting(B&S) 90KN,4 Bolt	No's.	114			
26	Disc insulator (B&S) 90 KN polymer	No's.	114			
27	PG Clamp for 232 sq.mm AAA conductor	No's.	114			
28	GI Nut, Bolt & Washer of different sizes (22.15 Kg each DP with Isolator)	KG	420.85			
29	Black Paint	Ltr	19.00			
30	Yellow Colour Paint for Background	Ltr	38.00	 	 	
	MATERIALS FOR 33 KV Cut Point with 180 Degree Angle					
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	193			
2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 2 No's of Channel = (2x 9.56x1.7)	KG	6273.27			

3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 8 no's required = (8x2.36x0.280)	KG	1020.28			
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 2 No's of Channel = (2x 9.56x0.306)	KG	1129.19			
5	Danger Plate, 1 no's.	No's.	193			
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	58.07			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	579.00			
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 4 no's = $(4x0.59x0.510)$	KG	232.29			
9	33KV pin insulator polymer	No's.	579			
10	H W fitting(B&S)90KN,4 Bolt	No's.	1158			
11	Disc insulator (B&S)90 KN polymer	No's.	1158			
12	Earthing of Support (Coil Type)	EA	193			
13	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	50.57			
14	PG Clamp for 232 sq.mm AAA conductor	No's.	1158			
15	GI Nut, Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point)	KG	941.65			
16	Black Paint	Ltr	193.00			
17	Yellow Colour Paint for Background	Ltr	386.00			
	MATERIALS FOR 33 KV Cut Point with 90 Degree Angle					
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	162			
2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 4 No's of Channel = (4x 9.56x1.7)	KG	10531.30			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280)	KG	1712.79			
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 4 No's of Channel = (4x 9.56x0.306)	KG	1895.63			
5	Danger Plate, 1 no's.	No's.	162			
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	48.75			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	486.00			

8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 4 no's = $(4x0.59x0.510)$	KG	194.98			
9	33KV pin insulator polymer (4 No's each 90 Deg. Cut point)	No's.	648			
10	H W fitting(B&S)90KN,4 Bolt	No's.	972			
11	Disc insulator (B&S)90 KN polymer	No's.	972			
12	Earthing of Support (Coil Type)	No's.	162			
13	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	42.44			
14	PG Clamp for 232 sq.mm AAA conductor	No's.	972			
15	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	162			
16	H.T. Stay set (Complete)	Set	162			
17	H.T. Stay Insulator Type-C (2 No's.)	No's.	162			
18	7/8 SWG Stay Wire 15kg /stay	KG	2430.00			
19	GI Nut, Bolt & Washer of different sizes (11.31 Kg each 90 deg. Cut point)	KG	1832.22			
20	Black Paint	Ltr	162.00			
21	Yellow Colour Paint for Background	Ltr	324.00			
	MATERIALS FOR 33 KV Pin Points					
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	2147			
2	33 KV V cross Arm (GI) 22Kg each	No's.	2147			
3	Top bracket 100x50x6mm GI channel (2kg each)	No's.	2147			
4	Danger Plate, 1 no's.	No's.	2147			
5	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	646.03			
6	GI barbed wire anticlimbing device 3 Kg. Per support	KG	6441.00			
7	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 4 no's = $(4x0.59x0.510)$	KG	2584.13			
8	33KV pin insulator polymer	No's.	6441			

20 Earthing of Support (Coil Type) No. 2147			•				
11 GI Nut , Boit & Washer of different sizes (1.45 Kg/ Fm Point) KG 3113.15	9	Earthing of Support (Coil Type)	No's.	2147			
12 222 sq.mm AAA conductor	10		KG	562.51			
13 Black Paint	11	GI Nut, Bolt & Washer of different sizes (1.45 Kg/ Pin Point)	KG	3113.15			
14 Yellow Colour Paint for Background	12	232 sq.mm AAA conductor	Km	455.16			
Erection, Testing & Commissioning of Material required for Construction of Line using 148sqmm conductor on 13 Mtr. long WPB Pole, as per technical specification and scope of work. MATERIALS FOR 33 KV DP Without Isolator 1 WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.) No's. 28 2 Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 3.25 mtr., 2 no's channel required = (2x9.56x3.25) 3 Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280) 4 Double Pole Belting Channel 75X40X 4.8mm, 7.14KG/Mtr., each channel length 1.96 Mtr., 5 no's channel required = (5x7.14x1.96) 5 50x50x6mm.Gl Bracing Angle, 4.5Kg/mtr., each angle length 3.432 mtr., 4 nos angle required = (4*4.5*3.432) 6 Danger Plate, 2 no's. 7 Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's e (2x0.59x0.510) 8 H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair 28) 9 H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair 28) 10 H.T. Stay Insulator Type-C (2 No's.) No's. 56 11 7/8 SWG Stay Wire 15kg /stay KG 420.00	13	Black Paint	Ltr	2147.00			
2 using 148sqmm conductor on 13 Mtr. long WPB Pole, as per technical specification and scope of work.	14	Yellow Colour Paint for Background	Ltr	4294.00			
1 WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	2	using 148sqmm conductor on 13 Mtr. long WPB Pole, as per technical specification and scope of work.					
2 Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 3.25 mtr., 2 no's channel required = (2x9.56x3.25) KG 869.96 3 Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280) KG 55.51 4 Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.96 Mtr., 5 no's channel required = (5x7.14x1.96) KG 979.61 5 50x50x6mm.Gl Bracing Angle, 4.5Kg./mtr., each angle length 3.432 mtr., 4 nos angle required = (4*4.5*3.432) KG 864.86 6 Danger Plate, 2 no's. No's. 28 7 Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510) KG 8.43 8 H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair 28 Pair 28 9 H.T. Stay insulator Type-C (2 No's.) No's. 56 10 H.T. Stay insulator Type-C (2 No's.) No's. 56 11 7/8 SWG Stay Wire 15kg /stay KG 420.00		MATERIALS FOR 33 KV DP Without Isolator					
2 channel required = (2x9.56x3.25)	1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	28			
3 (6x2.36x0.280) KG 55.51 4 Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.96 KG 979.61 5 S0x50x6mm.Gl Bracing Angle, 4.5Kg./mtr., each angle length 3.432 mtr., 4 nos angle required = (4*4.5*3.432) KG 864.86 6 Danger Plate, 2 no's. No's. 28 7 = (2x0.59x0.510) KG 8.43 8 H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair 28 9 H.T. Stay set (Complete) Set 28 10 H.T. Stay Insulator Type-C (2 No's.) No's. 56 11 7/8 SWG Stay Wire 15kg/stay KG 420.00	2		KG	869.96			
4 Mtr., 5 no's channel required = (5x7.14x1.96) KG 9/9.01 5 50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 3.432 mtr., 4 nos angle required = (4*4.5*3.432) KG 864.86 6 Danger Plate, 2 no's. No's. 28 7 Exception of danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's exception of excep	3		KG	55.51			
Sequired = (4*4.5*3.432) RG 864.86	4		KG	979.61			
Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's	5		KG	864.86			
7 = (2x0.59x0.510) KG 8.43 8 H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair 28 Pair) 28 9 H.T. Stay set (Complete) Set 28 28 10 H.T. Stay Insulator Type-C (2 No's.) No's. 56 11 7/8 SWG Stay Wire 15kg /stay KG 420.00	6	Danger Plate, 2 no's.	No's.	28			
8 Pair) Pair 28 9 H.T. Stay set (Complete) Set 28 10 H.T. Stay Insulator Type-C (2 No's.) No's. 56 11 7/8 SWG Stay Wire 15kg /stay KG 420.00	7		KG	8.43			
10 H.T. Stay Insulator Type-C (2 No's.) No's. 56 11 7/8 SWG Stay Wire 15kg /stay KG 420.00	8		Pair	28			
11 7/8 SWG Stay Wire 15kg /stay KG 420.00	9	H.T. Stay set (Complete)	Set	28			
	10	H.T. Stay Insulator Type-C (2 No's.)	No's.	56			
12 Gi Pipe Earthing 40mm. 3 Mtr. Long No's. 14	11	7/8 SWG Stay Wire 15kg /stay	KG	420.00	 		
	12	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	14			

13	50x6mm GI Flat for earthing, 2.36kg/mtr., (2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 5x2.36	KG	165.20			
14	GI barbed wire anticlimbing device 3 Kg. Per support	KG	84.00			
15	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 8 no's = $(8x0.59x0.510)$	KG	33.70			
16	33KV pin insulator polymer	No's.	42			
17	H W fitting(B&S) 90KN,4 Bolt	No's.	84			
18	Disc insulator (B&S) 90 KN polymer	No's.	84			
19	PG Clamp for 148 sq.mm AAA conductor	No's.	84			
20	GI Nut, Bolt & Washer of different sizes (12.261 Kg each DP without Isolator)	KG	171.65			
21	Black Paint	Ltr	14.00			
22	Yellow Colour Paint for Background	Ltr	28.00			
	MATERIALS FOR 33 KV DP With Isolator					
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	6			
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 4.3 mtr., 2 no's channel required =(2x9.56x4.3)	KG	246.65			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	11.89			
4	Insulator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 1 no's channel required =(1x7.14x4.3)	KG	92.11			
5	Isolator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 2 no's channel required =(2x7.14x4.3)	KG	184.21			
6	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 4 no's channel required = (4x7.14x4.3)	KG	368.42			
7	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 4.927 mtr., 4 nos angle required = (4*4.5*4.927)	KG	266.06			
8	Isolator Operating Down Pipe Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 0.8 Mtr., 1 no's channel required =(1x7.14x0.8)	KG	17.14			
9	Down Pipe Diagonal Support Angle, 4.5Kg./mtr., each angle length 0.388mtr., 1 nos angle required = (1*4.5*0.388)	KG	5.24			
10	Down Pipe Base Support Angle, 4.5Kg./mtr., each angle length 0.34mtr., 1 nos angle required = (1*4.5*0.340)	KG	4.59			

11	Isolator Support Side Cahnnel 100X50X6mm, 9.56 KG/Mtr., each channel length 0.5 mtr., 2 no's channel required =(2x9.56x0.5)	KG	28.68			
12	Danger Plate, 2 no's.	No's.	6			
13	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	1.81			
14	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	6			
15	H.T. Stay set (Complete)	Set	6			
16	H.T. Stay Insulator Type-C (2 No's.)	No's.	12			
17	7/8 SWG Stay Wire 15kg /stay	KG	90.00			
18	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	6			
19	50x6mm GI Flat for earthing, 2.36kg/mtr., (15 Mtr. For L.A, 4 Mtr for Isolator Body, 2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 24x2.36	KG	169.92			
20	GI barbed wire anticlimbing device 3 Kg. Per support	KG	18.00			
21	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 8 no's = $(8x0.59x0.510)$	KG	7.22			
22	Lightning Arrester(30KV,10KA) (Station Class,class-2)	EA	9			
23	33 KV 1250 AMP Double break (Turn & twist center rotating) isolator without earth switch with Pl(Polymer)	Set	3			
24	33KV pin insulator polymer	No's.	9			
25	H W fitting(B&S) 90KN,4 Bolt	No's.	18			
26	Disc insulator (B&S) 90 KN polymer	No's.	18			
27	PG Clamp for 148 sq.mm AAA conductor	No's.	18			
28	GI Nut, Bolt & Washer of different sizes (22.15 Kg each DP with Isolator)	KG	66.45			
29	Black Paint	Ltr	3.00			
30	Yellow Colour Paint for Background	Ltr	6.00			

	MATERIALS FOR 33 KV Cut Point with 180 Degree Angle					
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	8			
2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 2 No's of Channel = (2x 9.56x1.7)	KG	260.03			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 8 no's required = (8x2.36x0.280)	KG	42.29			
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 2 No's of Channel = (2x 9.56x0.306)	KG	46.81			
5	Danger Plate, 1 no's.	No's.	8			
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	2.41			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	24.00			
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 4 no's = $(4x0.59x0.510)$	KG	9.63			
9	33KV pin insulator polymer	No's.	24			
10	H W fitting(B&S)90KN,4 Bolt	No's.	48			
11	Disc insulator (B&S)90 KN polymer	No's.	48			
12	Earthing of Support (Coil Type)	EA	8			
13	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	2.10			
14	PG Clamp for 148 sq.mm AAA conductor	No's.	48			
15	GI Nut, Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point)	KG	39.03			
16	Black Paint	Ltr	8.00			
17	Yellow Colour Paint for Background	Ltr	16.00			
	MATERIALS FOR 33 KV Cut Point with 90 Degree Angle					
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	10			

2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 4 No's of Channel = (4x 9.56x1.7)	KG	650.08			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280)	KG	105.73			
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 4 No's of Channel = (4x 9.56x0.306)	KG	117.01			
5	Danger Plate, 1 no's.	No's.	10			
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	3.01			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	30.00			
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 4 no's = $(4x0.59x0.510)$	KG	12.04			
9	33KV pin insulator polymer (4 No's each 90 Deg. Cut point)	No's.	40			
10	H W fitting(B&S)90KN,4 Bolt	No's.	60			
11	Disc insulator (B&S)90 KN polymer	No's.	60			
12	Earthing of Support (Coil Type)	No's.	10			
13	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	2.62			
14	PG Clamp for 148 sq.mm AAA conductor	No's.	60			
15	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	10			
16	H.T. Stay set (Complete)	Set	10			
17	H.T. Stay Insulator Type-C (2 No's.)	No's.	10			
18	7/8 SWG Stay Wire 15kg /stay	KG	150.00			
19	GI Nut, Bolt & Washer of different sizes (11.31 Kg each 90 deg. Cut point)	KG	113.10			
20	Black Paint	Ltr	10.00			
21	Yellow Colour Paint for Background	Ltr	20.00			

	MATERIALS FOR 33 KV Pin Points					
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	140			
2	33 KV V cross Arm (GI) 22Kg each	No's.	140			
3	Top bracket 100x50x6mm GI channel (2kg each)	No's.	140			
4	Danger Plate, 1 no's.	No's.	140			
5	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	42.13			
6	GI barbed wire anticlimbing device 3 Kg. Per support	KG	420.00			
7	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 4 no's = $(4x0.59x0.510)$	KG	168.50			
8	33KV pin insulator polymer	No's.	420			
9	Earthing of Support (Coil Type)	No's.	140			
10	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	36.68			
11	GI Nut, Bolt & Washer of different sizes (1.45 Kg/ Pin Point)	KG	203.00			
12	148 sq.mm AAA conductor	Km	21.63			
13	Black Paint	Ltr	140.00			
14	Yellow Colour Paint for Background	Ltr	280.00			
3	Erection, Testing & Commissioning of Material required for Construction of Line using 241sqmm conductor on 13 Mtr. long WPB Pole, as per technical specification and scope of work.					
	MATERIALS FOR 33 KV DP Without Isolator					
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	126			
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 3.25 mtr., 2 no's channel required = (2x9.56x3.25)	KG	3914.82			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	249.78			

4	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.96 Mtr., 5 no's channel required =(5x7.14x1.96)	KG	4408.24			
5	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 3.432 mtr., 4 nos angle required = (4*4.5*3.432)	KG	3891.89			
6	Danger Plate, 2 no's.	No's.	126			
7	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	37.91			
8	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	126			
9	H.T. Stay set (Complete)	Set	126			
10	H.T. Stay Insulator Type-C (2 No's.)	No's.	252			
11	7/8 SWG Stay Wire 15kg /stay	KG	1890.00			
12	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	63			
13	50x6mm GI Flat for earthing, 2.36kg/mtr., (2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 5x2.36	KG	743.40			
14	GI barbed wire anticlimbing device 3 Kg. Per support	KG	378.00			
15	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 8 no's = $(8x0.59x0.510)$	KG	151.65			
16	33KV pin insulator polymer	No's.	189			
17	Non Metallic Ties 33KV (For covered conductor)	No's.	189			
18	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	252			
19	IPC for 241 sq.mm AAA conductor (For covered conductor)	No's.	378			
20	H W fitting(B&S)90KN,4 Bolt	No's.	378			
21	Disc insulator (B&S) 90 KN polymer	No's.	378			
22	GI Nut, Bolt & Washer of different sizes (12.261 Kg each DP without Isolator)	KG	772.44			
23	Black Paint	Ltr	63.00			

24	Yellow Colour Paint for Background	Ltr	126.00		
	MATERIALS FOR 33 KV DP With Isolator				
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	24		
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 4.3 mtr., 2 no's channel required =(2x9.56x4.3)	KG	986.59		
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	47.58		
4	Insulator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 1 no's channel required =(1x7.14x4.3)	KG	368.42		
5	Isolator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 2 no's channel required =(2x7.14x4.3)	KG	736.85		
6	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 4 no's channel required = (4x7.14x4.3)	KG	1473.70		
7	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 4.927 mtr., 4 nos angle required = (4*4.5*4.927)	KG	1064.23		
8	Isolator Operating Down Pipe Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 0.8 Mtr., 1 no's channel required =(1x7.14x0.8)	KG	68.54		
9	Down Pipe Diagonal Support Angle, 4.5Kg./mtr., each angle length 0.388mtr., 1 nos angle required = (1*4.5*0.388)	KG	20.95		
10	Down Pipe Base Support Angle, 4.5Kg./mtr., each angle length 0.34mtr., 1 nos angle required = (1*4.5*0.340)	KG	18.36		
11	Isolator Support Side Cahnnel 100X50X6mm, 9.56 KG/Mtr., each channel length 0.5 mtr., 2 no's channel required =(2x9.56x0.5)	KG	114.72		
12	Danger Plate, 2 no's.	No's.	24		
13	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	7.22		
14	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	24		
15	H.T. Stay set (Complete)	Set	24		
16	H.T. Stay Insulator Type-C (2 No's.)	No's.	48		
17	7/8 SWG Stay Wire 15kg /stay	KG	360.00		
18	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	24		

19	50x6mm GI Flat for earthing, 2.36kg/mtr., (15 Mtr. For L.A, 4 Mtr for Isolator Body, 2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 24x2.36	KG	679.68		
20	GI barbed wire anticlimbing device 3 Kg. Per support	KG	72.00		
21	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 8 no's = $(8x0.59x0.510)$	KG	28.89		
22	Lightning Arrester(30KV,10KA) (Station Class,class-2)	EA	36		
23	33 KV 1250 AMP Double break (Turn & twist center rotating) isolator without earth switch with Pl(Polymer)	Set	12		
24	33KV pin insulator polymer	No's.	36		
25	Non Metallic Ties 33KV (For covered conductor)	No's.	36		
26	IPC for 241 sq.mm AAA conductor (For covered conductor)	No's.	72		
27	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	48		
28	H W fitting(B&S)90KN,4 Bolt	No's.	72		
29	Disc insulator (B&S) 90 KN polymer	No's.	72		
30	GI Nut, Bolt & Washer of different sizes (22.15 Kg each DP with Isolator)	KG	265.80		
31	Black Paint	Ltr	12.00		
32	Yellow Colour Paint for Background	Ltr	24.00		
	MATERIALS FOR 33 KV Cut Point with 180 Degree Angle				
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	44		
2	Straight Cross Arm Channel $100 \times 50 \times 6$ mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 2 No's of Channel = $(2 \times 9.56 \times 1.7)$	KG	1430.18		
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 8 no's required = (8x2.36x0.280)	KG	232.60		
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 2 No's of Channel = (2x 9.56x0.306)	KG	257.43		
5	Danger Plate, 1 no's.	No's.	44		

6	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	13.24			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	132.00			
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 4 no's = $(4x0.59x0.510)$	KG	52.96			
9	33KV pin insulator polymer	No's.	132			
10	Non Metallic Ties 33KV (For covered conductor)	No's.	132			
11	IPC for 241 sq.mm AAA conductor (For covered conductor)	No's.	264			
12	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	88			
13	H W fitting(B&S)90KN,4 Bolt	No's.	264			
14	Disc insulator (B&S)90 KN polymer	No's.	264			
15	Earthing of Support (Coil Type)	EA	44			
16	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	11.53			
17	GI Nut, Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point)	KG	214.68			
18	Black Paint	Ltr	44.00			
19	Yellow Colour Paint for Background	Ltr	88.00			
	MATERIALS FOR 33 KV Cut Point with 90 Degree Angle					
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	38			
2	Straight Cross Arm Channel $100 \times 50 \times 6$ mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 4 No's of Channel = $(4 \times 9.56 \times 1.7)$	KG	2470.30		_	
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280)	KG	401.77			
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 4 No's of Channel = (4x 9.56x0.306)	KG	444.65			
5	Danger Plate, 1 no's.	No's.	38			

6	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	11.43			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	114.00			
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 4 no's = $(4x0.59x0.510)$	KG	45.74			
9	33KV pin insulator polymer (4 No's each 90 Deg. Cut point)	No's.	152			
10	H W fitting(B&S)90KN,4 Bolt	No's.	228			
11	Disc insulator (B&S)90 KN polymer	No's.	228			
12	Non Metallic Ties 33KV (For covered conductor)	No's.	152			
13	IPC for 241 sq.mm AAA conductor (For covered conductor)	No's.	228			
14	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	76			
15	Earthing of Support (Coil Type)	No's.	38			
16	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	9.96			
17	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	38			
18	H.T. Stay set (Complete)	Set	38			
19	H.T. Stay Insulator Type-C (2 No's.)	No's.	38			
20	7/8 SWG Stay Wire 15kg /stay	KG	570.00			
21	GI Nut, Bolt & Washer of different sizes (11.31 Kg each 90 deg. Cut point)	KG	429.78			
22	Black Paint	Ltr	38.00			
23	Yellow Colour Paint for Background	Ltr	76.00			
	MATERIALS FOR 33 KV Pin Points					
1	WPB 160x152 (13Mtr. Long, 30.44KG/Mtr.)	No's.	653			

2	33 KV V cross Arm (GI) 22Kg each	No's.	653			
3	Top bracket 100x50x6mm GI channel (2kg each)	No's.	653			
4	Danger Plate, 1 no's.	No's.	653			
5	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	196.49			
6	GI barbed wire anticlimbing device 3 Kg. Per support	KG	1959.00			
7	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 4 no's = $(4x0.59x0.510)$	KG	785.95			
8	33KV pin insulator polymer	No's.	1959			
9	Non Metallic Ties 33KV (For covered conductor)	No's.	1959			
10	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	1306			
11	Earthing of Support (Coil Type)	No's.	653			
12	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	171.09			
13	GI Nut, Bolt & Washer of different sizes (1.45 Kg/ Pin Point)	KG	946.85			
14	241 sq.mm AAA conductor	Km	117.42			
15	Black Paint	Ltr	653.00			
16	Yellow Colour Paint for Background	Ltr	1306.00			
4	Erection, Testing & Commissioning of Material required for Construction of Line using 232sqmm conductor on 13 Mtr. long H-Pole, as per technical specification and scope of work.					
	MATERIALS FOR 33 KV DP Without Isolator					
1	13 Mtr. Long H-Pole	No's.	112			
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 3.25 mtr., 2 no's channel required = (2x9.56x3.25)	KG	3479.84			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	222.03			

4	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.96 Mtr., 5 no's channel required =(5x7.14x1.96)	KG	3918.43			
5	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 3.432 mtr., 4 nos angle required = (4*4.5*3.432)	KG	3459.46			
6	Danger Plate, 2 no's.	No's.	112			
7	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	33.70			
8	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	112			
9	H.T. Stay set (Complete)	Set	112			
10	H.T. Stay Insulator Type-C (2 No's.)	No's.	224			
11	7/8 SWG Stay Wire 15kg /stay	KG	1680.00			
12	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	56			
13	50x6mm GI Flat for earthing, 2.36kg/mtr., (2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 5x2.36	KG	660.80			
14	GI barbed wire anticlimbing device 3 Kg. Per support	KG	336.00			
15	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 8 no's = $(8x0.59x0.510)$	KG	134.80			
16	33KV pin insulator polymer	No's.	168			
17	H W fitting(B&S) 90KN,4 Bolt	No's.	336			
18	Disc insulator (B&S) 90 KN polymer	No's.	336			
19	PG Clamp for 232 sq.mm AAA conductor	No's.	336			
20	GI Nut, Bolt & Washer of different sizes (12.261 Kg each DP without Isolator)	KG	686.62			
21	Black Paint	Ltr	56.00			
22	Yellow Colour Paint for Background	Ltr	112.00			
	MATERIALS FOR 33 KV DP With Isolator					

			1			
1	13 Mtr. Long H-Pole	No's.	36			
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 4.3 mtr., 2 no's channel required =(2x9.56x4.3)	KG	1644.32			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	79.29			
4	Insulator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 1 no's channel required =(1x7.14x4.3)	KG	614.05			
5	Isolator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 2 no's channel required =(2x7.14x4.3)	KG	1228.08			
6	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 4 no's channel required = (4x7.14x4.3)	KG	2456.15			
7	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 4.927 mtr., 4 nos angle required = (4*4.5*4.927)	KG	1773.72			
8	Isolator Operating Down Pipe Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 0.8 Mtr., 1 no's channel required =(1x7.14x0.8)	KG	114.25			
9	Down Pipe Diagonal Support Angle, 4.5Kg./mtr., each angle length 0.388mtr., 1 nos angle required = (1*4.5*0.388)	KG	34.92			
10	Down Pipe Base Support Angle, 4.5Kg/mtr., each angle length 0.34mtr., 1 nos angle required = (1*4.5*0.340)	KG	30.60			
11	Isolator Support Side Cahnnel 100X50X6mm, 9.56 KG/Mtr., each channel length 0.5 mtr., 2 no's channel required =(2x9.56x0.5)	KG	191.20			
12	Danger Plate, 2 no's.	No's.	40			
13	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 2 no's = $(2x0.59x0.510)$	KG	12.05			
14	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	100			
15	H.T. Stay set (Complete)	Set	40			
16	H.T. Stay Insulator Type-C (2 No's.)	No's.	68			
17	7/8 SWG Stay Wire 15kg /stay	KG	600.00			
18	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	40			
19	50x6mm GI Flat for earthing, 2.36kg/mtr., (15 Mtr. For L.A, 4 Mtr for Isolator Body, 2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 24x2.36	KG	1132.80			
20	GI barbed wire anticlimbing device 3 Kg. Per support	KG	120.00			

21	Back Clamp for anticlimbing device 25X3 mm. flat, $0.59Kg/Mtr$. Flat of $0.510mtr$ length $8 \text{ no's} = (8x0.59x0.510)$	KG	48.14			
22	Lightning Arrester(30KV,10KA) (Station Class,class-2)	EA	60			
23	33 KV 1250 AMP Double break (Turn & twist center rotating) isolator without earth switch with Pl(Polymer)	Set	18			
24	33KV pin insulator polymer	No's.	60			
25	H W fitting(B&S) 90KN,4 Bolt	No's.	120			
26	Disc insulator (B&S) 90 KN polymer	No's.	120			
27	PG Clamp for 232 sq.mm AAA conductor	No's.	84			
28	GI Nut, Bolt & Washer of different sizes (22.15 Kg each DP with Isolator)	KG	443.00			
29	Black Paint	Ltr	18.00			
30	Yellow Colour Paint for Background	Ltr	36.00			
31	AB Switch (33KV, 200A.3pole) Polymer Insulator, as per technical specification and scope of work. (For Stattion transformer)	Set	2.00			
32	33kV HG Fuse with horn gap, as per technical specification and scope of work. (For Stattion transformer) 1 set=03 nos	Set	2.00			
	MATERIALS FOR 33 KV Cut Point with 180 Degree Angle					
1	13 Mtr. Long H-Pole	No's.	49			
2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 2 No's of Channel = (2x 9.56x1.7)	KG	1592.70			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 8 no's required = (8x2.36x0.280)	KG	259.03			
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 2 No's of Channel = (2x 9.56x0.306)	KG	286.69			
5	Danger Plate, 1 no's.	No's.	49			
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	14.74			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	147.00			

8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 4 no's = $(4x0.59x0.510)$	KG	58.98		
9	33KV pin insulator polymer	No's.	147		
10	H W fitting(B&S)90KN,4 Bolt	No's.	294		
11	Disc insulator (B&S)90 KN polymer	No's.	294		
12	Earthing of Support (Coil Type)	EA	49		
13	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	12.84		
14	PG Clamp for 232 sq.mm AAA conductor	No's.	294		
15	GI Nut, Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point)	KG	239.07		
16	Black Paint	Ltr	49.00		
17	Yellow Colour Paint for Background	Ltr	98.00		
	MATERIALS FOR 33 KV Cut Point with 90 Degree Angle				
1	13 Mtr. Long H-Pole	No's.	18		
2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 4 No's of Channel = (4x 9.56x1.7)	KG	1170.14		
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280)	KG	190.31		
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 4 No's of Channel = (4x 9.56x0.306)	KG	210.63		
5	Danger Plate, 1 no's.	No's.	18		
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	5.42		
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	54.00		
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 4 no's = $(4x0.59x0.510)$	KG	21.66		
9	33KV pin insulator polymer (4 No's each 90 Deg. Cut point)	No's.	72		

10	H W fitting(B&S)90KN,4 Bolt	No's.	108			
11	Disc insulator (B&S)90 KN polymer	No's.	108			
12	Earthing of Support (Coil Type)	No's.	18			
13	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	4.72			
14	PG Clamp for 232 sq.mm AAA conductor	No's.	108			
15	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	18			
16	H.T. Stay set (Complete)	Set	18			
17	H.T. Stay Insulator Type-C (2 No's.)	No's.	18			
18	7/8 SWG Stay Wire 15kg /stay	KG	270.00			
19	GI Nut, Bolt & Washer of different sizes (11.31 Kg each 90 deg. Cut point)	KG	203.58			
20	Black Paint	Ltr	18.00			
21	Yellow Colour Paint for Background	Ltr	36.00			
	MATERIALS FOR 33 KV Pin Points					
1	13 Mtr. Long H-Pole	No's.	701			
2	33 KV V cross Arm (GI) 22Kg each	No's.	701			
3	Top bracket 100x50x6mm GI channel (300mm each)	No's.	701			
4	Danger Plate, 1 no's.	No's.	701			
5	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	210.93			
6	GI barbed wire anticlimbing device 3 Kg. Per support	KG	2103.00			
7	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 4 no's = $(4x0.59x0.510)$	KG	843.72			

8	33KV pin insulator polymer	No's.	2103			
9	Earthing of Support (Coil Type)	No's.	701			
10	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	183.66			
11	GI Nut, Bolt & Washer of different sizes (1.45 Kg/ Pin Point)	KG	1016.45			
12	232 sq.mm AAA conductor	Km	103.52			
13	Black Paint	Ltr	701.00			
14	Yellow Colour Paint for Background	Ltr	1402.00			
5	Erection, Testing & Commissioning of Material required for Construction of Line using 148sqmm conductor on 13 Mtr. long H-Pole, as per technical specification and scope of work.					
	MATERIALS FOR 33 KV Cut Point with 90 Degree Angle					
1	13 Mtr. Long H-Pole	No's.	2			
2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 4 No's of Channel = (4x 9.56x1.7)	KG	130.02			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280)	KG	21.15			
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 4 No's of Channel = (4x 9.56x0.306)	KG	23.40			
5	Danger Plate, 1 no's.	No's.	2			
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	0.60			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	6.00			
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 4 no's = $(4x0.59x0.510)$	KG	2.41			
9	33KV pin insulator polymer (4 No's each 90 Deg. Cut point)	No's.	8			
10	H W fitting(B&S)90KN,4 Bolt	No's.	12			
11	Disc insulator (B&S)90 KN polymer	No's.	12			

12	Earthing of Support (Coil Type)	No's.	2			
13	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	0.52			
14	PG Clamp for 148 sq.mm AAA conductor	No's.	48			
15	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	2			
16	H.T. Stay set (Complete)	Set	2			
17	H.T. Stay Insulator Type-C (2 No's.)	No's.	2			
18	7/8 SWG Stay Wire 15kg /stay	KG	30.00			
19	GI Nut, Bolt & Washer of different sizes (11.31 Kg each 90 deg. Cut point)	KG	22.62			
20	Black Paint	Ltr	2.00			
21	Yellow Colour Paint for Background	Ltr	4.00			
	MATERIALS FOR 33 KV Pin Points					
1	13 Mtr. Long H-Pole	No's.	4			
2	33 KV V cross Arm (GI) 22Kg each	No's.	4			
3	Top bracket 100x50x6mm GI channel (300mm each)	No's.	4			
4	Danger Plate, 1 no's.	No's.	4			
5	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	1.20			
6	GI barbed wire anticlimbing device 3 Kg. Per support	KG	12.00			
7	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 4 no's = $(4x0.59x0.510)$	KG	4.81			
8	33KV pin insulator polymer	No's.	12			
9	Earthing of Support (Coil Type)	No's.	4			

10	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	1.05			
11	GI Nut, Bolt & Washer of different sizes (1.45 Kg/ Pin Point)	KG	5.80			
12	148 sq.mm AAA conductor	Km	0.69			
13	Black Paint	Ltr	4.00			
14	Yellow Colour Paint for Background	Ltr	8.00			
6	Erection, Testing & Commissioning of Material required for Construction of Line using 241sqmm conductor on 13 Mtr. long H-Pole, as per technical specification and scope of work.					
	MATERIALS FOR 33 KV DP Without Isolator					
1	13 Mtr. Long H-Pole	No's.	40			
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 3.25 mtr., 2 no's channel required =(2x9.56x3.25)	KG	1242.80			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	79.30			
4	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.96 Mtr., 5 no's channel required = (5x7.14x1.96)	KG	1399.44			
5	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 3.432 mtr., 4 nos angle required = (4*4.5*3.432)	KG	1235.52			
6	Danger Plate, 2 no's.	No's.	40			
7	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	12.04			
8	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	40			
9	H.T. Stay set (Complete)	Set	40			
10	H.T. Stay Insulator Type-C (2 No's.)	No's.	80			
11	7/8 SWG Stay Wire 15kg /stay	KG	600.00			
12	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	20			
13	50x6mm GI Flat for earthing, 2.36kg/mtr., (2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 5x2.36	KG	236.00			

14	GI barbed wire anticlimbing device 3 Kg. Per support	KG	120.00			
15	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 8 no's = $(8x0.59x0.510)$	KG	48.14			
16	33KV pin insulator polymer	No's.	60			
17	Non Metallic Ties 33KV (For covered conductor)	No's.	60			
18	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	80			
19	IPC for 241 sq.mm AAA conductor (For covered conductor)	No's.	120			
20	H W fitting(B&S)90KN,4 Bolt	No's.	120			
21	Disc insulator (B&S) 90 KN polymer	No's.	120			
22	GI Nut, Bolt & Washer of different sizes (12.261 Kg each DP without Isolator)	KG	245.22			
23	Black Paint	Ltr	20.00			
24	Yellow Colour Paint for Background	Ltr	40.00			
	MATERIALS FOR 33 KV DP With Isolator					
1	13 Mtr. Long H-Pole	No's.	12			
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 4.3 mtr., 2 no's channel required = (2x9.56x4.3)	KG	493.30			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	23.79			
4	Insulator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 1 no's channel required = (1x7.14x4.3)	KG	184.21			
5	Isolator Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 2 no's channel required =(2x7.14x4.3)	KG	368.42			
6	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 4 no's channel required = (4x7.14x4.3)	KG	736.85			
7	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 4.927 mtr., 4 nos angle required = (4*4.5*4.927)	KG	532.12			
8	Isolator Operating Down Pipe Support Cahnnel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 0.8 Mtr., 1 no's channel required =(1x7.14x0.8)	KG	34.27		 	
		_				

9	Down Pipe Diagonal Support Angle, 4.5Kg./mtr., each angle length 0.388mtr., 1 nos angle required = (1*4.5*0.388)	KG	10.48			
10	Down Pipe Base Support Angle, 4.5Kg/mtr., each angle length 0.34mtr., 1 nos angle required = (1*4.5*0.340)	KG	9.18			
11	Isolator Support Side Cahnnel 100X50X6mm, 9.56 KG/Mtr., each channel length 0.5 mtr., 2 no's channel required =(2x9.56x0.5)	KG	57.36			
12	Danger Plate, 2 no's.	No's.	12			
13	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	3.61			
14	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	12			
15	H.T. Stay set (Complete)	Set	12			
16	H.T. Stay Insulator Type-C (2 No's.)	No's.	24			
17	7/8 SWG Stay Wire 15kg /stay	KG	180.00			
18	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	12			
19	50x6mm GI Flat for earthing, 2.36kg/mtr., (15 Mtr. For L.A, 4 Mtr for Isolator Body, 2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 24x2.36	KG	339.84			
20	GI barbed wire anticlimbing device 3 Kg. Per support	KG	36.00			
21	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 8 no's = $(8x0.59x0.510)$	KG	14.44			
22	Lightning Arrester(30KV,10KA) (Station Class,class-2)	EA	18			
23	33 KV 1250 AMP Double break (Turn & twist center rotating) isolator without earth switch with Pl(Polymer)	Set	2			
24	33 KV 1250 AMP Double break (Turn & twist center rotating) isolator with earth switch with Pl(Polymer)	Set	4			
25	33KV pin insulator polymer	No's.	18			
26	Non Metallic Ties 33KV (For covered conductor)	No's.	18			
27	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	24			
28	IPC for 241 sq.mm AAA conductor (For covered conductor)	No's.	36			

			1			
29	H W fitting(B&S)90KN,4 Bolt	No's.	36			
30	Disc insulator (B&S) 90 KN polymer	No's.	36			
31	GI Nut, Bolt & Washer of different sizes (22.15 Kg each DP with Isolator)	KG	132.90			
32	Black Paint	Ltr	6.00			
33	Yellow Colour Paint for Background	Ltr	12.00			
	MATERIALS FOR 33 KV Cut Point with 180 Degree Angle					
1	13 Mtr. Long H-Pole	No's.	20			
2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 2 No's of Channel = (2x 9.56x1.7)	KG	650.08			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 8 no's required = (8x2.36x0.280)	KG	105.73			
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 2 No's of Channel = (2x 9.56x0.306)	KG	117.01			
5	Danger Plate, 1 no's.	No's.	20			
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	6.02			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	60.00			
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 4 no's = $(4x0.59x0.510)$	KG	24.07			
9	33KV pin insulator polymer	No's.	60			
10	Non Metallic Ties 33KV (For covered conductor)	No's.	60			
11	IPC for 241 sq.mm AAA conductor (For covered conductor)	No's.	120			
12	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	40			
13	H W fitting(B&S)90KN,4 Bolt	No's.	120			
14	Disc insulator (B&S)90 KN polymer	No's.	120			

		1		1		
15	Earthing of Support (Coil Type)	EA	20			
16	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	5.24			
17	GI Nut, Bolt & Washer of different sizes (4.879 Kg each 180 deg. Cut point)	KG	97.58			
18	Black Paint	Ltr	20.00			
19	Yellow Colour Paint for Background	Ltr	40.00			
	MATERIALS FOR 33 KV Cut Point with 90 Degree Angle					
1	13 Mtr. Long H-Pole	No's.	20			
2	Straight Cross Arm Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 1.7 Mtr., 4 No's of Channel = (4x 9.56x1.7)	KG	1300.16			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280)	KG	211.46			
4	Straight Cross Arm Top Channel 100 x 50 x 6 mm, 9.56 KG/mtr, each channel length 0.306 Mtr., 4 No's of Channel = (4x 9.56x0.306)	KG	234.03			
5	Danger Plate, 1 no's.	No's.	20			
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	6.02			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	60.00			
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 4 no's = $(4x0.59x0.510)$	KG	24.07			
9	33KV pin insulator polymer (4 No's each 90 Deg. Cut point)	No's.	80			
10	H W fitting(B&S)90KN,4 Bolt	No's.	120			
11	Disc insulator (B&S)90 KN polymer	No's.	120			
12	Non Metallic Ties 33KV (For covered conductor)	No's.	80			
13	IPC for 241 sq.mm AAA conductor (For covered conductor)	No's.	120			
14	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	40			

15	Earthing of Support (Coil Type)	No's.	20			
16	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	5.24			
17	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.511 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	20			
18	H.T. Stay set (Complete)	Set	20			
19	H.T. Stay Insulator Type-C (2 No's.)	No's.	20			
20	7/8 SWG Stay Wire 15kg /stay	KG	300.00			
21	GI Nut, Bolt & Washer of different sizes (11.31 Kg each 90 deg. Cut point)	KG	226.20			
22	Black Paint	Ltr	20.00			
23	Yellow Colour Paint for Background	Ltr	40.00			
	MATERIALS FOR 33 KV Pin Points					
1	13 Mtr. Long H-Pole	No's.	188			
2	33 KV V cross Arm (GI) 22Kg each	No's.	188			
3	Top bracket 100x50x6mm GI channel (2kg each)	No's.	188			
4	Danger Plate, 1 no's.	No's.	188			
5	Back Clamp for danger Plate 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 1 no's = $(1x0.59x0.510)$	KG	56.57			
6	GI barbed wire anticlimbing device 3 Kg. Per support	KG	564.00			
7	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59 Kg/Mtr. Flat of 0.510 mtr length 4 no's = $(4x0.59x0.510)$	KG	226.28			_
8	33KV pin insulator polymer	No's.	564			
9	Non Metallic Ties 33KV (For covered conductor)	No's.	630			
10	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	376			

11	Earthing of Support (Coil Type)	No's.	188			
	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil	1105.	100			
12	earthing	KG	49.26			
13	GI Nut, Bolt & Washer of different sizes (1.45 Kg/ Pin Point)	KG	272.60			
14	241 sq.mm AAA conductor	Km	30.90			
15	Black Paint	Ltr	188.00			
16	Yellow Colour Paint for Background	Ltr	376.00			
7	Erection, Testing & Commissioning of Material for 33kV Line on 1CX 630sqmm UG Cable, as per technical specification and scope of work.					
1.1	Laying, Commissioning & Testing of 33kV, 1Core, 3Runs, 630sqmm, XLPE insulation (extruted type) UG cable (with one single 1core, 630sqmm, XLPE cable as spare) in trefoil formation by open trench method.	Mtr.	44280			
1.2	Erection of Straight through jointing kits Heat Shrinkable type suitable for 33kV, 1Core, 630sqmm, aluminium UG cable kits	Set	182			
1.3	Erection of Outdoor termination kits Heat Shrinkable type suitable for 33kV, 1Core, 630sqmm, HT UG cable kits	Set	141			
1.4	Erection of Indoor termination kits Heat Shrinkable type suitable for 33kV, 1Core, 630sqmm, HT UG cable kits	Set	102			
1.5	Installation, Laying, Commissioning & Testing of 33kV, 1Core, 3Runs, 630sqmm, XLPE insulation (extruted type) UG cable including looping at cable terminations and straight through joints by HDD method with HDPE pipe (110mm dia, PN8 PE80) for laying of individual run of UG cable at main road and unaccessable place.	Mtr.	16200			
1.6	Laying of 110mm dia PE 80-PN8, HDPE pipe inside open trench.	Mtr.	43548			
2	Erection, Commissioning, Wiring and Testing of 33kV RMU					
2.4	Erection of RMU 33KV 4WAY 630A (2ISLTR+2 BKR) (LLVV)	No's.	9			
3	Earthing					
3.1	Earthing Conductor: 50X6 mm (2.4kg./mtr.) GI Flat for equipment, structure etc.)	KG	118.80			
3.2	Pipe Earthing 40mm. GI Pipe	No's.	18			
4	Erection, Testing & Commissioning of Standard FRTU 4Way with FRTU networking Equipment consisting of Fibre Optic switch (Mono mode along wilh associate LIU unit for connection of FO Cable. for 3 Way & 4 way RMU.	No's.	8			

			I	1	I	I	
8	Erection, Testing & Commissioning of Material for 33kV Line on 3CX 400sqmm UG Cable, as per technical specification and scope of work.						
1	Erection, Commissioning & Testing of 33kV new line by 3Core, 400sqmm, XLPE UG cable without spare						
1.1	Laying, Commissioning & Testing of 33kV, 3Core, 1Run, 400sqmm, XLPE insulation (extruted type) UG cable with spare by open trench method .	Mtr.	198.00				
1.3	Erection of Outdoor termination kits Heat Shrinkable type suitable for 33kV, 3Core, 400sqmm, HT UG cable kits	Set	14.00				
1.4	Erection of Indoor termination kits Heat Shrinkable type suitable for 33kV, 3Core, 400sqmm, HT UG cable kits	Set	6.00				
1.6	Laying of 160mm dia PE 80-PN8, HDPE pipe inside open trench.	Mtr.	180				
2	Erection, Commissioning, Wiring and Testing of 33kV RMU						
2.3	Erection of RMU 33KV 3WAY 630A (2ISLTR+ 1BKR) (LLV)	No's.	1				
3	Earthing						
3.1	Earthing Conductor: 50X6 mm (2.4kg./mtr.) GI Flat for equipment, structure etc.)	KG	13.20				
3.2	Pipe Earthing 40mm. GI Pipe	No's.	2				
4	Erection, Testing & Commissioning of Standard FRTU 4Way with FRTU networking Equipment consisting of Fibre Optic switch (Mono mode along wilh associate LlU unit for connection of FO Cable. for 3 Way & 4 way RMU.	No's.	1				
9	Erection, Testing & Commissioning of GI PC '+6' EHT Tower for River crossing including all types of materials, as per technical specification and scope of work.						
1	GI PC '+6' Tower super structure G.I (Main + Extention +Stub + Template), as per technical specification and scope of work.						
i)	PC Tower	MT	49.71				
ii)	'+6' Mtr. Extention	MT	18.74				
iii)	Template	MT	15.23				
2	GI Nut, Bolt & Washer of different sizes, as per technical specification and scope of work.						
i)	PC Tower	MT	13.23				

ii)	'+6' Mtr. Extention	MT	4.74			
3	Erection, Testing & Commissioning of Conductor and Accessories, as per technical specification and scope of work.					
i	232 mm2 AAAC, as per technical specification and scope of work.	Km	1.85			
ii	Earth wire 7/1.5 G.I, as per technical specification and scope of work.	Km	0.62			
iii	Double tension Hardware Fittings suitable for Conductor size.	Set	96			
iv	Disc insulator (B&S) 120 KN polymer type.	No's.	192			
v	Tension fittings suitable for Earth wire.	Set	16			
vi.	Vibration damper suitable for earth wire	No's.	16			
vii.	Vibration damper suitable for conductor size.	No's.	96			
viii	Copper flexible bond	No's.	8			
ix	Phase Plate (R,Y,B)	Set	48			
х	GI Tower Number Plate	No's.	16			
xi	Circuit Plate	No's.	16			
xii	Earthing Device & Associated Accessories (Heavy duty GI Perforated Pipe of ID=40mm & OD=50mm with 3000mm long for treated Earth Pit), as per technical specification and scope of work.	No's.	16			
xiii	Earthing Conductor: 50X6 mm (2.4Kg./Mtr.) GI Flat for Raiser from the burial earth mat to equipment, structure etc), as per technical specification and scope of work.	KG	800.00			
xiv	GI Danger Board	No's.	16			
xv	Bird Guard	No's.	96			
xvi	Anticlimbing Device (G.I)	KG	844.80			
xvii	Loop Connector	No's.	48			

		1		T	ı	1	
10	Civil Works Incluing Supply of All Materials Like Cement, MS tor Rod, Brick, Coarse & Fine Agregrates & Labour, T&P etc.; for Construction of 33kV Line.						
1	Civil Works for Construction of 33kV OH Line, as per technical specification and scope of work.						
1.1	Detail Survey of 33kV lines profile plotting, pole spotting and preparation of pole schedule, as per technical specification and scope of work.	Km	256				
1.2	Excavation of Earth for 13 Mtr. long poles pit. (1000mm X 500mm X 2275mm) = 1.14 Cu.mtr.), as per technical specification and scope of work.	Cum	5870				
1.3	Concreting of poles in ratio 1:1.5:3 (500mmX500mmX2200mm) = 0.55 Cu.mtr, as per technical specification and scope of work.	Cum	2832				
1.4	Couping of poles in ratio 1:1.5:3 with dimension (500X500X450)= 0.1125 Cu mtr, as per technical specification and scope of work.	Cum	579				
1.5	Fixing of stay set with 0.5Cum cement concrete foundation PCC 1:3:6 size (900mmx600mmx900mm) using 40mm BHG metal with all labor and material, including excavation and required backfilling, as per technical specification and scope of work.	No's.	1006				
1.6	Dismantling of Poles with Accessories and h&w and return to store	No's.	505				
1.7	Dismantling of Line Conductor with all accessorise and return to store	Km	359				
2	Civil Works for Construction of 33kV Line on UG Cable, as per technical specification and scope of work.						
2.1	Earth work excavation of soil (1mtr. width X 1.2 mtr. depth)	Cum	12303				
2.2	Earth work excavation of hard rock (1mtr. width X 1.2 mtr. depth)	Cum	5273				
2.3	Back filling with excavated soil outside and above the trench	Cum	17575				
2.4	Damage of asphalt/tar road and other utilities and reconstructing to bring to its original shape after laying of cable in open trench (1mtr. width)	Mtr.	6805				
3	Civil Works for 33kV RMU, as per technical specification and scope of work.						
3.1	Prefabricated RCC foundation of 33kV RMU	No's.	10				
3.2	Erection of Galvanised Fencing around each RMU with height 2 mtr for external protection including supply of the same	Sq. mtr.	200				
4	Making of earth chamber with brick masonary (1:5), PCC (1:4:8) and with 50mm thick RCC Slab (with 8mm rod) cover for earth pit of size 450mmX450mm X600 mm depth as per direction of Engg in Charge.	No's.	20				

5	Supply and erection of GI Pipe of dia. 150mm, Class-B (8Mtr.)	Mtr.	1176			
6	Supply and Erection of Cable Route Marker along the cable route at an interval of 30mtrs with civil works	No's.	674			
7	Civil Work for PC '+6' EHT Tower, as per technical specification and scope of work.					
7.1	Detail Survey of lines profile plotting, spotting and marking, as per technical specification and scope of work.	No's.	8			
7.2	Excavation with back filling in all types of soil for PC + 6 Tower , including dewatering, Shoring & Shuttering	Cum	1760.00			
7.3	PCC (1:3:6) for PC + 6 Tower with cement, including de- watering, Shoring & Shuttering including supply of Materials	Cum	0.80			
7.4	PCC (1:3:6) for Tower Foundation as blind layer (1Cum for 1tower) including supply of Materials	Cum	8.00			
7.5	PCC (1:2:4) for Tower Foundation as blind layer (1Cum for 1tower) Per Tower= 1Cum including supply of Materials	Cum	8.00			
7.6	RCC (1:1.5:3) for PC + 6 Tower with cement & with tor rod including setting of stub by providing required templets with proper alignment including de-watering. including supply of Materials	Cum	352.00			
7	TOTAL OF ERECTION & CIVIL WORKS COMPONENT OF THE WORKS CONTRACT FOR 33kV LINE in (Rs.)					

ANNEXURE- I

SCOPE-III:

- (A) SUPPLY PART:
- (B) ERECTION PART

Construction of 11kV FEEDER WORK with accessories, as per technical specification and scope of work.

	BROAD REQUIREMENT FOR INFORMATION		55 (Sum from 1 to 55)
1	11kV Line with 11mtr long WPB Pole	Km	186.27
2	11kV line on Underground Cable	Mtr.	4880.00
3	PC '+6' Tower Requirement for River crossing on 11kV Line	No's.	1

	Tata Power Central Odisha Distribution Limited (TPCODL)							
En	gineering, Supply, Erection and Commissioning of 33/11 kV Sub-Stations, Lines, LVRT and DTR with associated 11kV Interlinking Lines Under							
	Supply of Materials Required for Construction of 11kV line							
NO	FICE INVITING TENDER- NIT NO- TPCODL/P&S/1000000364/2023-24	. Date:05	5.04.2023					
1,0,	1102 11, 1111, 10 12, 12 21, 1111, 10 11 0022, 1 00, 100, 1	, 2						
SL. No.	DESCRIPTION OF ITEMS							
	SUPPLY OF FOLLOWING EQUIPMENTS/ MATERIALS (As per technical specification and scope of work.)	UNITS	Total Quantity	BASIC PRICE PER UNIT (Taxable Value) In Rs	CGST @ 9% PER UNIT (INTRA- STATE)	OGST @ 9% PER UNIT (INTRA- STATE)	TOTAL PRICE PER UNIT (In Rs)	TOTAL PRICE FOR THE TENDER QUANTITY (RS.)
		Circle						
	BROAD REQUIREMENT FOR INFORMATION		55 (Sum from 1 to 55)	56	57= (56*9%)	58= (56*9%)	59= {56+57+58}	60= {59*55}
1	11kV Line with 11mtr long WPB Pole	Km	186.27					
2	11kV line on Underground Cable	Mtr.	4880.00					
3	PC '+6' Tower Requirement for River crossing on 11kV Line	No's.	1					
	DETAIL REQUIREMENT (To be quoted)							
1	Supply of Material required for Construction of Line using 100sqmm conductor on 11 Mtr. long WPB Pole, as per technical specification and scope of work.							
Sl. No.	Description of Materials	Unit						
	MATERIALS OF DP Without AB Switch							
1	WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	Nos.	522					
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 2.3 mtr., 2 no's channel required =(2x9.56x2.3)	KG	11477.74					
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	1034.81					
4	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.66 Mtr., 4 no's channel required = (7.14x1.66x4)	KG	12373.91					
5	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 2.671 mtr., 4 nos angle required = (4.5x2.671x4)	KG	12548.36					
6	Danger Plate, 2 no's.	Nos.	522					
7	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	157.07					
8	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.551 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	522					

9 H.T. Stay set (Complete) Set 522	
11 7/10 SWG Stay Wire 15kg /stay	
12 Gi Pipe Earthing 40mm. 3 Mtr. Long	
13 50x6mm GI Flat for earthing, 2.36kg/mtr., (2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 5x2.36 3079.80	
13 5x2.36 KG 3079.80 14 GI barbed wire anticlimbing device 3 Kg. Per support, 2 no's qty. required =(2x3kg) KG 1566.00 15 Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510) KG 628.28 16 11 KV pin insulator polymer Nos. 783 17 H W fitting(B&S) 70KN, 3Bolt Nos. 1566 18 Disc insulator (B&S) 70 KN polymer Nos. 1566 19 PG Clamp for 100 sq.mm AAA conductor Nos. 1566 20 GI Nut, Bolt & Washer of different sizes (12.261 Kg each DP without AB Switch) KG 3200.12 21 Black Paint Ltr 261.00 22 Yellow Colour Paint for Background Ltr 522.00 MATERIALS OF DP With AB Switch Nos. 268	
14 GI barbed wire anticlimbing device 3 Kg. Per support, 2 no's qty. required =(2x3kg) KG 1566.00 15 Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510) KG 628.28 16 11 KV pin insulator polymer Nos. 783 17 H W fitting(B&S) 70KN, 3Bolt Nos. 1566 18 Disc insulator (B&S) 70 KN polymer Nos. 1566 19 PG Clamp for 100 sq.mm AAA conductor Nos. 1566 20 GI Nut , Bolt & Washer of different sizes (12.261 Kg each DP without AB Switch) KG 3200.12 21 Black Paint Ltr 261.00 22 Yellow Colour Paint for Background Ltr 522.00 MATERIALS OF DP With AB Switch Nos. 268 Top Champel 100X50X6mm	
Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = KG (8x0.59x0.510) KG (8x0.5	
15 (8x0.59x0.510)	
16	
17	
18 Disc insulator (B&S) 70 KN polymer Nos. 1566 19 PG Clamp for 100 sq.mm AAA conductor Nos. 1566 20 Gf Nut , Bolt & Washer of different sizes (12.261 Kg each DP without AB Switch) KG 3200.12 21 Black Paint Ltr 261.00 22 Yellow Colour Paint for Background Ltr 522.00	
19 PG Clamp for 100 sq.mm AAA conductor Nos. 1566 20 GI Nut , Bolt & Washer of different sizes (12.261 Kg each DP without AB Switch) KG 3200.12 21 Black Paint Ltr 261.00 22 Yellow Colour Paint for Background Ltr 522.00	
20 GI Nut , Bolt & Washer of different sizes (12.261 Kg each DP without AB Switch) KG 3200.12 21 Black Paint Ltr 261.00 22 Yellow Colour Paint for Background Ltr 522.00	
21 Black Paint	
22 Yellow Colour Paint for Background	
MATERIALS OF DP With AB Switch 1 WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.) Nos. 268 Top Chappel 100Y50Y6mm 0.56 VG/Mtr. goals chappel length 3 mtr. 2 mels chappel required = (
1 WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.) Nos. 268	
Top Channel 100V50V6mm 0.56 VG/Mtr. goals channel langth 2 mtr. 2 nels channel required =/	
2 1709 Chainlet 100X30X0hini, 9.30 KO/Witt., each chainlet length 3 hitt., 2 hos chainlet lequired – (
3 Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280) KG 511.46	
AB switch Mounting Channel 75X40X4.8mm, 7.14KG/Mtr, each channel length 3 Mtr., 2 no's	
4 Ab switch Mounting Channel 73A40A4.8hini, 7.14K0/Mit, each Channel required = (7.14x3x2) KG 5783.40	
AB Switch Side Support Channel 100X50X6mm,9.56 KG/Mtr., each channel length 0.35 mtr., 2	
5 AB Switch Side Support Chainlet 100A50A0hini, 9.50 KO/Mit., each Chainlet length 0.55 hit., 2 KG 903.40	
Channel Support for down Pipe 75X40X 4.8mm., 7.14KG/Mtr., each channel length 0.8 Mtr., 1	
6 Chaimlet Support for down Type 75X 15X 15Min., 71 TRESTARD., each chaimlet length 5.5 Vid., 1 KG 771.10 KG 771.10	
7 Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 3.0 Mtr., 4 no's KG 11823.84	
7 Channel required = (7.14x3x4) KG 11823.84	
8 50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 3.512 mtr., 4 nos angle required = KG 8723.80	
8 30x30x0min.Gr Bracing Angle, 4.5kg/mir., each angle length 5.512 mir., 4 nos angle required KG 8723.80	
9 Danger Plate, 2 no's. Nos. 264	
Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = KG 90.62	
$\frac{10}{(2x0.59x0.510)}$	
11 H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.551 Mtr. Length, 2 no's qty. required (1 Pair) Pair 290	
11 H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.551 Mtr. Length, 2 no's qty. required (1 Pair) Pair 290	
12 H.T. Stay set (Complete) Set 258	
13 H.T. Stay Insulator Type-C Nos. 258	
14 7/10 SWG Stay Wire 15kg /stay KG 3870.00	
15 Gi Pipe Earthing 40mm. 3 Mtr. Long Nos. 258	
50x6mm GI Flat for earthing, 2.36kg/mtr., (12.5 Mtr. For L.A, 3 Mtr for AB Switch Body, 2.5 mtr. KG 6241.02	
For mesh formation and 2.5 mtr. For raising)= 20.5x2.36	
17 GI barbed wire anticlimbing device 3 Kg. Per support, 2 no's qty. required =(2x3kg) KG 792.00	

Digitaling Arrested (12KV-10KA) (Station Class, class-2)	18	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's =	KG	317.75			
20 Als Swartch (LTKA-400A.3pole.59Hz)	10	(8x0.59x0.510)	EA	207			
22							
1 W Giting (1885) 70KN, 3Bolt Nos. \$10 1 23 Dois crimstor (1885) 70 KN, polymer Nos. \$10 1 24 RC Clamp for 100 sq. mm AAA conductor Nos. \$10 1 24 RC Clamp for 100 sq. mm AAA conductor Nos. \$10 1 24 26 26 26 27 27 20 20 20 20 20 20							
22 Disc insulator (IASS) 70 KN polymer							
24 P.C. Clamp for 100 sa,mm AAA conductor Sci Gil Nut, Ball & Washer of different sizes (13.718 Kg each DP with AB Switch) KG 1878.46							
25 Gil Nut. Bolt & Washer of different sizes (13.718 Kg each DP with AH Switch) KG Black Parin							
26 Black Paint Ltr 134.00 Ltr 268.00 Ltr 27 Yellow Colour Paint for Background Ltr 268.00 Ltr 268.00							
27 Yellow Colour Paint for Background Lir 268.00							
1 KV 400 AMP Double break (Turn & revis center rotating) isolator without earth switch Outdoor Set 8.00							
Type Polymer Insulator, as per technical specification and scope of work. Sec. Sec.			Lu	200.00			
WPB 160x152 (11Mrt. Long. 30.44 KG/Mtr.) Nos. 189	28		Set	8.00			
WPB 160x152 (11Mrt. Long, 30.44KG/Mtr., each channel length 1.2 mtr., 2 no's channel required = (2x9.5x01.2) KG 4336.42							
Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 2 no's channel required = (2x9.56x1.2) KG 4336.42	1		Nos	189			
2 required = (2x9.56x1.2)							
Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 2 no's channel required = (8x2.36x0.280) KG 999.13	2		KG	4336.42			
Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 2 no's channel required = (2x9.56x0.306) RG		1					
10	3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 8 no's required = (8x2.36x0.280)	KG	999.13			
10		Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 2 no's channel					
5 Danger Plate, 1 no's.	4		KG	1105.79			
Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's =	5		Nos.	189			
Column C		ŭ /					
GI barbed wire anticlimbing device 3 Kg. Per support KG 567.00	6		KG	56.87			
Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 4 no's channel r., 4 no's chann	7		KG	567.00			
(4x0.59x0.510)	0	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's =	V.C	227.40			
10	8	(4x0.59x0.510)	KG	227.48			
Disc insulator (B&S) 70 KN polymer	9	11 KV pin insulator polymer	Nos.	567			
12 Earthing of Support (Coil Type)	10	H W fitting(B&S) 70KN, 3Bolt	Nos.	1134			
13 No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing KG 49.52	11	Disc insulator (B&S) 70 KN polymer	Nos.	1134			
14 PG Clamp for 100 sq.mm AAA conductor Nos. 1134 15 GI Nut , Bolt & Washer of different sizes (3.55 Kg each Cut Pole) KG 670.95 16 Black Paint Ltr 94.50 17 Yellow Colour Paint for Background Ltr 378.00 MATERIALS FOR 11 KV Cut Point with 90 Degree Angle 1 WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.) Nos. 162 2 Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 4 no's channel required = (4x9.56x1.2) KG 7433.86 3 Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280) KG 1712.79 4 Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 4 no's channel VG 1805.63	12	Earthing of Support (Coil Type)	EA	189			
15 GI Nut , Bolt & Washer of different sizes (3.55 Kg each Cut Pole) KG 670.95	13	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	49.52			
16 Black Paint Ltr 94.50	14	PG Clamp for 100 sq.mm AAA conductor	Nos.	1134			
17 Yellow Colour Paint for Background	15	GI Nut, Bolt & Washer of different sizes (3.55 Kg each Cut Pole)	KG	670.95			
MATERIALS FOR 11 KV Cut Point with 90 Degree Angle 1 WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.) Nos. 162 Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 4 no's channel KG 7433.86 3 Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280) KG 1712.79 Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 4 no's channel KG 1805.63 1	16	Black Paint	Ltr	94.50			
1 WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.) Nos. 162 2 Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 4 no's channel required = (4x9.56x1.2) KG 7433.86 3 Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280) KG 1712.79 4 Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 4 no's channel VG 1895.63	17		Ltr	378.00			
2 Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 4 no's channel required = (4x9.56x1.2) 3 Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280) 4 Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 4 no's channel RG 4 Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 4 no's channel RG 5 T433.86		MATERIALS FOR 11 KV Cut Point with 90 Degree Angle					
2 required = (4x9.56x1.2) RG 7433.86 3 Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280) KG 1712.79 Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 4 no's channel	1		Nos.	162			
required = (4x9.56x1.2) 3 Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280) KG 1712.79 Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 4 no's channel	2		KG	7/32 96		 	
Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 4 no's channel		required = $(4x9.56x1.2)$	NO	/455.00			
	3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280)	KG	1712.79		 	
	1	Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 4 no's channel	VC	1005 (3			
	4		KG	1895.63	 		

5	Danger Plate, 1 no's.	Nos.	162			
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	48.75			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	486.00			
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	194.98			
9	11 KV pin insulator polymer	Nos.	648			
10	H W fitting(B&S) 70KN, 3Bolt	Nos.	972			
	Disc insulator (B&S) 70 KN polymer	Nos.	972			
12	Earthing of Support (Coil Type)	EA	162			
13	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	42.44			
14	PG Clamp for 100 sq.mm AAA conductor	Nos.	972			
15	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.551 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	324			
16	H.T. Stay set (Complete)	Set	324			
	H.T. Stay Insulator Type-C	Nos.	324			
18	7/10 SWG Stay Wire 15kg /stay	KG	4860.00			
19	GI Nut, Bolt & Washer of different sizes (7.433 Kg each Cut Pole)	KG	1204.15			
20	Black Paint	Ltr	81.00			
21	Yellow Colour Paint for Background	Ltr	324.00			
	MATERIALS FOR 11 KV Pin Points With WPB					
1	WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	Nos.	2790			
2	11 KV V cross Arm (10.2 K.g. each)	Nos.	2790			
3	Top bracket 100x50X6 mm GI channel (2kg each)	Nos.	2790			
4	Danger Plate, 1 no's. for each pole	Nos.	2790			
5	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	839.51			
6	GI barbed wire anticlimbing device 3 Kg. Per support	KG	8370.00			
7	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	3358.04			
8	11 KV pin insulator polymer, 3 Nos. required for each support	Nos.	8370			
9	Earthing of Support (Coil Type)	Nos.	2790			
10	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	730.98			
11	GI Nut, Bolt & Washer of different sizes (1.45 Kg/ Pin Point)	KG	4045.50			
12	100 mm2 AAAC	Km	492.74			
13	Black Paint	Ltr	2790.00			
14	Yellow Colour Paint for Background	Ltr	5580.00			
2	Supply of Material required for Construction of Line using 99sqmm conductor on 11 Mtr. long WPB Pole, as per technical specification and scope of work.					
	MATERIALS OF DP Without AB Switch					
1	WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	Nos.	58			
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 2.3 mtr., 2 no's channel required =(2x9.56x2.3)	KG	1275.30			

3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	114.98			
	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.66 Mtr., 4 no's					
4	channel required =(7.14x1.66x4)	KG	1374.88			
5	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 2.671 mtr., 4 nos angle required = (4.5x2.671x4)	KG	1394.26			
6	Danger Plate, 2 no's.	Nos.	58			
7	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	17.45			
8	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.551 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	58			
	H.T. Stay set (Complete)	Set	58			
10	H.T. Stay Insulator Type-C	Nos.	58			
11	7/10 SWG Stay Wire 15kg /stay	KG	870.00			
12	Gi Pipe Earthing 40mm. 3 Mtr. Long	Nos.	29			
13	50x6mm GI Flat for earthing, 2.36kg/mtr., (2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 5x2.36	KG	342.20			
14	GI barbed wire anticlimbing device 3 Kg. Per support, 2 no's qty. required =(2x3kg)	KG	174.00			
15	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510)	KG	69.81			
16	11 KV pin insulator polymer	Nos.	87			
17	H W fitting(B&S) 70KN, 3Bolt	Nos.	174			
18	Disc insulator (B&S) 70 KN polymer	Nos.	174			
19	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	116			
20	Non Metallic Ties 11KV (For covered conductor)	Nos.	87			
21	IPC for 99 sq.mm AAA conductor (For covered conductor)	Nos.	174			
22	GI Nut, Bolt & Washer of different sizes (12.261 Kg each DP without AB Switch)	KG	355.57			
23	Black Paint	Ltr	29.00			
24	Yellow Colour Paint for Background	Ltr	58.00			
	MATERIALS OF DP With AB Switch					
1	WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	Nos.	32			
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 3 mtr., 2 no's channel required =(2x9.56x3)	KG	917.76			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	63.44			
4	AB switch Mounting Channel 75X40X4.8mm, 7.14KG/Mtr, each channel length 3 Mtr., 2 no's channel required =(7.14x3x2)	KG	685.44			
5	AB Switch Side Support Channel 100X50X6mm,9.56 KG/Mtr., each channel length 0.35 mtr., 2 no's channel required = (9.56x2x0.35)	KG	107.07			
6	Channel Support for down Pipe 75X40X 4.8mm., 7.14KG/Mtr., each channel length 0.8 Mtr., 1 no's channel required = (7.14x0.8x1)	KG	91.39			
7	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 3.0 Mtr., 4 no's channel required =(7.14x3x4)	KG	1370.88			

8	50x50x6mm.GI Bracing Angle, 4.5Kg/mtr., each angle length 3.512 mtr., 4 nos angle required = (4.5x3.512x4)	KG	1011.46			
9	Danger Plate, 2 no's.	Nos.	32			
10	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	9.63			
	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.551 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	32			
	H.T. Stay set (Complete)	Set	32			
	H.T. Stay Insulator Type-C	Nos.	32			
	7/10 SWG Stay Wire 15kg /stay	KG	480.00			
15	Gi Pipe Earthing 40mm. 3 Mtr. Long	Nos.	32			
16	50x6mm GI Flat for earthing, 2.36kg/mtr., (12.5 Mtr. For L.A, 3 Mtr for AB Switch Body, 2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 20.5x2.36	KG	774.08			
17	GI barbed wire anticlimbing device 3 Kg. Per support, 2 no's qty. required =(2x3kg)	KG	96.00			
18	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510)	KG	38.52			
19	Lightning Arrester(12KV,10KA) (Station Class,class-2)	EA	48			
20	AB Switch (11KV,400A.3pole,50Hz)	Set	16			
21	11 KV pin insulator polymer	Nos.	48			
22	H W fitting(B&S) 70KN, 3Bolt	Nos.	96			
23	Disc insulator (B&S) 70 KN polymer	Nos.	96			
24	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	64			
25	Non Metallic Ties 11KV (For covered conductor)	Nos.	48			
26	IPC for 99 sq.mm AAA conductor (For covered conductor)	Nos.	96			
27	GI Nut, Bolt & Washer of different sizes (13.718 Kg each DP with AB Switch)	KG	219.49			
28	Black Paint	Ltr	16.00			
29	Yellow Colour Paint for Background	Ltr	32.00			
	MATERIALS FOR 11 KV Cut Point with 180 Degree Angle					
1	WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	Nos.	23			
2	Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 2 no's channel required = (2x9.56x1.2)	KG	527.71			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 8 no's required = (8x2.36x0.280)	KG	121.59			
4	Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 2 no's channel required =(2x9.56x0.306)	KG	134.57			
5	Danger Plate, 1 no's.	Nos.	23			
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	6.92			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	69.00			
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	27.68			
9	11 KV pin insulator polymer	Nos.	69			
10	H W fitting(B&S) 70KN, 3Bolt	Nos.	138			

11	Disc insulator (B&S) 70 KN polymer	Nos.	138			
12	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each	0.4	16			
12	Pole)	Set	46			
13	Non Metallic Ties 11KV (For covered conductor)	Nos.	69			
14	IPC for 99 sq.mm AAA conductor (For covered conductor)	Nos.	138			
15	Earthing of Support (Coil Type)	EA	23			
16	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	6.03			
17	GI Nut, Bolt & Washer of different sizes (3.55 Kg each Cut Pole)	KG	81.65			
18	Black Paint	Ltr	11.50			
19	Yellow Colour Paint for Background	Ltr	46.00			
	MATERIALS FOR 11 KV Cut Point with 90 Degree Angle					
1	WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	Nos.	24			
2	Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 4 no's channel required =(4x9.56x1.2)	KG	1101.31			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280)	KG	253.75			
4	Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 4 no's channel required =(4x9.56x0.306)	KG	280.83			
5	Danger Plate, 1 no's.	Nos.	24			
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	7.22			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	72.00			
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	28.89			
9	11 KV pin insulator polymer	Nos.	96			
10	H W fitting(B&S) 70KN, 3Bolt	Nos.	144			
11	Disc insulator (B&S) 70 KN polymer	Nos.	144			
12	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	48			
13	Non Metallic Ties 11KV (For covered conductor)	Nos.	96			
14	IPC for 99 sq.mm AAA conductor (For covered conductor)	Nos.	144			
15	Earthing of Support (Coil Type)	EA	24			
16	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	6.29			
17	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.551 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	48			
18	H.T. Stay set (Complete)	Set	48			
19	H.T. Stay Insulator Type-C	Nos.	48			
20	7/10 SWG Stay Wire 15kg /stay	KG	720.00			
21	GI Nut, Bolt & Washer of different sizes (7.433 Kg each Cut Pole)	KG	178.39			
22	Black Paint	Ltr	12.00			
23	Yellow Colour Paint for Background	Ltr	48.00			
	MATERIALS FOR 11 KV Pin Points With WPB					
1	WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	Nos.	464			
2	11 KV V cross Arm (10.2 K.g. each)	Nos.	464			

3	Top bracket 100x50X6 mm GI channel (2kg each)	Nos.	464		
4	Danger Plate, 1 no's. for each pole	Nos.	464		
5	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	139.62		
6	GI barbed wire anticlimbing device 3 Kg. Per support	KG	1392.00		
7	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	558.47		
8	11 KV pin insulator polymer, 3 Nos. required for each support	Nos.	1392		
9	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	928		
10	Non Metallic Ties 11KV (For covered conductor)	Nos.	1392		
11	Earthing of Support (Coil Type)	Nos.	464		
12	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	121.57		
13	GI Nut, Bolt & Washer of different sizes (1.45 Kg/ Pin Point)	KG	672.80		
14	99 SQ.MM. AAAC XLPE Covered Conductor	Km	82.86		
16	Black Paint	Ltr	464.00		
17	Yellow Colour Paint for Background	Ltr	928.00		
3	Supply of Material for 11kV Line on UG Cable, as per technical specification and scope of work.				
1	Supply of materials for 11kV, 3Core, 400sqmm, XLPE insulation armoured UG cable with accessories				
a	Length of 11kV 3C, 400sqmm cable (open trench) (Mtr.)				
b	Length of 11kV 3C, 400sqmm cable (HDD) (Mtr)				
1.1	Supply of 11kV, 3Core, 400sqmm, XLPE insulation armoured UG cable (SC rating of cable in kA-37.7kA and SC rating of Armour in kA-15kA)	Mtr.	9760.00		
1.2	Supply of Straight through jointing kits Heat Shrinkable type suitable for 11kV, 3Core, 400 sqmm, Aluminium UG cable for 3Core (Set)	Set	36		
1.3	Supply of Indoor termination kits Heat Shrinkable type suitable for 11kV, 3Core, 400 sqmm, HT UG cable for 3Core (Set)	Set	32		
1.4	Supply of Outdoor termination kits Heat Shrinkable type suitable for 11kV, 3Core, 400 sqmm, HT UG cable for 3Core (Set)	Set	42		
1.5	Supply of HDPE PE 80-PN8 pipe of 160mm diameter (for 400sqmm HT cable laying)	Mtr.	8504.00		
2	Supply of 11kV RMU				
2.1	Supply of 11kV RMU 3 Way, 2 Iso & 1 Brk 630A (LLV)	Nos.	3		
2.2	Supply of 11kV RMU 4 Way, 2 Iso & 2 Brk 630A (LLVV)	Nos.	2		
3	Earthing				
3.1	Earthing Conductor: 50X6 mm (2.4kg./mtr.) GI Flat for equipment, structure etc.)	KG	66.00		
3.2	Pipe Earthing 40mm. GI Pipe	Nos.	10		
4	Supply of Standard FRTU 4Way with FRTU networking Equipment consisting of Fibre Optic switch (Mono mode along wilh associate LIU unit for connection of FO Cable. for 3 Way & 4 way RMU.	Nos.	5		
4	Supply of GI PC '+6' EHT Tower for River crossing including all types of materials, as per technical specification and scope of work.				

1	GI PC '+6' Tower super structure G.I (Main + Extention +Stub + Template), as per technical specification and scope of work.					
i)	PC Tower	MT	12.43			
ii)	'+6' Mtr. Extention	MT	4.68			
iii)	Template	MT	3.81			
2	GI Nut, Bolt & Washer of different sizes, as per technical specification and scope of work.					
i)	PC Tower	MT	3.31			
ii)	'+6' Mtr. Extention	MT	1.18			
3	Supply of Conductor and Accessories, as per technical specification and scope of work.					
i	232 mm2 AAAC, as per technical specification and scope of work.	Km	0.46			
ii	Earth wire 7/1.5 G.I, as per technical specification and scope of work.	Km	0.15			
iii	Double tension Hardware Fittings suitable for Conductor size.	Set	24			
iv	Disc insulator (B&S) 120 KN polymer type.	Nos.	48			
v	Tension fittings suitable for Earth wire.	Set	4			
vi.	Vibration damper suitable for earth wire	Nos.	4			
vii.	Vibration damper suitable for conductor size.	Nos.	24			
viii	Copper flexible bond	Nos.	2			
ix	Phase Plate (R,Y,B)	Set	12			
х	GI Tower Number Plate	Nos.	4			
xi	Circuit Plate	Nos.	4			
xii	Earthing Device & Associated Accessories (Heavy duty GI Perforated Pipe of ID=40mm & OD=50mm with 3000mm long for treated Earth Pit), as per technical specification and scope of work.	Nos.	4			
xiii	Earthing Conductor: 50X6 mm (2.4Kg./Mtr.) GI Flat for Raiser from the burial earth mat to equipment, structure etc), as per technical specification and scope of work.	KG	200.00			
xiv	GI Danger Board	Nos.	4			
XV	Bird Guard	Nos.	24			
xvi	Anticlimbing Device (G.I)	KG	211.20			
xvii	Loop Connector	Nos.	37			
TO	TAL OF SUPPLY COMPONENT OF THE WORKS CONTRACT FOR 11kV LINE (Rs.)					

	Tata Power Central Odisha Distribution Limited (TPCODL)							
Engi	neering, Supply, Erection and Commissioning of 33/11 kV Sub-Stations, 33kV, 11k	V. LT Li	ies, LVRT					
g	and DTR with associated 11kV Interlinking Lines Under CMPDP	.,, 21 21	100, 2 , 111					
	Supply of Materials Required for Construction of 11kV line							
	NOTICE INVITING TENDER- NIT NO- TPCODL/P&S/1000000364/2023-24, D	ata:05 04	2022					
	NOTICE INVITING TENDER- NIT NO- TECODE/F&5/1000000304/2025-24, D	ate:05.04.	2023					
	T	1						
SL. No.	DESCRIPTION OF ITEMS							
	ERECTION, TESTING & COMMISSIONING INCLUDING CIVIL WORKS OF FOLLOWING EQUIPMENTS (As per technical specification and scope of work.)	UNITS	Total Quantity	BASIC PRICE PER UNIT (Taxable Value) In Rs	CGST @ 9% PER UNIT (INTRA- STATE)	OGST @ 9% PER UNIT (INTRA- STATE)	TOTAL PRICE PER UNIT (In Rs)	TOTAL PRICE FOR THE TENDER QUANTITY (Rs.)
		Circle						
	BROAD REQUIREMENT FOR INFORMATION		55 (Sum from 1 to 55)	56	57= (56*9%)	58= (56*9%)	59= {56+57+58}	60= {59*55}
1	11kV Line with 11mtr long WPB Pole	Km	186.27					
2	11kV line on Underground Cable	Mtr.	4880.00					
3	PC '+6' Tower Requirement for River crossing on 11kV Line	No's.	1					
	DETAIL REQUIREMENT (To be quoted)							
1	Erection, Testing & Commissioning of Material required for Construction of Line using 100sqmm conductor on 11 Mtr. long WPB Pole, as per technical specification and scope of work.							
Sl. No.	Description of Materials	Unit						
	MATERIALS OF DP Without AB Switch							
1	WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	No's.	522					
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 2.3 mtr., 2 no's channel required =(2x9.56x2.3)	KG	11477.74					
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	1034.81					
4	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.66 Mtr., 4 no's channel required =(7.14x1.66x4)	KG	12373.91					
5	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 2.671 mtr., 4 nos angle required = (4.5x2.671x4)	KG	12548.36					
6	Danger Plate, 2 no's.	No's.	522					
7	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	157.07					

8	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.551 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	522			
9	H.T. Stay set (Complete)	Set	522			
10	H.T. Stay Insulator Type-C	No's.	522			
11	7/10 SWG Stay Wire 15kg /stay	KG	7830.00			
12	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	261			
13	50x6mm GI Flat for earthing, 2.36kg/mtr., (2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 5x2.36	KG	3079.80			
14	GI barbed wire anticlimbing device 3 Kg. Per support, 2 no's qty. required =(2x3kg)	KG	1566.00			
15	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510)	KG	628.28			
16	11 KV pin insulator polymer	No's.	783			
17	H W fitting(B&S) 70KN, 3Bolt	No's.	1566			
18	Disc insulator (B&S) 70 KN polymer	No's.	1566			
19	PG Clamp for 100 sq.mm AAA conductor	No's.	1566			
20	GI Nut, Bolt & Washer of different sizes (12.261 Kg each DP without AB Switch)	KG	3200.12			
21	Black Paint	Ltr	261.00			
22	Yellow Colour Paint for Background	Ltr	522.00			
	MATERIALS OF DP With AB Switch					
1	WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	No's.	268			
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 3 mtr., 2 no's channel required =(2x9.56x3)	KG	7915.68			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	511.46			
4	AB switch Mounting Channel 75X40X4.8mm, 7.14KG/Mtr, each channel length 3 Mtr., 2 no's channel required = (7.14x3x2)	KG	5783.40			
5	AB Switch Side Support Channel 100X50X6mm,9.56 KG/Mtr., each channel length 0.35 mtr., 2 no's channel required = (9.56x2x0.35)	KG	903.40			
					-	

6	Channel Support for down Pipe 75X40X 4.8mm., 7.14KG/Mtr., each channel length 0.8 Mtr., 1 no's channel required =(7.14x0.8x1)	KG	771.10			
7	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 3.0 Mtr., 4 no's channel required =(7.14x3x4)	KG	11823.84			
8	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 3.512 mtr., 4 nos angle required = (4.5x3.512x4)	KG	8723.80			
9	Danger Plate, 2 no's.	No's.	264			
10	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	90.62			
11	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.551 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	290			
12	H.T. Stay set (Complete)	Set	258			
13	H.T. Stay Insulator Type-C	No's.	258			
14	7/10 SWG Stay Wire 15kg /stay	KG	3870.00			
15	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	258			
16	50x6mm GI Flat for earthing, 2.36kg/mtr., (12.5 Mtr. For L.A, 3 Mtr for AB Switch Body, 2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 20.5x2.36	KG	6241.02			
17	GI barbed wire anticlimbing device 3 Kg. Per support, 2 no's qty. required =(2x3kg)	KG	792.00			
18	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510)	KG	317.75			
19	Lightning Arrester(12KV,10KA) (Station Class,class-2)	EA	387			
20	AB Switch (11KV,400A.3pole,50Hz)	Set	127			
21	11 KV pin insulator polymer	No's.	387			
22	H W fitting(B&S) 70KN, 3Bolt	No's.	810			
23	Disc insulator (B&S) 70 KN polymer	No's.	810			
24	PG Clamp for 100 sq.mm AAA conductor	No's.	810			
25	GI Nut, Bolt & Washer of different sizes (13.718 Kg each DP with AB Switch)	KG	1878.46			
26	Black Paint	Ltr	134.00			

27	Yellow Colour Paint for Background	Ltr	268.00			
28	11 KV 400 AMP Double break (Turn & twist center rotating) isolator without earth switch Outdoor Type Polymer Insulator, as per technical specification and scope of work.	Set	8.00			
	MATERIALS FOR 11 KV Cut Point with 180 Degree Angle					
1	WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	No's.	189			
2	Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 2 no's channel required =(2x9.56x1.2)	KG	4336.42			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 8 no's required = (8x2.36x0.280)	KG	999.13			
4	Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 2 no's channel required =(2x9.56x0.306)	KG	1105.79			
5	Danger Plate, 1 no's.	No's.	189			
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	56.87			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	567.00			
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	227.48			
9	11 KV pin insulator polymer	No's.	567			
10	H W fitting(B&S) 70KN, 3Bolt	No's.	1134			
11	Disc insulator (B&S) 70 KN polymer	No's.	1134			
12	Earthing of Support (Coil Type)	EA	189			
13	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	49.52			
14	PG Clamp for 100 sq.mm AAA conductor	No's.	1134			
15	GI Nut, Bolt & Washer of different sizes (3.55 Kg each Cut Pole)	KG	670.95			
16	Black Paint	Ltr	94.50			
17	Yellow Colour Paint for Background	Ltr	378.00			
	MATERIALS FOR 11 KV Cut Point with 90 Degree Angle					

1	WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	No's.	162			
2	Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 4 no's channel required =(4x9.56x1.2)	KG	7433.86			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280)	KG	1712.79			
4	Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 4 no's channel required = (4x9.56x0.306)	KG	1895.63			
5	Danger Plate, 1 no's.	No's.	162			
6	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	48.75			
7	GI barbed wire anticlimbing device 3 Kg. Per support	KG	486.00			
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	194.98			
9	11 KV pin insulator polymer	No's.	648			
10	H W fitting(B&S) 70KN, 3Bolt	No's.	972			
11	Disc insulator (B&S) 70 KN polymer	No's.	972			
12	Earthing of Support (Coil Type)	EA	162			
13	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	42.44			
14	PG Clamp for 100 sq.mm AAA conductor	No's.	972			
15	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.551 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	324			
16	H.T. Stay set (Complete)	Set	324			
17	H.T. Stay Insulator Type-C	No's.	324			
18	7/10 SWG Stay Wire 15kg /stay	KG	4860.00			
19	GI Nut, Bolt & Washer of different sizes (7.433 Kg each Cut Pole)	KG	1204.15			
20	Black Paint	Ltr	81.00			
21	Yellow Colour Paint for Background	Ltr	324.00			

	MATERIALS FOR 11 KV Pin Points With WPB					
1	WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	No's.	2790			
2	11 KV V cross Arm (10.2 K.g. each)	No's.	2790			
3	Top bracket 100x50X6 mm GI channel (2kg each)	No's.	2790			
4	Danger Plate, 1 no's. for each pole	No's.	2790			
5	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	839.51			
6	GI barbed wire anticlimbing device 3 Kg. Per support	KG	8370.00			
7	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	3358.04			
8	11 KV pin insulator polymer, 3 Nos. required for each support	No's.	8370			
9	Earthing of Support (Coil Type)	No's.	2790			
10	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	730.98			
11	GI Nut , Bolt & Washer of different sizes (1.45 Kg/ Pin Point)	KG	4045.50			
12	100 mm2 AAAC	Km	492.74			
13	Black Paint	Ltr	2790.00			
14	Yellow Colour Paint for Background	Ltr	5580.00			
2	Erection, Testing & Commissioning of Material required for Construction of Line using 99sqmm conductor on 11 Mtr. long WPB Pole, as per technical specification and scope of work.					
	MATERIALS OF DP Without AB Switch					
1	WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	No's.	58			
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 2.3 mtr., 2 no's channel required =(2x9.56x2.3)	KG	1275.30		 	
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	114.98			

4	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 1.66 Mtr., 4 no's channel required =(7.14x1.66x4)	KG	1374.88			
5	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 2.671 mtr., 4 nos angle required = (4.5x2.671x4)	KG	1394.26			
6	Danger Plate, 2 no's.	No's.	58			
7	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	17.45			
8	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.551 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	58			
9	H.T. Stay set (Complete)	Set	58			
10	H.T. Stay Insulator Type-C	No's.	58			
11	7/10 SWG Stay Wire 15kg /stay	KG	870.00			
12	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	29			
13	50x6mm GI Flat for earthing, 2.36kg/mtr., (2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 5x2.36	KG	342.20			
14	GI barbed wire anticlimbing device 3 Kg. Per support, 2 no's qty. required =(2x3kg)	KG	174.00			
15	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510)	KG	69.81			
16	11 KV pin insulator polymer	No's.	87			
17	H W fitting(B&S) 70KN, 3Bolt	No's.	174			
18	Disc insulator (B&S) 70 KN polymer	No's.	174			
19	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	116			
20	Non Metallic Ties 11KV (For covered conductor)	No's.	87			
21	IPC for 99 sq.mm AAA conductor (For covered conductor)	No's.	174			
22	GI Nut, Bolt & Washer of different sizes (12.261 Kg each DP without AB Switch)	KG	355.57			
23	Black Paint	Ltr	29.00			
24	Yellow Colour Paint for Background	Ltr	58.00			

	MATERIALS OF DP With AB Switch					
1	WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	No's.	32			
2	Top Channel 100X50X6mm, 9.56 KG/Mtr., each channel length 3 mtr., 2 no's channel required =(2x9.56x3)	KG	917.76			
3	Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 6 no's required = (6x2.36x0.280)	KG	63.44			
4	AB switch Mounting Channel 75X40X4.8mm, 7.14KG/Mtr, each channel length 3 Mtr., 2 no's channel required = (7.14x3x2)	KG	685.44			
5	AB Switch Side Support Channel 100X50X6mm,9.56 KG/Mtr., each channel length 0.35 mtr., 2 no's channel required = (9.56x2x0.35)	KG	107.07			
6	Channel Support for down Pipe 75X40X 4.8mm., 7.14KG/Mtr., each channel length 0.8 Mtr., 1 no's channel required =(7.14x0.8x1)	KG	91.39			
7	Double Pole Belting Channel 75X40X 4.8mm., 7.14KG/Mtr., each channel length 3.0 Mtr., 4 no's channel required = (7.14x3x4)	KG	1370.88			
8	50x50x6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 3.512 mtr., 4 nos angle required = (4.5x3.512x4)	KG	1011.46			
9	Danger Plate, 2 no's.	No's.	32			
10	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 2 no's = (2x0.59x0.510)	KG	9.63			
11	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.551 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	32			
12	H.T. Stay set (Complete)	Set	32			
13	H.T. Stay Insulator Type-C	No's.	32			
14	7/10 SWG Stay Wire 15kg /stay	KG	480.00			
15	Gi Pipe Earthing 40mm. 3 Mtr. Long	No's.	32			
16	50x6mm GI Flat for earthing, 2.36kg/mtr., (12.5 Mtr. For L.A, 3 Mtr for AB Switch Body, 2.5 mtr. For mesh formation and 2.5 mtr. For raising)= 20.5x2.36	KG	774.08			
17	GI barbed wire anticlimbing device 3 Kg. Per support, 2 no's qty. required =(2x3kg)	KG	96.00			
18	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 8 no's = (8x0.59x0.510)	KG	38.52			
19	Lightning Arrester(12KV,10KA) (Station Class,class-2)	EA	48			
20	AB Switch (11KV,400A.3pole,50Hz)	Set	16			

1 KV pin insulator polymer	No's.	48					
		40					
I W fitting(B&S) 70KN, 3Bolt	No's.	96					
Disc insulator (B&S) 70 KN polymer	No's.	96					
Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	64					
Non Metallic Ties 11KV (For covered conductor)	No's.	48					
PC for 99 sq.mm AAA conductor (For covered conductor)	No's.	96					
GI Nut, Bolt & Washer of different sizes (13.718 Kg each DP with AB Switch)	KG	219.49					
Black Paint	Ltr	16.00					
Vellow Colour Paint for Background	Ltr	32.00					
MATERIALS FOR 11 KV Cut Point with 180 Degree Angle							
WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	No's.	23					
Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 2 no's channel required =(x9.56x1.2)	KG	527.71					
Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 8 no's required = (8x2.36x0.280)	KG	121.59					
straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 2 no's channel required e(2x9.56x0.306)	KG	134.57					
Danger Plate, 1 no's.	No's.	23					
Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	6.92					
GI barbed wire anticlimbing device 3 Kg. Per support	KG	69.00					
Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = 4x0.59x0.510)	KG	27.68					
1 KV pin insulator polymer	No's.	69					
H W fitting(B&S) 70KN, 3Bolt	No's.	138					
Disc insulator (B&S) 70 KN polymer	No's.	138					
	pike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) fon Metallic Ties 11KV (For covered conductor) PC for 99 sq.mm AAA conductor (For covered conductor) il Nut , Bolt & Washer of different sizes (13.718 Kg each DP with AB Switch) clack Paint fellow Colour Paint for Background MATERIALS FOR 11 KV Cut Point with 180 Degree Angle VPB 160x152 (11Mtr. Long, 30.44KG/Mtr.) traight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 2 no's channel required =(x9.56x1.2) ish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 8 no's required = (8x2.36x0.280) traight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 2 no's channel required (2x9.56x0.306) Panger Plate, 1 no's. lack Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) il barbed wire anticlimbing device 3 Kg. Per support lack Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = 4x0.59x0.510) 1 KV pin insulator polymer I W fitting(B&S) 70KN, 3Bolt	pike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set from Metallic Ties 11KV (For covered conductor) No's. PC for 99 sq.mm AAA conductor (For covered conductor) No's. MATERIALS FOR 11 KV Cut Point with 180 Degree Angle VPB 160x152 (11Mtr. Long, 30.44KG/Mtr.) traight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 2 no's channel required =(x9.56x1.2) ish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 8 no's required = (8x2.36x0.280) KG traight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 2 no's channel required (2x9.56x0.306) No's. No's.	pike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 64 from Metallic Ties 11KV (For covered conductor) No's. 48 PC for 99 sq.mm AAA conductor (For covered conductor) No's. 96 El Nut , Bolt & Washer of different sizes (13.718 Kg each DP with AB Switch) KG 219.49 Elack Paint Ltr 16.00 MATERIALS FOR 11 KV Cut Point with 180 Degree Angle VPB 160x152 (11Mtr. Long, 30.44KG/Mtr.) traight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 2 no's channel required =(xy.56x1.2) ish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 8 no's required = (8x2.36x0.280) KG 121.59 traight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 2 no's channel required (2x2.59.56x0.306) RG 134.57 Panger Plate, 1 no's. No's. 23 sack Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) KG 69.00 sack Clamp for anticlimbing device 3 Kg. Per support sack Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = KG kG 27.68 KG 128 KG 128 KG 69.00 Set W pitting(B&S) 70KN, 3Bolt No's. 138	pike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 64 lon Metallic Ties 11KV (For covered conductor) No's. 48 2°C for 99 sq.mm AAA conductor (For covered conductor) No's. 96 li Nut , Bolt & Washer of different sizes (13.718 Kg each DP with AB Switch) KG 219.49 llack Paint Ltr 16.00 MATERIALS FOR 11 KV Cut Point with 180 Degree Angle WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.) No's. 23 traight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 2 no's channel required = (pike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 64 Ion Metallic Ties 11KV (For covered conductor) No's. 48 PC for 99 sq.mm AAA conductor (For covered conductor) No's. 96 In Nut , Bolt & Washer of different sizes (13.718 Kg each DP with AB Switch) Idack Paint Ltr 16.00 MATERIALS FOR 11 KV Cut Point with 180 Degree Angle VPB 160x152 (11Mtr. Long, 30.44KG/Mtr.) No's. 23 Traight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 2 no's channel required = (KG 527.71 size) Set Pola 50x6 mm, 2.36 kg/Mtr., each 0.280 mtr. length, 8 no's required = (8x2.36x0.280) RG 121.59 Traight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 2 no's channel required (KG 134.57 (2x9.56x0.306)) No's. 23 Lack Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) KG 27.68 LW fitting(B&S) 70KN, 3Bolt No's. 138	pike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 64 Ion Metallic Ties 11KV (For covered conductor) No's. 48 O'C for 99 sq.mm AAA conductor (For covered conductor) No's. 96 II Nut , Bolt & Washer of different sizes (13.718 Kg each DP with AB Switch) Iack Paint Lir 16.00 MATERIALS FOR 11 KV Cut Point with 180 Degree Angle WPB 160x152 (11Mir. Long. 30.44KG/Mtr.) No's. 23 WPB 160x152 (11Mir. Long. 30.44KG/Mtr.) No's. 23 Set 121.59 Set 121.59 Itraight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 2 no's channel required (22.95 6x0.306) No's. 23 Itraight Cross Arm 100XS0X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 2 no's channel required (22.95 6x0.306) No's. 23 Itraight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 2 no's channel required (23.95 6x0.306) No's. 23 Itraight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 2 no's channel required (23.95 6x0.306) No's. 23 Itraight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 2 no's channel required (24.95 6x0.306) KG 134.57 Anger Plate, 1 no's. No's. 23 Ither the danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) KG 6.92 Ither between the flat of the flat of 0.510mtr length 4 no's = KG 27.68 KG 27.68 KG 27.68 It Vy pin insulator polymer No's. 69 IV W fitting (B&S) 70KN, 3Bolt No's. 138	pike (GI) (using \$0x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole) Set 64 Mo Metallic Ties 11KV (For covered conductor) No's. 48 Co for 99 sq.mm AAA conductor (For covered conductor) No's. 96 No's. 97 It It 16.00 MATERIALS FOR 11 KV Cut Point with 180 Degree Angle WPB 160x152 (11Mrr. Long, 30.44KG/Mrr.) No's. 23 Traight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 2 no's channel required (

Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	46					
Non Metallic Ties 11KV (For covered conductor)	No's.	69					
IPC for 99 sq.mm AAA conductor (For covered conductor)	No's.	138					
Earthing of Support (Coil Type)	EA	23					
No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	6.03					
GI Nut, Bolt & Washer of different sizes (3.55 Kg each Cut Pole)	KG	81.65					
Black Paint	Ltr	11.50					
Yellow Colour Paint for Background	Ltr	46.00					
MATERIALS FOR 11 KV Cut Point with 90 Degree Angle							
WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	No's.	24					
Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 4 no's channel required =(4x9.56x1.2)	KG	1101.31					
Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280)	KG	253.75					
Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 4 no's channel required =(4x9.56x0.306)	KG	280.83					
Danger Plate, 1 no's.	No's.	24					
Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	7.22					
GI barbed wire anticlimbing device 3 Kg. Per support	KG	72.00					
Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	28.89					
11 KV pin insulator polymer	No's.	96					
H W fitting(B&S) 70KN, 3Bolt	No's.	144					
Disc insulator (B&S) 70 KN polymer	No's.	144					
Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	48					
	Non Metallic Ties 11KV (For covered conductor) IPC for 99 sq.mm AAA conductor (For covered conductor) Earthing of Support (Coil Type) No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing GI Nut , Bolt & Washer of different sizes (3.55 Kg each Cut Pole) Black Paint Yellow Colour Paint for Background MATERIALS FOR 11 KV Cut Point with 90 Degree Angle WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.) Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 4 no's channel required =(4x9.56x1.2) Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280) Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 4 no's channel required =(4x9.56x0.306) Danger Plate, 1 no's. Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) GI barbed wire anticlimbing device 3 Kg. Per support Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510) 11 KV pin insulator polymer H W fitting(B&S) 70KN, 3Bolt Disc insulator (B&S) 70 KN polymer	Non Metallic Ties 11KV (For covered conductor) No's. IPC for 99 sq.mm AAA conductor (For covered conductor) Earthing of Support (Coil Type) EA No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing KG GI Nut , Bolt & Washer of different sizes (3.55 Kg each Cut Pole) Black Paint Ltr Yellow Colour Paint for Background Ltr MATERIALS FOR 11 KV Cut Point with 90 Degree Angle WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.) Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 4 no's channel required =(4x9.56x1.2) KG Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 4 no's channel required =(4x9.56x0.306) Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 4 no's channel required =(4x9.56x0.306) Danger Plate, 1 no's. Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) KG GI barbed wire anticlimbing device 3 Kg. Per support Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = KG H W fitting(B&S) 70 KN, 3Bolt No's.	Non Metallic Ties 11KV (For covered conductor) No's. 69 IPC for 99 sq.mm AAA conductor (For covered conductor) No's. 138 Earthing of Support (Coil Type) EA 23 No-8 GI wire (Dia 4.6mm) 0.131 KG/Mtr 2 Mtr. For connecting pole with Coil earthing KG 6.03 GI Nut , Bolt & Washer of different sizes (3.55 Kg each Cut Pole) KG 81.65 Black Paint Ltr 11.50 Yellow Colour Paint for Background Ltr 46.00 MATERIALS FOR 11 KV Cut Point with 90 Degree Angle WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.) No's. 24 Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 4 no's channel required = (KG 1101.31 Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280) KG 253.75 Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 4 no's channel required = (KG 280.83 Danger Plate, 1 no's. No's. 24 Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) KG 72.20 Back Clamp for anticlimbing device 3 Kg. Per support KG 72.00 Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (KG 28.89 H W fitting(B&S) 70KN, 3Bolt No's. 144 Disc insulator (B&S) 70 KN polymer No's (Back	Non Metallic Ties 11KV (For covered conductor) No's. 69 IPC for 99 sq.mm AAA conductor (For covered conductor) No's. 138 Earthing of Support (Coil Type) EA 23 No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing KG 6.03 GI Nut , Bolt & Washer of different sizes (3.55 Kg each Cut Pole) KG 81.65 Black Paint Ltr 11.50 Yellow Colour Paint for Background Ltr 46.00 MATERIALS FOR 11 KV Cut Point with 90 Degree Angle WPB 160x152 (11Mtr. Long. 30.44KG/Mtr.) No's. 24 Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 1.2 mtr., 4 no's channel required = (KG 1101.31 Fish Plate 50x6 mm., 2.36 kg/Mtr., each 0.280 mtr. length, 16 no's required = (16x2.36x0.280) KG 253.75 Straight Cross Arm 100X50X6mm, 9.56 KG/Mtr., each channel length 0.306 mtr., 4 no's channel required = (KG 280.83 489.36x0.300 Danger Plate, 1 no's. No's. 24 Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510) KG 7.22 GI barbed wire anticlimbing device 3 Kg. Per support KG 72.00 Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (KG 28.89 HW fitting(B&S) 70KN, 3Bolt No's. 144 Disc insulator (B&S) 70 KN polymer No's. 144	Non Metallic Ties 11KV (For covered conductor) No's. 69 IPC for 99 sq.mm AAA conductor (For covered conductor) No's. 138 Earthing of Support (Coil Type) EA 23 No-8 GI wire (Dia 4.6mm) 0.131 KG/Mtr2 Mtr. For connecting pole with Coil earthing KG 6.03 GI Nut., Bolt & Washer of different sizes (3.55 Kg each Cut Pole) KG 81.65 Black Paint Lir 11.50 Yellow Colour Paint for Background Lir 11.50 WATERIALS FOR 11 KV Cut Point with 90 Degree Angle	No Metallic Ties 11KV (For covered conductor)	Non-Metallic Ties 11KV (For covered conductor) No's. 60 IPC for 99 sq.mm AAA conductor (For covered conductor) No's. 138 Earthing of Support (Coil Type) Earthing of Support (Coil Type) No-8 GI wire (Dia 4.6mm) 0.131 KG/Mir 2 Mir. For connecting pole with Coil earthing KG 6.03 GI Nut , Bolt & Washer of different sizes (3.55 Kg each Cut Pole) KG 81.65 Rack Paint 1tr 11.50 Yellow Colour Paint for Background Ltr 46.00 MATERIALS FOR 11 KV Cut Point with 90 Degree Angle WPB 160x152 (11Mir. Long, 30.44 KG/Mir.) No's. 24 WPB 160x152 (11Mir. Long, 30.44 KG/Mir.) Straight Cross Arm 100X50X6mm, 9.56 KG/Mir., each channel length 1.2 mir., 4 mo's channel required — KG 1101.31 Fish Plate 50x6 mm., 2.36 kg/Mir., each 0.280 mir. length, 16 mo's required — (16x2.36x0.280) Straight Cross Arm 100X50X6mm, 9.56 KG/Mir., each channel length 0.306 mir., 4 mo's channel required — KG 280.83 Danger Plate, 1 mos. Back Clamp for danger Plate 25x3 mm. flat, 0.59 kg/Mtr. Flat of 0.510mir length 1 no's = (1x0.59x0.510) KG 72.00 Back Clamp for anticlimbing device 3 kg. Per support Back Clamp for anticlimbing device 2 SX3 mm. flat, 0.59 kg/Mtr. Flat of 0.510mir length 4 mo's — KG 28x89 II W fitting(BaS) 70KN. 3Botl No's. 144 Dise insulator (BaSs) 70 KN polymer

13	Non Metallic Ties 11KV (For covered conductor)	No's.	96			
14	IPC for 99 sq.mm AAA conductor (For covered conductor)	No's.	144			
15	Earthing of Support (Coil Type)	EA	24			
16	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	6.29			
17	H.T. Stay clamp, 50x8 mm. flat, 3.14Kg/Mtr., 0.551 Mtr. Length, 2 no's qty. required (1 Pair)	Pair	48			
18	H.T. Stay set (Complete)	Set	48			
19	H.T. Stay Insulator Type-C	No's.	48			
20	7/10 SWG Stay Wire 15kg /stay	KG	720.00			
21	GI Nut, Bolt & Washer of different sizes (7.433 Kg each Cut Pole)	KG	178.39			
22	Black Paint	Ltr	12.00			
23	Yellow Colour Paint for Background	Ltr	48.00			
	MATERIALS FOR 11 KV Pin Points With WPB					
1	WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	No's.	464			
2	11 KV V cross Arm (10.2 K.g. each)	No's.	464			
3	Top bracket 100x50X6 mm GI channel (2kg each)	No's.	464			
4	Danger Plate, 1 no's. for each pole	No's.	464			
5	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 1 no's = (1x0.59x0.510)	KG	139.62			
6	GI barbed wire anticlimbing device 3 Kg. Per support	KG	1392.00			
7	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	558.47			
8	11 KV pin insulator polymer, 3 Nos. required for each support	No's.	1392			
9	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	928			

10	Non Metallic Ties 11KV (For covered conductor)	No's.	1392			
11	Earthing of Support (Coil Type)	No's.	464			
12	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	KG	121.57			
13	GI Nut, Bolt & Washer of different sizes (1.45 Kg/ Pin Point)	KG	672.80			
14	99 SQ.MM. AAAC XLPE Covered Conductor	Km	82.86			
16	Black Paint	Ltr	464.00			
17	Yellow Colour Paint for Background	Ltr	928.00			
3	Erection, Testing & Commissioning of Material for 11kV Line on UG Cable, as per technical specification and scope of work.					
1	Laying, Commissioning, Testing of 11kV, 3core, 400sqmm, aluminium, XLPE insulation armoured (extruded type) UG cable by open trench method and HDD method					
1.1	Laying, Commissioning, Testing of 11kV, 3core, 400sqmm, aluminium, XLPE insulation armoured (extruded type) UG cable by open trench method.	Mtr	8760.00			
1.2	Erection of Straight through jointing kits Heat Shrinkable type suitable for 11kV, 3Core, 400sqmm, aluminium UG cable kits for 3core (set)	Set	36.00			
1.3	Erection of Indoor termination kits Heat Shrinkable type suitable for 11kV, 3Core, 400sqmm, aluminium UG cable kits for 3core (set)	Set	32.00			
1.4	Erection of Outdoor termination kits Heat Shrinkable type suitable for 11kV, 3Core, 400sqmm, aluminium UG cable kits for 3core (set)	Set	42.00			
1.5	Erection, Testing & Commissioning, Installation, Laying, Commissioning, Testing of 11kV, 3core, 1Run, 400sqmm, aluminium, XLPE insulation armoured (extruded type) UG cable in HDD method with HDPE pipe (160mm dia, PN8 PE80) for laying of individual run of UG cable at main road and unaccessable place.	Mtr	1000.00			
1.6	Laying of 160mm dia PE 80-PN8, HDPE pipe inside open trench.	Mtr	8504.00			
2	Erection, Commissioning, Wiring and Testing of 11kV RMU					
2.1	Erection of 11kV RMU 3 Way, 2 Iso & 1 Brk 630A (LLV)	No's.	3.00			
2.2	Erection of 11kV RMU 4 Way, 2 Iso & 2 Brk 630A (LLVV)	No's.	2.00			
3	Earthing					
3.1	Earthing Conductor: 50X6 mm (2.4kg./mtr.) GI Flat for equipment, structure etc.)	KG	66.00			
3.2	Pipe Earthing 40mm. GI Pipe	Nos.	10			

4	Erection of Standard FRTU 4Way with FRTU networking Equipment consisting of Fibre Optic switch (Mono mode along wilh associate LIU unit for connection of FO Cable. for 3 Way & 4 way RMU.	Nos.	5				
4	Erection, Testing & Commissioning of GI PC '+6' EHT Tower for River crossing including all types of materials, as per technical specification and scope of work.						
1	GI PC '+6' Tower super structure G.I (Main + Extention +Stub + Template), as per technical specification and scope of work.						
i)	PC Tower	MT	12.43				
ii)	'+6' Mtr. Extention	MT	4.68				
iii)	Template	MT	3.81				
2	GI Nut, Bolt & Washer of different sizes, as per technical specification and scope of work.						
i)	PC Tower	MT	3.31				
ii)	'+6' Mtr. Extention	MT	1.18				
3	Erection, Testing & Commissioning of Conductor and Accessories, as per technical specification and scope of work.						
i	232 mm2 AAAC, as per technical specification and scope of work.	Km	0.46				
ii	Earth wire 7/1.5 G.I, as per technical specification and scope of work.	Km	0.15				
iii	Double tension Hardware Fittings suitable for Conductor size.	Set	24				
iv	Disc insulator (B&S) 120 KN polymer type.	No's.	48				
v	Tension fittings suitable for Earth wire.	Set	4				
vi.	Vibration damper suitable for earth wire	No's.	4				
vii.	Vibration damper suitable for conductor size.	No's.	24				
viii	Copper flexible bond	No's.	2				
ix	Phase Plate (R,Y,B)	Set	12				
х	GI Tower Number Plate	No's.	4				
	•	•			•	•	•

		ı			1	
xi	Circuit Plate	No's.	4			
xii	Earthing Device & Associated Accessories (Heavy duty GI Perforated Pipe of ID=40mm & OD=50mm with 3000mm long for treated Earth Pit), as per technical specification and scope of work.	No's.	4			
xiii	Earthing Conductor: 50X6 mm (2.4Kg./Mtr.) GI Flat for Raiser from the burial earth mat to equipment, structure etc), as per technical specification and scope of work.	KG	200.00			
xiv	GI Danger Board	No's.	4			
XV	Bird Guard	No's.	24			
xvi	Anticlimbing Device (G.I)	KG	211.20			
xvii	Loop Connector	No's.	37			
5	Civil Works Incluing Supply of All Materials Like Cement, MS tor Rod, Brick, Coarse & Fine Agregrates & Labour, T&P etc.; for Construction of 33kV Line.					
1	Civil Works for Construction of 33kV OH Line, as per technical specification and scope of work.					
1.1	Detail Survey of 11kV lines profile plotting, pole spotting and preparation of pole schedule, as per technical specification and scope of work.	Km	235			
1.2	Excavation of Earth for 11 Mtr. long poles pit. (1000mm X 500mm X 1875mm) = 0.94 Cu.mtr.), as per technical specification and scope of work.	Cum	4241			
1.3	Concreting of poles in ratio 1:1.5:3 (500mmX500mmX1800mm) = 0.45 Cu.mtr, as per technical specification and scope of work.	Cum	2030			
1.4	Couping of poles in ratio 1:1.5:3 with dimension (500X500X450)= 0.1125 Cu mtr, as per technical specification and scope of work.	Cum	508			
1.5	Fixing of stay set with 0.5Cum cement concrete foundation PCC 1:3:6 size (900mmx600mmx900mm) using 40mm BHG metal with all labor and material, including excavation and required backfilling, as per technical specification and scope of work.	No's.	1226			
1.6	Dismantling of Poles with Accessories and h&w and return to store	No's.	126			
1.7	Dismantling of Line Conductor with all accessorise and return to store	Km	97			
2	Civil Works for Construction of 33kV Line on UG Cable, as per technical specification and scope of work.					
2.1	Earth work excavation of soil (1mtr. width X 1.2 mtr. depth)	Cum	3010			
2.2	Earth work excavation of hard rock (1mtr. width X 1.2 mtr. depth)	Cum	1290			
2.3	Back filling with excavated soil outside and above the trench	Cum	4300			

2.4	Damage of asphalt/tar road and other utilities and reconstructing to bring to its original shape after laying of cable in open trench (1mtr. width)	Mtr	2060			
3	Civil Works for 33kV RMU, as per technical specification and scope of work.					
3.1	Prefabricated RCC foundation of 33kV RMU	No's.	5			
3.2	Erection of Galvanised Fencing around each RMU with height 2 mtr for external protection including supply of the same	Sq. mtr.	40			
4	Making of earth chamber with brick masonary (1:5), PCC (1:4:8) and with 50mm thick RCC Slab (with 8mm rod) cover for earth pit of size 450mmX450mm X600 mm depth as per direction of Engg in Charge.	No's.	10			
5	Supply and erection of GI Pipe of dia. 150mm, Class-B (8Mtr.)	Mtr	336			
6	Supply and Erection of Cable Route Marker along the cable route at an interval of 30mtrs with civil works	No's.	162			
7	Civil Work for PC '+6' EHT Tower, as per technical specification and scope of work.					
7.1	Detail Survey of lines profile plotting, spotting and marking, as per technical specification and scope of work.	No's.	2			
7.2	Excavation with back filling in all types of soil for PC + 6 Tower , including de- watering, Shoring & Shuttering	Cum	440			
7.3	PCC (1:3:6) for PC + 6 Tower with cement, including de- watering, Shoring & Shuttering including supply of Materials	Cum	0			
7.4	PCC (1:3:6) for Tower Foundation as blind layer (1Cum for 1tower) including supply of Materials	Cum	2			
7.5	PCC (1:2:4) for Tower Foundation as blind layer (1Cum for 1tower) Per Tower= 1Cum including supply of Materials	Cum	2			
7.6	RCC (1:1.5:3) for PC + 6 Tower with cement & with tor rod including setting of stub by providing required templets with proper alignment including de-watering. including supply of Materials	Cum	88			
TOTA	L OF ERECTION & CIVIL WORKS COMPONENT OF THE WORKS CONTRACT FOR 11kV LINE (Rs.)					