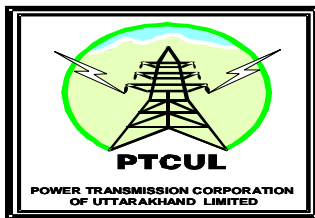


RATE SCHEDULE

(2010-2011)

SUBSTATIONS & LINES



POWER TRANSMISSION CORPORATION OF UTTARAKHAND LTD

Vidyut Bhawan, Near ISBT Crossing, Majra, Dehra Dun,

Uttarakhand, India

POWER TRANSMISSION CORPORATION OF UTTARAKHAND LTD.

For bringing uniformity, more optimality and less deviation in the costs of different estimates a Rate Schedule is essentially required for estimation purpose. There fore a Committee has been formed by MD (PTCUL) vide Note and Order **No.1195/MD/PTCUL/Approval Dated 28/08/2009**, for the finalization of Rate Schedule. This Committee Headed by GM(Project) comprises of DGM(Civil), DGM(Engg), DGM(C&P) and DGM(PI).

Committee For The Rate Schedule Finalization:

1.Er.D.N.Joshi	GM(Project)	Chairman
2.Er.D.K.Gaur	DGM(Civil)	Member
3.Er.S.Bhatnagar	DGM(Engg-I)	Member
4.Er.Vikas Sharma	DGM(C&P)	Member
5.Er.AjayAggarwal	DGM(PI)	Member

The rates of the items mentioned in Rate Schedule of Substations and Lines has been deliberated by taking the rates Quoted in the Tenders awarded for the construction of different Substation and Lines in PTCUL. The rates Quoted in different tenders were duly discussed and finalized by the Chairman and members of the Committee during the meetings held time to time for finalization of rates of Substation and Lines.The rates in the Rate Schedule are approved for the plains in Uttarakhand and additional hill index shall be applicable to the rates as mentioned in **Annexure- I.**

POWER TRANSMISSION CORPORATION OF UTTARAKHAND LTD.

PRICE SCHEDULE FOR 132 KV SUBSTATION:A

SUPPLY:

S.No.	Item Description	Unit	Amount in (Rs.)
1	Transformer		
a	40 MVA 132/33 KV	No.	22,000,000.00
b	630 KVA 33/0.4 KV	No.	700,000.00
2	132 KV Equipment		
a	Circuit Breaker for T/F & TBC	No.	600,000.00
b	Circuit breaker for Line	No.	600,000.00
c	CT-800/400/1 (3 core)A, 1-Ph with JB	No.	120,000.00
d	CT-200/100/1 (3 core)A, 1-Ph with JB	No.	120,000.00
e	C.V.T. 1-Ph with JB	No.	190,000.00
f	Lighting Arrestor - 1 Ph	No.	34,000.00
g	Bus Isolator with solid core insulators with mettalics	No.	200,000.00
h	Tandom Isolator with solid core insulators with mettalics	No.	210,000.00
i	Line Isolator with solid core insulators with mettalics	No.	265,000.00
j	145 KV Bus post Insulator	No.	10,500.00
k	145 KV Support Insulator for Wave trap	No.	10,500.00
3	33 KV Equipments		
a	Circuit breaker	No.	270,000.00
b	CT-800/400/1 (3 core)A, 1-Ph with JB	No.	35,000.00
c	CT-400/200/1 (3 core)A, 1-Ph with JB	No.	35,000.00
d	Potential Transformer 1 Phase with JB	No.	26,000.00
e	Lighting Arrestor - 1 Ph	No.	9,000.00
f	Bus Isolator	No.	40,000.00
g	Line Isolator	No.	50,000.00
4	PVC cable		
a	2.5 x 10 core	Km.	145,000.00
b	2.5mm x 6 core	Km.	100,000.00
c	2.5mm x 4 core	Km.	70,000.00
d	2.5mm x 2 core	Km.	50,000.00
e	L.T. Cable		
f	31/2 x 400 mm	Km.	780,000.00
g	31/2 x 70 mm	Km.	175,000.00
h	BMK	No.	50,000.00
i	Lighting JB using MCB	No.	30,000.00
5	Fabricated Galvanized Structure	MT	65,000.00

S.No.	Item Description	Unit	Amount in Rs.
6	Control Panel		
a	132 KV Single Feeder control and Distance Protection relay panel with energy meter	No.	550,000.00
b	Transformer control and relay Panel 132/33 KV System	No.	850,000.00
c	TBC Panel 132 KV	No.	285,000.00
d	33 KV Tripple feeder Panel with energy meter on each feeder	No.	640,000.00
7	A.C. board	No.	180,000.00
a	110V, 500AH Battery set, Charger &		
b	110 V Charger & DCDB	Set	180,000.00
c	110 V, 500AH Battery	Set	260,000.00
d	48 Volt 300 AH Battery set, charger &		
e	48 V Charger & DCDB	Set	100,000.00
f	48 V, 300AH Battery	Set	120,000.00
8	33 KV fuse set	Set	12,000.00
a	Fire Fighting Equipments		
b	45 Ltr. Foam Type	No.	6,000.00
c	20 Kg Co2 Type	No.	14,000.00
d	2 Kg Co2 Type	No.	2,000.00
e	6 Fire Bucket with stand	Set	1,100.00
f	Sand Drum (half size) filled with sand	No.	600.00
g	Fire Hut at sand pit	Set	2,500.00
h	Lighting Arrangement		
i	SY Lighting Points HPSV Lamp 250 W		7,600.00
j	Control Room Lighting points roof type D/tubes suspension fitting	No.	5,000.00
9	Bus bar material and Insulator		
a	Bolted Type Tension Fitting for ACSR Zebra/Moose conductor	No.	2,500.00
b	Bolted Type Tension Fitting for ACSR 'Tarantulla' conductor	No.	2,800.00
c	Bolted Type Tension Fitting for ACSR Panther	No.	2,400.00
d	Suspension fitting for ACSR 'Zebra'	No.	1,800.00
e	Suspension fitting for ACSR 'Panther'	No.	1,800.00
f	ACSR 'Zebra' Conductor	Km.	235,000.00
g	ACSR 'Panther' Conductor	Km.	135,000.00
h	ACSR 'Tarantulla' Conductor	Km.	370,000.00
i	Disc Insulator 70 KN	No.	400.00
j	22 KV Post Insulator	No.	600.00

S.No.	Item Description	Unit	Amount in (Rs.)
10	Earthing Material		
a	MS Round 36 mm dia	MT	40,000.00
b	MS Flat 50 x 6 mm	MT	40,000.00
11	PLCC		
a	PLCC Equipment including Wave Trap (P.P.)	Set	225,000.00
b	LMU	No.	70,000.00
c	HF Cable	Km.	100,000.00
d	Telephone set	No.	1,000.00
e	Carrier cabinet	No.	295,000.00

PRICE SCHEDULE FOR 132 KV SUBSTATION:**ERECTION:**

S.No.	Description of Works	Unit	Amount in (Rs.)
1	Transformer including foundation		
a	40 MVA 132/33 KV	No.	420,000.00
b	630 KVA 33/0.4 KV	No.	30,000.00
2	132 KV Equipment excluding foundation		
a	Circuit Breaker for T/F & TBC	No.	8,000.00
b	Circuit breaker for Line	No.	8,000.00
c	CT-800/400/1 (3 core)A, 1-Ph with JB	No.	3,000.00
d	CT-200/100/1 (3 core)A, 1-Ph with JB	No.	3,000.00
e	C.V.T. 1-Ph with JB	No.	3,000.00
f	Lighting Arrestor - 1 Ph	No.	2,000.00
g	Bus Isolator with solid core insulators with mettalics	No.	9,000.00
h	Random isolator with solid core insulators with mettalics	No.	9,000.00
i	Line Isolator with solid core insulators with mettalics	No.	9,000.00
j	145 KV Bus post Insulator	No.	1,500.00
k	145 KV Support Insulator for Wave trap	No.	1,500.00
3	33 KV Equipments excluding foundation		
a	Circuit breaker	No.	5,000.00
b	CT-800/400/1 (3 core)A, 1-Ph with JB	No.	1,200.00
c	CT-400/200/1 (3 core)A, 1-Ph with JB	No.	1,200.00
d	Potential Transformer 1 Phase with JB	No.	1,200.00
e	Lighting Arrestor - 1 Ph	No.	1,000.00
f	Bus Isolator	No.	5,000.00
g	Line Isolator	No.	5,000.00
4	PVC cable Laying		
a	2.5 x 10 core	Km.	15,000.00
b	2.5mm x 6 core	Km.	12,000.00
c	2.5mm x 4 core	Km.	10,000.00
d	2.5mm x 2 core	Km.	8,000.00
e	L.T. Cable Laying		
f	31/2 x 400 mm	Km.	45,000.00
g	31/2 x 70 mm	Km.	40,000.00
h	BMK	No.	5,000.00
i	Lighting JB	No.	2,000.00
5	Main and Auxillary structure, Bolts and Nuts	MT	5,000.00

S.No.	Description of Works	Unit	Amount in Rs.
6	Control Panel		
a	132 KV Single Feeder control and Distance Protection relay panel with energy meter	No.	10,000.00
b	Transformer control and relay Panel 132/33 KV System	No.	10,000.00
c	TBC Panel 132 KV	No.	10,000.00
d	33 KV Tripple feeder Panel with energy meter on each feeder	No.	10,000.00
7	A.C. board	No.	6,000.00
a	110V, 500AH Battery set, Charger		
b	110 V Charger & DCDB	Set	4,000.00
c	110 V, 500AH Battery	Set	6,000.00
d	48 Volt 300 AH Battery set, charger		
e	48 V Charger & DCDB	Set	4,000.00
f	48 V, 300AH Battery	Set	5,000.00
8	33 KV fuse set	Set	1,000.00
a	Fire Fighting Equipments		
b	45 Ltr. Foam Type	No.	100.00
c	20 Kg Co2 Type	No.	100.00
d	2 Kg Co2 Type	No.	100.00
e	6 Fire Bucket with sand	Set	100.00
f	Sand Drum (half size) filled with sand	No.	100.00
g	Fire Hut at sand pit	Set	1,000.00
h	Lighting Arrangement		
i	SY Lighting Points HPSV Lamp 250 W including Lamp & Cable	No.	1,200.00
j	Control Room Lighting points roof type D/tubes suspension fitting	No.	1,200.00
9	Bus bar material and Insulator		
a	Bolted Type Tension Fitting for ACSR Zebra/Moose conductor	No.	500.00
b	Bolted Type Tension Fitting for ACSR 'Tarantulla' conductor	No.	500.00
c	Bolted Type Tension Fitting for ACSR Panther	No.	500.00
d	Suspension fitting for ACSR 'Zebra'	No.	500.00
e	Suspension fitting for ACSR 'Panther'	No.	500.00
f	ACSR 'Zebra' Conductor	Mtr	50.00
g	ACSR 'Panther' Conductor	Mtr	50.00
h	ACSR 'Tarantulla' Conductor	Mtr	50.00
i	Disc Insulator 70 KN	No.	20.00
j	22 KV Post Insulator	No.	30.00

S.No.	Description of Works	Unit	Amount in Rs.
10	Earthing Material		
a	MS Round 36 mm dia	MT	10,000.00
b	MS Flat 50 x 6 mm	MT	10,000.00
11	PLCC		
a	PLCC Equipment including Wave Trap (P.P.), Telephone set & Carrier cabinet	Set	20,000.00
b	LMU	No.	500.00
c	HF Cable	Km.	10,000.00

POWER TRANSMISSION CORPORATION OF UTTARAKHAND LTD.

PRICE SCHEDULE FOR 220 KV SUBSTATION: (Excluding 132 KV & 33 KV Portion as per price schedule A)

SUPPLY:

S. No.	Item Description	Unit	Amount in Rs.
1	Transformer		
a	160 MVA 220/132 KV Transformer	Nos.	7500000.00
b	80 MVA 132/33 KV Transformer	Nos.	4500000.00
2	245 KV Equipment		
a	245 KV circuit breakers (3 Ph.) 2500A,40 KA	Nos.	1650000.00
b	245 KV (5 Core) Current Transformer(1 Ph.)For line,BC,TBC(Dead tank Type)	Nos.	365000.00
c	245 KV (5 Core) Current Transformer (1 Ph.) For Transformer(Dead tank Type)	Nos.	365000.00
d	245 KV Capacitive Voltage Transformer (1 Ph.) 4400pF	Nos.	365000.00
e	245 KV (3-phase) (Horizontal Double break) 1600A, 40 KA, isolator with E/S	Nos.	350000.00
f	245 KV (3-phase) (Horizontal Double break) 1600A, 40 KA, isolator without E/S	Nos.	300000.00
g	245 KV (3-phase) (Horizontal Double break) 1600A, 40KA, Isolator without E/S (Tandem)	Nos.	300000.00
h	198 KV Surge Arrestors(gap Less)	Nos.	80000.00
i	245 KV Bus Post Insulators	Nos.	20000.00
3	Hardware for 220 KV Bays & Busbar Insulator strings, Disc Insulators, Hardware, conductor & AL pipes, bus-bar material, cable trays, Bay MB, clamps, connectors, earthwire, earthing material etc. for the following:		
a	Line bay	Sets.	600000.00
b	Transformer Bay	Sets.	600000.00
c	Transfer Bus Coupler Bay	Sets.	450000.00
d	Bus Coupler Bay	Sets.	450000.00
e	Bus Works (for three Bus)	Sets.	1200000.00
4	220 KV Control and Relay panel		
a	Line Control Panel With Auto Reclose	Nos.	240000.00
b	Transformer Control Panel With out Auto Reclose	Nos.	240000.00
c	Line Relay Panel (Main 1+Main 2)(Numerical Relay compatible with SCADA Panel)	Nos.	1500000.00
d	Bus Bar Protection Panel		
i)	220 KV (Single bus bar protection) Panel	Set	1500000.00
e	Transformer Relay Panel	Nos.	600000.00
5	PLCC for 220 KV Line feeder		
a	Protection Coupler(4 Command)	Nos.	100000.00
b	EPAX (24/8) with 24 telephones, cables etc.	Set	200000.00
6	Batteries and charger		
a	Batteries220V,500AH	Set	550000.00
b	Battery Charger System+DCDB,220V (60 A/60 A)	Nos.	300000.00
7	DG Set along with control panel (250 kVA)	Set	1500000.00
8	High Wall split type 2 T capacity Conditioner	Nos	35000.00
9	Fire Protection System		
a	Nitrogen Injection Fire protection System	Set	1000000.00

POWER TRANSMISSION CORPORATION OF UTTARAKHAND LTD.

PRICE SCHEDULE FOR 220 KV SUBSTATION: (Excluding 132 KV & 33 KV Portion as per price schedule A)

ERECTION:

S. No.	Item Description	Unit	Amount in Rs.	Amount in Rs.
1	Transformer including Foundation			
a	160 MVA 220/132 KV Transformer	Nos.	180000.00	
b	80 MVA 132/33 KV Transformer	Nos.	80000.00	
2	245kV Equipment		Equipment Erection Including Foundation	Equipment Erection Excluding Foundation
a	245 KV circuit breakers (3 Ph.) 2500A,40KA	Nos.	45000.00	15000.00
b	245 KV (5 Core) Current Transformer (1 Ph.)For line,BC,TBC(Dead tank Type)	Nos.	20000.00	5000.00
c	245 KV (5 Core) Current Transformer (1 Ph.) For Transformer(Dead tank Type)	Nos.	20000.00	5000.00
d	245 KV Capacitive Voltage Transformer (1 Ph.) 4400pF	Nos.	20000.00	5000.00
e	245 KV (3-phase) (Horizontal Double break) 1600A, 40 KA, isolator with E/S	Nos.	50000.00	10000.00
f	245 KV (3-phase) (Horizontal Double break) 1600A, 40 KA, isolator without E/S	Nos.	50000.00	10000.00
g	245 KV (3-phase) (Horizontal Double break) 1600A, 40KA, Isolator without E/S (Tandem)	Nos.	50000.00	10000.00
h	198 KV Surge Arrestors	Nos.	18000.00	4000.00
i	245 kV Bus Post Insulators	Nos.	18000.00	4000.00
3	Hardware for 220 KV Bays & Busbar Insulator strings, Disc Insulators, Hardware, conductor & AL pipes, bus-bar material, cable trays, Bay MB, clamps, connectors, earthwire, earthing material etc. for the following			
a	Line bay	Sets.	30000.00	
b	Transformer Bay	Sets.	30000.00	
c	Transfer Bus Coupler Bay	Sets.	30000.00	
d	Bus Coupler Bay	Sets.	30000.00	
e	Bus Works (for three Bus)	Sets.	75000.00	
4	220 KV Control and Relay panel			
a	Line Control Panel With Auto Reclose	Nos.	10000.00	
b	Transformer Control Panel With out Auto Reclose	Nos.	10000.00	
c	Line Relay Panel (Main 1+Main 2)(Numerical Relay compatible with SCADA Panel)	Nos.	10000.00	
d	Bus Bar Protection Panel			
i)	220 KV (Single bus bar protection) Panel	Set	10000.00	
e	Transformer Relay Panel	Nos.	10000.00	
5	PLCC for 220 KV Line feeder			
a	Protection Coupler(4 Command)	Nos.	2000.00	
b	EPAX (24/8) with 24 telephones, cables etc.	Set	5000.00	
6	Batteries and charger			
a	Batteries,220V,500AH	Set	12000.00	
b	Battery Charger System+DCDB,220V (60 A/60 A)	Nos.	4000.00	
7	DG Set along with control panel (250 kVA) including Plinth	Set	25000.00	
8	High Wall split type 2 T capacity Conditioner	Nos	1000.00	
9	Fire Protection System			
a	Nitrogen Injection Fire protection System	Set	included in Transformer Erection	

**POWER TRANSMISSION CORPORATION OF UTTARAKHAND LTD.
PRICE SCHEDULE FOR 132 /220/400 KV LINES**

SUPPLY:			
S.No.	Item Description	Unit	Amount in Rs.
1	Counterpoise Type(set of 4 No. for each tower)	Sets	7000.00
2	Pipe type(set of 2 No. for each tower)	Sets	5000.00
3	Danger Plate	Nos.	300.00
4	Number Plate	Nos.	300.00
5	Phase plate (set of three)	Sets	300.00
6	Circuit plate (set of two)	Sets	300.00
7	Anti-climbing device barbed wire type	Sets	7000.00
8	Bird Guard	Nos.	350.00
9	Conductor:		
(i)	ACSR Bersimis	KM	420000.00
(ii)	ACSR Moose	KM	350000.00
(iii)	ACSR Zebra	KM	275000.00
(iv)	ACSR Panther	KM	150000.00
(v)	GS Earthwire-7/3.66 mm or 7/9 SWG	KM	53000.00
(vi)	GS Earthwire-7/3.15 mm or 7/10 SWG	KM	40000.00
10	Insulators:		
(i)	160 KN standard Disc insulators	Nos.	1300.00
(ii)	120 KN standard Disc insulators	Nos.	900.00
(iii)	90 KN standard Disc insulators	Nos.	850.00
(iv)	70 KN standard Disc insulators	Nos.	750.00
11	Tension Fittings for conductor:		
(i)	Single Tension fitting (160 KN) Quad Bersimis	Sets	53935.00
(ii)	Single Tension fitting (160 KN) Quad Moose	Sets	44946.00
(iii)	Single Tension fitting (160 KN) Triad Moose	Sets	34574.00
(iv)	Single Tension fitting (160 KN) Twin Moose	Sets	27659.00
(v)	Single Tension fitting (160 KN) Quad Zebra	Sets	33710.00
(vi)	Single Tension fitting (160 KN) Twin Zebra	Sets	20744.00
(vii)	Single Tension fitting (160 KN) Single Zebra	Sets	3700.00
(viii)	Single Tension fitting (160 KN) for Panther	Sets	3000.00
(ix)	Double Tension fitting (160 KN) Twin Moose	Sets	45638.00
(x)	Double Tension fitting (160 KN) for Panther	Sets	5000.00

S.No.	Item Description	Unit	Amount in Rs.
12	Tension/Suspension Fittings for Earthwire:		
(i)	Tension fitting for GS Earthwire-7/3.15 mm or 7/10 SWG	Sets	800.00
(ii)	Suspension fitting for GS Earthwire-7/3.15 mm or 7/10 SWG	Sets	800.00
(iii)	Tension fitting for GS Earthwire-7/3.66 mm or 7/9 SWG	Sets	1100.00
(iv)	Suspension fitting for GS Earthwire-7/3.66 mm or 7/9 SWG	Sets	1100.00
13	Suspension Fittings for conductor:		
(i)	Single I Suspension fitting (120KN) for Quad Bersimis	Sets	17938.00
(ii)	Single I Suspension fitting (120KN) for Quad Moose	Sets	14949.00
(iii)	Single I Suspension fitting (120KN) for Triad Moose	Sets	11499.00
(iv)	Single I Suspension fitting (120KN) for Twin Moose	Sets	9199.00
(v)	Single I Suspension fitting (120KN) for Quad Zebra	Sets	11212.00
(vi)	Single I Suspension fitting (120KN) for Twin Zebra	Sets	6899.00
(vii)	Single I Suspension fitting (120KN) for Single Zebra	Sets	5175.00
(viii)	Single I Suspension fitting (120KN) for Panther	Sets	2500.00
14	Pilot fitting:		
(i)	Pilot fitting for 160KN	Sets	4320.00
(ii)	Pilot fitting for 120KN	Sets	3510.00
(iii)	Pilot fitting for 90KN	Sets	2700.00
(iv)	Pilot fitting for 70KN	Sets	2160.00
15	Mid span compression joint for conductor:		
(i)	Mid span compression joint for ACSR Bersimis	Nos.	1253.00
(ii)	Mid span compression joint for ACSR Moose	Nos.	1044.00
(iii)	Mid span compression joint for ACSR Zebra	Nos.	1250.00
(iv)	Mid span compression joint for ACSR Panther	Nos.	1000.00
16	Mid span compression joint for Earthwire:		
(i)	Midspan compression joint for 7/3.66 mm GS Earthwire or 7/9 SWG	Nos.	500.00
(ii)	Midspan compression joint for 7/3.15 mm GS Earthwire or 7/10 SWG	Nos.	400.00
17	Repair sleeve:		
(i)	Repair sleeve for ACSR Bersimis	Nos.	900.00
(ii)	Repair sleeve for ACSR Moose	Nos.	750.00
(iii)	Repair sleeve for ACSR Zebra	Nos.	600.00
(iv)	Repair sleeve for ACSR Panther	Nos.	300.00

S.No.	Item Description	Unit	Amount in Rs
18	Flexlibl copper Bonds:		
(i)	Flexlibl copper Bonds for Panther	Nos.	750.00
(ii)	Flexlibl copper Bonds for Zebra	Nos.	937.50
19	Bundle spacer Damper:		
(i)	Bundle spacer Damper for ACSR Quad Bersimis	Nos.	1415.00
(ii)	Bundle spacer Damper for ACSR Quad Moose	Nos.	1179.00
(iii)	Bundle spacer Damper for ACSR Triad Moose	Nos.	907.00
(iv)	Bundle spacer Damper for ACSR Twin Moose	Nos.	726.00
(v)	Bundle spacer Damper for ACSR Quad Zebra	Nos.	884.00
(vi)	Bundle spacer Damper for ACSR Twin Zebra	Nos.	544.00
20	Vibration Damper:		
(i)	Vibration Damper For Panther Conductor	Nos.	1100.00
(ii)	Vibration Damper For Zebra Conductor	Nos.	1375.00
(iii)	Vibration Damper For 7/3.15 mm GS Earthwire or 7/10 SWG	Nos.	850.00
(iv)	Vibration Damper For 7/3.66 mm GS Earthwire or 7/9 SWG	Nos.	1062.50
21	Rigid spacer:		
(i)	Rigid spacer for ACSR Quad Bersimis	Nos.	643.00
(ii)	Rigid spacer for ACSR Quad Moose	Nos.	536.00
(iii)	Rigid spacer for ACSR Triad Moose	Nos.	412.00
(iv)	Rigid spacer for ACSR Twin Moose	Nos.	330.00
22	Armour Rod For Panther	Nos.	800.00
23	Fabricated Galvanized Structure	MT	75000.00
24	Template of A,B,C Type Tower	MT	56000.00
25	MS Steel Bar	MT	56000.00
26	Span markers	Nos.	6242.00
27	Obstruction lights (to be provided as per IS 5613)		
	1 Medium + 2 low intensity	Sets	327315.00
	1 Medium + 4 low intensity	Sets	409143.00
28	Supply of Wind Measuring Equipment	Sets	80381.00

POWER TRANSMISSION CORPORATION OF UTTARAKHAND LTD.**PRICE SCHEDULE FOR 132 /220/400 KV LINES****ERECTION:**

S.No.	Item Description	Unit	Amount in Rs
1	Soil investigation:		
(i)	Detailed soil investigation in all type of soil.	loc	26446.70
2	Erection of various type of towers, tower parts and tower extension (complete) and leg extension with bolts & nuts including tack welding and supply and application of zinc rich primer and two coats of enamel paints	MT	9550.60
3	Excavation for Tower:		
(i)	Dry (Plains)	Cum	134.00
(ii)	Wet (Plains)	Cum	140.00
(iii)	DFR/SFR (Hills)	Cum	198.00
(iv)	HR (Hills)	Cum	423.00
(v)	P.S(Plains)	Cum	161.00
(vi)	F.S(Plains)	Cum	161.00
4	Benching:		
(i)	SFR/DFR (Hills)	Cum	204.00
(ii)	HR (Hills)	Cum	786.52
5	Protection of Tower Footings (supply and installation):		
(i)	Random rubble stone masonry including excavation (1:5 cement mortar)	Cum.	2391.00
(ii)	M15 (1:2:4) mixed Concrete for top & bottom seal cover of revetment	Cum.	4361.00
(iii)	Back filling and levelling of space enclosed by revetment	Cum.	99.00
(iv)	Stone bound in galvanizing wire netting including excavation	Cum.	1964.00
6	Installation of Earthing of Towers:		
(i)	Counterpoise Type Earthing (set of 4 No. for each tower)	Set	4628.00
(ii)	Pipe Type Earthing (set of 2 No. for each tower)	Set	1655.00
7	Installation of tower accessories:		
(i)	Danger Plate	No.	100.00
(ii)	Number Plate	No.	100.00
(iii)	Phase Plate	Set	100.00
(iv)	Circuit Plate (Set of two)	Set	100.00
(v)	Anti-Climbing Device(barbed wire type)	Set	431.46
(vi)	Birds Guards (set of six)	Set	300.00

S. No.	Item Description	Unit	Amount in Rs
8	Installation of Avation Items:		
(a)	Span markers	No.	3175.29
(b)	Obstruction lights (to be provided as per IS 5613)		
(i)	1 Medium + 2 low intensity	Set	34116.99
(ii)	1 Medium + 4 low intensity	Set	40728.25
9	Painting of Towers (above 45m from ground level)	No.	21157.39
10	Installation of Wind Measuring Equipment:	Set	18513.00
11	Concrete for foundations including all material, shouring and shuttering if any, forming, concreting and curing by water inlcuding cost of cement for 1:1.5:3 mix, concrete	Cum	6245.00
12	Cost of concreting 1:3:6 mix	M ³	3527.00
13	Plaster 1:4	M ²	108.00
14	Cost of concreting 1:4:8 mix	M ³	3184.00
15	Survey:		
(i)	Survey including profiling, tower spotting , optimisation of tower locations, prepration of tower scheduale for 400 KV Line	kms	15867.00
(ii)	Survey including profiling, tower spotting , optimisation of tower locations, prepration of tower scheduale for 220 KV Line	kms	14281.00
(iii)	Survey including profiling, tower spotting , optimisation of tower locations, prepration of tower scheduale for 132 KV Line	kms	11107.00
(iv)	Check Survey including peg marking for 400 KV Line	kms	10579.00
(v)	Check Survey including peg marking for 220 KV Line	kms	10579.00
(vi)	Check Survey including peg marking for 132 KV Line	kms	10579.00
16	Laying, Stringing Tensioning, clamping, jointing etc. complete with single ACSR conductor including hoisting of insulators and fitting of vibration dampers etc. for complete route .		
(i)	400 KV Quad Bersimis Line	kms	808992.00
(ii)	400 KV Quad Moose Line	kms	674160.00
(iii)	400 KV Triad Moose Line	kms	561800.00
(iv)	400 KV Twin Moose Line	kms	449440.00
(v)	220 KV Quad Zebra Line	kms	400000.00
(vi)	220 KV Twin Zebra Line	kms	300000.00
(vii)	220 KV single Zebra Line	kms	200000.00
(viii)	132 KV single Panther Line	kms	97315.00

S.No.	Item Description	Unit	Amount in Rs
17	Laying, Stringing Tensioning, clamping, jointing etc. complete with earth wire including fixing of clamps and all accessories.		
(i)	Laying, Stringing Tensioning, clamping, jointing etc. complete with single earth wire 7/9 SWG including fixing of clamps and all accessories.	kms	7500.00
(ii)	Laying, Stringing Tensioning, clamping, jointing etc. complete with Double earth wire 7/9 SWG including fixing of clamps and all accessories.	KMs	15000.00
(iii)	Laying, Stringing Tensioning, clamping, jointing etc. complete with single earth wire 7/10 SWG including fixing of clamps and all accessories.	KMs	6765.00
18	Tag welding on bolts & nuts on first section of Tower	No.	12000.00

Annexure -I

POWER TRANSMISSION CORPORATION OF UTTARAKHAND LTD.

HILL INDEX

For Substation:

The rates in the Rate Schedule are approved for the plains in Uttarakhand .For hilly terrains **5%** Hill index will be added in the rates for supply of equipments of Substation and **15%** Hill index will be added in the rates of the erection of equipments of Substation.

For Lines:

The rates in the Rate Schedule are approved for the plains in Uttarakhand .For hilly terrains **5%** Hill index will be added in the rates for supply of equipments of lines and **20%** Hill index will be added in the rates of the erection of lines.

