

ABSTRACT**SCHEDULE : Up-gradation of 33/11 kV GIS SUBSTATION AT PELRITHNAG & SARPANGTAR***Figures in BTN/INR*

Sl. No.	Particulars	Amount
1	Price Schedule For Supply & Delivery of Substation Equipment	
2	Price Schedule for Erection, Testing & Commissioning of Substation Equipment	
3	GIS Spare Parts	
4	Civil Foundations	
	Total	

**SCHEDULE 1A: SCHEDULE FOR SUPPLY AND DELIVERY OF SUBSTATION EQUIPMENT
(Pelrithang)**

Sl. No	Description	Unit	Qty	Unit Price (DDP Site)	Total price
			1	2	3=1X2
A	Equipment				
1	33/11 kV, 2.5 MVA power transformer with NCT	No	1		
2	33 kV GIS switchgear with numerical relays, synchro-check relay, meters, CTs, line PTs as per specifications.	Set	5		
a)	630A, VCB - GIS Panel (2 incomer/outgoing, 2 transformer/Out-going and 1 buscoupler)				
b)	PT with under voltage relay in the incomer panel and Buscoupler				
3	11 kV switchgear with numerical relays, CTs, synchro-check relay, etc.	Set	2		
a)	630A, VCB (1 incomer and 1 bus coupler)				
b)	Line PT (to be mounted on incomer panel)				
c)	Bus PT (to be mounted on bus coupler panel)				
4	11 kV Adapter panel/Bus trunking	Set	1		
5	11 kV side entry cable box for bus coupling	Set	2		
B	Cables				
1	HV cables - outdoor and indoor termination kits				
a)	33 kV XLPE cable, 300 sqmm	Mtr	70		
b)	33 kV termination for GIS panel	Set	4		
c)	11 kV termination for AIS panel	Set	5		
2	LV cables, control and instrumentation cables				
a)	Instrumentation Cables with lugs and glands				
	3 C x 2.5 sqmm	Mtr	100		
	5 C x 2.5 sqmm	Mtr	200		
	12 C x 2.5 sqmm	Mtr	200		
C	Cabling system				
a)	Aluminium Cable Trays, 50x50x5(angle), 30x5 mm(flat), 300 mm(width) with support material	Mtr	15		
b)	Conduits, bends, tees, junction boxes, accessories for cabling system.	L.S	1		
D	Earthing and lightning protection system				
a)	GEE slab	No	15		
b)	50 x 6 mm MS flat including nuts & bolts.	Mtr	150		
c)	50 x 6 mm GI flat for riser including nuts & bolts.	Mtr	20		
E	DC system				
a)	Maintenance free VRLA battery 48 DC, 200 AH	Set	1		
b)	Battery charger (float cum boost)	Set	1		
F	Miscellaneous Item				
a)	Rubber mats as per specifications	Nos	5		
	TOTAL WORKS				

**SCHEDULE 1B: SCHEDULE FOR SUPPLY AND DELIVERY OF SUBSTATION EQUIPMENT
(Sarpangtar)**

				Unit Price (DDP Site)	Total price
			1	2	3=1X2
A	Equipment				
1	33 kV GIS switchgear with numerical relays, meters, CTs, line PTs as per specifications.	Set	3		
a)	630A, VCB - GIS Panel (2 incomer/outing, 1 transformer feeder)				
b)	PT with under voltage relay in the incomer panel				
2	11 kV switchgear with numerical relays, CTs, synchro-check relay, etc.	Set	9		
a)	630A, VCB (8 incomer/outgoing and 1 bus coupler)				
b)	Line PT (to be mounted on incomer panel)				
c)	Bus PT (to be mounted on bus coupler panel)				
B	Cables				
1	HV cables - outdoor and indoor termination kits				
a)	33 kV termination for GIS panel	Set	3		
b)	11 kV termination for AIS panel	Set	9		
2	LV power, control and instrumentation cables				
a)	Instrumentation cables with lugs and glands				
	3 C x 2.5 sqmm	Mtr	100		
	5 C x 2.5 sqmm	Mtr	200		
	12 C x 2.5 sqmm	Mtr	200		
C	Cabling system				
a)	Aluminium Cable Trays, 50x50x5(angle), 30x5 mm(flat), 300 mm(width) with support material	Mtr	15		
b)	Conduits, bends, tees, junction boxes, accessories for cabling system.	L.S	1		
D	Earthing and lightning protection system				
a)	50 x 6 mm GI flat for riser including nuts & bolts.	Mtr	20		
E	DC system				
a)	Maintenance free VRLA battery 48 DC, 200 AH	Set	1		
b)	Battery charger (float cum boost)	Set	1		
F	Miscellaneous Item				
a)	Rubber mats as per specifications	Nos	5		
	1B - TOTAL WORKS				
	TOTAL WORKS				

**SCHEDULE 2A: SCHEDULE FOR ERECTION TESTING AND
COMMISSIONING OF SUBSTATION EQUIPMENT (Pelrithang)**

Sl. No	Description	Unit	Provisional Qty	Unit Rate	Amount (Nu)
A	Equipment		1	2	3=1X2
1	33/11 kV, 2.5 MVA power transformer with NCT (Including RTCC Panel)	Nos.	1		
2	33kV switchgear with numerical relays, meters, CTs, line PTs as per specifications.	Set	5		
a)	630A, VCB (2 incomer, 2 outgoing, 1 transformer feeder, 1 buscoupler)				
b)	Bus PT panel with under voltage relay (cost to be included in a)				
c)	Prices should be inclusive of floor leveling as required at the site for GIS panels				
3	Dismantaling of 33kV AIS switchgear along with the control relay panel (CRP) and transport to ESD store	Set	2		
4	11 kV switchgear with numerical relays, CTs, synchro-check relay, etc.	Set	2		
a)	630A, VCB (4 incomer, 10 outgoings and 2 bus coupler)				
b)	Line PT (to be mounted on incomer panel)				
c)	Bus PT (to be mounted on bus coupler panel)				
5	11 kV Adapter panel/Bus trunking	Set	1		
6	11 kV side entry cable box for bus coupling	Set	2		
B	Cables including supply of tiles and sand as required for direct burial				
1	HV Cables - outdoor and indoor termination kits				
a)	33 kV GIS termination, Heat Shrinkable	Set	4		
b)	11 kV AIS termination, Heat Shrinkable	Set	4		
2	LV power, control and instrumentation cables including the earthing strip connections	Lot	1		
C	Cabling system				
a)	Erection of all accessories with cable trays, conduits, bends, tees, junction boxes, accessories for cabling system.	Lot	1.00		
D	DC system				
a)	Maintenance free VRLA battery 48 DC, 200 AH	Set	1		
b)	Battery charger (float cum boost)	Set	1		
	2A - TOTAL WORKS				

**SCHEDULE 2A: SCHEDULE FOR ERECTION TESTING AND
COMMISSIONING OF SUBSTATION EQUIPMENT (Pelrithang)**

Sl. No	Description	Unit	Provisional Qty	Unit Rate	Amount (Nu)
--------	-------------	------	-----------------	-----------	-------------

SCHEDULE 2B: SCHEDULE FOR ERECTION TESTING AND COMMISSIONING OF

Sl. No	Description	Unit	Provisional Qty	Unit Rate	Amount (Nu)
A	Equipment		1	2	3=1X2
1	33kV switchgear with numerical relays, meters, CTs, line PTs as per specifications.	No	3		
a)	630A, VCB (2 incomer / outgoing, 1 transformer feeder)				
b)	Bus PT panel with under voltage relay (cost to be included in a)				
c)	Prices should be inclusive of floor leveling as required at the site for GIS panels				
2	Dismantling of 33kV AIS switchgear along with the control relay panel (CRP) and transport to ESD store	No	7		
3	11 kV switchgear with numerical relays, CTs	Set	9		
a)	630A, VCB (4 incomer, 10 outgoings and 2 bus coupler)				
b)	Line PT (to be mounted on incomer panel)				
c)	Bus PT (to be mounted on bus coupler panel)				
4	Dismantling of 11 AIS switchgear along with the control relay panel (CRP) and transport to ESD store	Set	9		
B	Cables including supply of tiles and sand as required for direct burial				
1	HV Cables - outdoor and indoor termination kits				
a)	33 kV GIS termination, Heat Shrinkable	Set	5		
b)	11 kV AIS termination, Heat Shrinkable	Set	9		
2	LV power, control and instrumentation cables including the earthing strip connections	Lot	1		
C	Cabling system				
a)	Erection of all accessories with cable trays, conduits, bends, tees, junction boxes, accessories for cabling system.	Lot	1		
D	DC system				
a)	Maintenance free VRLA battery 48 DC, 200 AH	Set	1		
b)	Battery charger (float cum boost)	Set	1		
	2B - TOTAL WORKS				
	TOTAL WORKS				

SCHEDULE 3A: SCHEDULE FOR SUPPLY OF ESSENTIAL SPARES (Pelrithang)

				Unit Price (DDP Site)	Total price
			1	2	3=1X2
1.0	SWITCHGEAR				
1.1	33kV (VCB break -GIS insulated)				
1.1.1	Closing Coil	Nos.	2		
1.1.2	Trip Coil	Nos.	2		
1.1.3	Current Transformer (1 set - 3 phases) for outgoing	Set	1		
1.1.4	33 kV termination for GIS panel	Set	1		
	SUB-TOTAL OF SPARE ITEMS				

SCHEDULE 3B: SCHEDULE FOR SUPPLY OF ESSENTIAL SPARES (Sarpang Tar)

				Unit Price (DDP Site)	Total price
			1	2	3=1X2
1.0	SWITCHGEAR				
1.1	33kV (VCB break -GIS insulated)				
1.1.1	Closing Coil	Nos.	2		
1.1.2	Trip Coil	Nos.	2		
1.1.3	Current Transformer (1 set - 3 phases) for outgoing	Set	1		
1.1.4	33 kV termination for GIS panel	Set	1		
	SUB-TOTAL OF SPARE ITEMS				
	TOTAL OF SPARE ITEMS				

SCHEDULE - 4: SCHEDULE FOR CIVIL WORKS

Sl. #	Description of item		Provisional Qty	Unit Rate	Amount (Nu)
1.0	Earth Works				
1.1	Earthwork in excavation including clearing away vegetation, if any in foundations, and pits trenches, drains, road formation and earthing etc. in all types of soils (ordinary! hard soil) in both dry and wet conditions including shoring, strutting, dewatering, dressing of sides and ramming of bottom & backfilling with selected earth from excavation in layers of 200 mm, watering, ramming, consolidation & transporting excavated material (at all leads and lifts) to temporary stockpiles within the PURCHASER's premises, I spreading, levelling etc. all complete as directed.	Cu.m	50.00		
1.2	Filling of trenches, sides of foundations etc. in layers <200mm using selected excavated earth, ramming etc. within all leads and lift.	Cu.m	11.51		
2.00	Stone/Brick Works				
2.1	Demolising stone rubble masonry including stacking useful materials and disposal of rubbish within 50m lead, (In any Cement Mortar)	Cu.m	5.00		
2.2	Demolising brick work including stacking useful materials and disposal of rubbish within 50m lead, (In any Cement Mortar)	Cu.m	5.00		
2.3	Providing and laying autoclaved aerated cement blocks masonry (AAC blocks as infill for firewall) in super structure above plinth level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineer in-Charge. (The payment of RCC band and reinforcement shall be made separately).	Cu.m	3.59		
2.4	Providing & laying Hand packed stone filling/soling	Cu.m	1.91		
2.5	Providing & laying Random Rubble Masonry with hard stone in protection wall - In CM 1:5	Cu.m	5.00		
2.6	Providing and laying gravel filling in Transformer soak pit 40mm	Cu.m	17.83		
3.00	Structural steel				
3.1	Supply, fabrication, erection, trasport, delivery to site, loading and unloading etc. for insert plates and M.S non-galvanised steel of approved make and pattern, fabrication to required shape and size, fixing clamps, cllips or welding as per specifications and drawings.	Kg	500.00		
3.2	Dismantling steel work in built up sections in channels, angles, tees, and flats in all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking within 50m lead.	Kg	200.00		
3.3	Dismantling steel fence posts, struts & earthwork/demolishing of concrete and stacking within 50m lead	Kg	200.00		
3.4	Providing and fixing of chequered plate 8mm thick (with provision of hole to lift the cover plate using handle) to cover the Cable Trench inside the control room including	Kg	500.00		
4.00	Concrete Works				
4.10	Providing and laying in position plain cement concrete M10 (1:3:6, 20mm aggregate) excluding the cost of centering and shuttering - All work upto plinth level.	Cu.m	3.89		
4.20	Providing & laying in position reinforced cement concrete work M20 grade (1:1.5:3, 20mm aggregate) in foundation raft, columns, beams excluding the cost of centering, shuttering and reinforcement.	Cu.m	20.00		
4.30	Providing & fixing Thermo-Mechanically Treated reinforcement bar (Yield Strength 500 MPa) for R.C.C work including cutting, bending, binding and placing in position complete	Kg	2,000.00		
4.40	Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork	Sq.m	350.00		

SCHEDULE - 4: SCHEDULE FOR CIVIL WORKS

Sl. #	Description of item		Provisional Qty	Unit Rate	Amount (Nu)
4.50	Supply & fixing precast slabs including suitable formwork to provide smooth finish, casting, curing, storing, protecting under appropriate conditions, erecting them in position etc. complete using M20 concrete with 20mm downgraded coarse aggregate for trench covers including lifting hooks as required and as per specifications & drawings.	Cu.m	1.00		
4.60	Providing & laying 20mm cement plaster - C.M 1:4 on both internal & external walls above plinth.	Sq.m	50.00		
5.00	Other Assessories				
5.10	Providing & laying H.D.P.E. pipes including clamps and fittings complete				
i.	20mm	m	6.00		
ii.	25mm	m	6.00		
iii.	32mm	m	6.00		
iv.	40mm	m	6.00		
v	50mm	m	6.00		
	Total				