

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)									
Engineering, Supply, Erection and Commissioning of 33/11 kV Sub-Stations, 33kV, 11kV, LT Lines, LVRT and DTR with associated 11kV Interlinking Lines Under CMPDP									
Supply of Materials Required for Construction of 33kV line									
NOTICE INVITING TENDER- NIT NO- TPCODL/P&S/1000000364/2023-24, Date:05.04.2023									
SL. No.	DESCRIPTION OF ITEMS			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)
	SUPPLY OF FOLLOWING EQUIPMENTS/ MATERIALS (As per technical specification and scope of work.)			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				
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, 0.59Kg/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 = (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	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, 0.59Kg/Mtr. Flat of 0.510mtr 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, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	2584.13			
8	33KV pin insulator polymer	No's.	6441			
9	Earthing of Support (Coil Type)	No's.	2147			
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.					
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)	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.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	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)	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			
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, 0.59Kg/Mtr. Flat of 0.510mtr 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, 0.59Kg/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			
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, 0.59Kg/Mtr. Flat of 0.510mtr 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			
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, 0.59Kg/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				
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.						
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, 0.59Kg/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			

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, 0.59Kg/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 PI(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				
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr 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 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	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, 0.59Kg/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				
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, 0.59Kg/Mtr. Flat of 0.510mtr 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			
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	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 PI(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 Station transformer)	Set	2.00			
32	33kV HG Fuse with horn gap, as per technical specification and scope of work. (For Station 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, 0.59Kg/Mtr. Flat of 0.510mtr 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, 0.59Kg/Mtr. Flat of 0.510mtr 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, 0.59Kg/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			
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, 0.59Kg/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				
7	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr 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	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				
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr 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, 0.59Kg/Mtr. Flat of 0.510mtr 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, 0.59Kg/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				
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, 0.59Kg/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				
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, 0.59Kg/Mtr. Flat of 0.510mtr 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				
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, 0.59Kg/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				
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, 0.59Kg/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 (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, 0.59Kg/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				
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				
7	Supply of Material for 33kV Line on 1CX 630sqmm UG Cable, as per technical specification and 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 with associate LIU 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				
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 with associate LIU 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 mm ² 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				
x	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				
TOTAL OF SUPPLY COMPONENT OF THE WORKS CONTRACT FOR 33kV LINE (Rs.)							

Tata Power Central Odisha Distribution Limited (TPCODL)								
Engineering, Supply, Erection and Commissioning of 33/11 kV Sub-Stations, 33kV, 11kV,								
Erection, Civil & Services of Equipment/Materials Required for Construction of 33kV line								
NOTICE INVITING TENDER- NIT NO- TPCODL/P&S/1000000364/2023-24,								
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			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 '4' 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, 0.59Kg/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					
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 PI(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 = (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	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, 0.59Kg/Mtr. Flat of 0.510mtr 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, 0.59Kg/Mtr. Flat of 0.510mtr length 4 no's = (4x0.59x0.510)	KG	2584.13				
8	33KV pin insulator polymer	No's.	6441				

9	Earthing of Support (Coil Type)	No's.	2147					
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	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)	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.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	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)	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					
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, 0.59Kg/Mtr. Flat of 0.510mtr 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, 0.59Kg/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 PI(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, 0.59Kg/Mtr. Flat of 0.510mtr 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						
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, 0.59Kg/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						
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, 0.59Kg/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					
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, 0.59Kg/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 PI(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					
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr 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 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	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, 0.59Kg/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					
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, 0.59Kg/Mtr. Flat of 0.510mtr 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	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, 0.59Kg/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					
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	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 PI(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 Station transformer)	Set	2.00				
32	33kV HG Fuse with horn gap, as per technical specification and scope of work. (For Station 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, 0.59Kg/Mtr. Flat of 0.510mtr 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, 0.59Kg/Mtr. Flat of 0.510mtr 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, 0.59Kg/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				

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, 0.59Kg/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					
7	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr 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, 0.59Kg/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					
8	Back Clamp for anticlimbing device 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr 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, 0.59Kg/Mtr. Flat of 0.510mtr 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, 0.59Kg/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	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, 0.59Kg/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					
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, 0.59Kg/Mtr. Flat of 0.510mtr 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 PI(Polymer)	Set	2				
24	33 KV 1250 AMP Double break (Turn & twist center rotating) isolator with earth switch with PI(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				

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, 0.59Kg/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					
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, 0.59Kg/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 (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, 0.59Kg/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					

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					
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 (extruded 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 (extruded 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 unaccessible 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 with associate LIU unit for connection of FO Cable. for 3 Way & 4 way RMU.	No's.	8					

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 (extruded 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 with associate LIU 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 + Extension +Stub + Template), as per technical specification and scope of work.							
i)	PC Tower	MT	49.71					
ii)	'+6' Mtr. Extension	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 mm ² 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					
x	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					

10	Civil Works Including 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 masonry (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 de-watering, 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					
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)											
Engineering, Supply, Erection and Commissioning of 33/11 kV Sub-Stations, 33kV, 11kV, LT Lines, LVRT and DTR with associated 11kV Interlinking Lines Under CMPDP											
Supply of Materials Required for Construction of 11kV line											
NOTICE INVITING TENDER- NIT NO- TPCODL/P&S/1000000364/2023-24, Date:05.04.2023											
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				
10	H.T. Stay Insulator Type-C	Nos.	522				
11	7/10 SWG Stay Wire 15kg /stay	KG	7830.00				
12	Gi Pipe Earthing 40mm. 3 Mtr. Long	Nos.	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	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							
1	WPB 160x152 (11Mtr. Long, 30.44KG/Mtr.)	Nos.	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.	Nos.	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	Nos.	258				
14	7/10 SWG Stay Wire 15kg /stay	KG	3870.00				
15	Gi Pipe Earthing 40mm. 3 Mtr. Long	Nos.	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	Nos.	387				
22	H W fitting(B&S) 70KN, 3Bolt	Nos.	810				
23	Disc insulator (B&S) 70 KN polymer	Nos.	810				
24	PG Clamp for 100 sq.mm AAA conductor	Nos.	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.)	Nos.	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.	Nos.	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	Nos.	567				
10	H W fitting(B&S) 70KN, 3Bolt	Nos.	1134				
11	Disc insulator (B&S) 70 KN polymer	Nos.	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	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 required =(4x9.56x0.306)	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				
11	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				
17	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				
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.	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				
9	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				
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	Nos.	32				
14	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 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 with 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				
x	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				
TOTAL OF SUPPLY COMPONENT OF THE WORKS CONTRACT FOR 11kV LINE (Rs.)							

Tata Power Central Odisha Distribution Limited (TPCODL)											
Engineering, Supply, Erection and Commissioning of 33/11 kV Sub-Stations, 33kV, 11kV, LT Lines, LVRT and DTR with associated 11kV Interlinking Lines Under CMPDP											
Supply of Materials Required for Construction of 11kV line											
NOTICE INVITING TENDER- NIT NO- TPCODL/P&S/1000000364/2023-24, Date:05.04.2023											
SL. No.	DESCRIPTION OF ITEMS				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.)
	ERECTION, TESTING & COMMISSIONING INCLUDING CIVIL WORKS OF FOLLOWING EQUIPMENTS (As per technical specification and scope of work.)				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						

21	11 KV pin insulator polymer	No's.	48					
22	H W fitting(B&S) 70KN, 3Bolt	No's.	96					
23	Disc insulator (B&S) 70 KN polymer	No's.	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)	No's.	48					
26	IPC for 99 sq.mm AAA conductor (For covered conductor)	No's.	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.)	No's.	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.	No's.	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	No's.	69					
10	H W fitting(B&S) 70KN, 3Bolt	No's.	138					
11	Disc insulator (B&S) 70 KN polymer	No's.	138					

12	Spike (GI) (using 50x6mm Flat welded with 8 mm square bar) (2 Nos of spike per Set in each Pole)	Set	46					
13	Non Metallic Ties 11KV (For covered conductor)	No's.	69					
14	IPC for 99 sq.mm AAA conductor (For covered conductor)	No's.	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.)	No's.	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.	No's.	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	No's.	96					
10	H W fitting(B&S) 70KN, 3Bolt	No's.	144					
11	Disc insulator (B&S) 70 KN polymer	No's.	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)	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 unaccessible 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 with 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					
x	GI Tower Number Plate	No's.	4					

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 Including 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 masonry (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					
TOTAL OF ERECTION & CIVIL WORKS COMPONENT OF THE WORKS CONTRACT FOR 11kV LINE (Rs.)								