No fo KM	10

Schedule: LT lines Supply

Item No.	Description of Goods (including inland transportation, Loading & unloading and other services required in India to convey the goods to their final destination)	Unit	Appx Qty required for KM	Total Qty
	Supply of LT 3-Ph 5Wire line with 55 Sqmm AAA Conductor over 9.1Mts PSCC Poles			
1	Supply of 9.1 Mts 280Kg PSCC poles as per Technical specification	Each	25	250
2	Supply of 8 Mts 200Kg PSCC poles (for struts) as per Technical specification	Each	4	40
3	Supply of 55Sqmm AAAC as per Technical specification	Km	5.1	51
4	Supply of MS Stay Set with LT Guy Insulator and 7/2.50mm GI stay wire Complete with clamps as per Drawing & Technical specification	Each	2	20
5	Supply of Stay Clamps for 9.1Mts PSCC Pole with 50X6mm MS Flat Including Bolts & Nuts	Set	6	60
6	Supply of Stay Clamps for 8Mts PSCC Pole with 50X6mm MS Flat Including Bolts & Nuts	Set	4	40
7	Supply of LT 3-Ph 5 wire cross arm with back clamps as per specification & drawing	Each	27	270
8	Supply of LT 3-Ph 5 wire side arm with 75X40 mm MS Channel length 1.80 Mtrs,50X50X6mm MSAngle length 1.6 Mtrs, Back Clamps and Stay clamps as per Technical specification & drawing	Each	2	20
9	Supply of 2 Nos LT 3-Ph 5 wire side arms with 75X40 mm MS Channal length 1.80 Mtrs with fish plates and 2Nos 50X50X6mm MS Angles of length 1.6 Mtrs as struts and Stay clamps for dead end poles as per Technical specification & drawing	Each	1	10
10	Supply of LT Pin Insulators with Pins as per Technical specification	Each	68	680
11	Supply of LT Shakle Insulators with metal parts as per Technical specification	Each	60	600
12	Supply of C.I.Knobs as per specification	Each	17	170
13	Supply of Foot Cross arm with 50X50X6 mm MS angle of 0.61Mts.(2feet) long with Back Clamps as per Technical specification & drawing	Each	25	250

Schedule: LT lines Erection			No fo KM	10
Item No.	**Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)**	**Unit**	**Appx Qty required for KM**	**Total Qty**
	Erection of LT 3-Ph 5Wire line with 55 Sqmm AAA Conductor over 9.1Mts PSCC Poles			
1	Detailed Survey, pit marking and way leaves Clearence including Clearing of heavy jungle, Cutting and removing other kind of tree	KM	1	10
2	Excavation of pits in all soils, i.e, mixture of gravel and soft disintegrated rock like shales ordinary gravel, stony earth and earth mixed with fair sized boulders except hard rock which requires blasting and drilling.			
2.1	For 8m PSCC Poles (Size of pit is 2'x2'x5' or 0.6mx0.6mx1.5m)	Pit	2	20
2.2	For 9.1m PSCC Poles (Size of pit is 2'x2'x5' or 0.6mx0.6mx1.5m)	Pit	12	120
3	Excavation of pole pit in hard rock by drilling where blasting is not possible		-	
3.2	For 9.1m PSCC Poles (Size of pit is 2'x2'x5' or 0.6mx0.6mx1.5m)	Pit	1	10
4	Excavation of pole pit in all soils with pole digging Machine	Pit	14	140
5	Excavation of Stay pit size 0.45 x 0.45 x 1.34 Mts. In all soils except hard murrum and disintegrated rock which requires blasting	Pit	2	20
6	Erection of 9.1Mts PSCCPoles in position, aligning and setting to work as per specification including supply of labour, T&P, back filling the earth, ramming for consolidation,Cost of transportation of Pole up to pit location wherever necessary and Geotagging of all all poles -Locating Co-ordinates(Lattitude & Longitude) using GPS as per Technical specification	Each	25	250
7	Erection of 8Mt./200Kg WL PSCC pole as Struts whereever necessary in the existing line including fixing of required clamps, including loading, unloading and transport where ever necessary and back filling the pits after erection of pole with excavated earth /extra earth and levelling the site without any lead as per specification.	Each	4	40
8	Erection of MS Stay Set with LT Guy Insulator and 7/2.50mm GI stay wire Complete as per Drawing where ever necessary including Erection of anchor rod and anchor plate in the pit, clamps fixing supply of nuts & bolts and connecting the stay to the pole as per specification	Each	2	20
9	Concreting of the pole locations of pit size 0.6x0.6x1.5Mts. up to 0.1Mts. as base concrete before erecting the pole and 1.4Mts. upto ground level after erecting the pole as pole cocrete with 1:3:6 cement concreting mix using 20mm HBG metal including cost of all the materials i.e. cement, sand, HBG metal etc. including dewatering, shoring & shuttiring, including seigniorage charges and curing after concreting as per technical specification including DPs & Single Pole Structures and other location wherever necessary as per specification.	Each	7	70
10	Concreting of Stay locations wherever necessary for anchor rod of the stay set up to ground level of size 0.45x0.45x1.34Mts. with 1:3:6 cement concreting mix using 20mm HBG metal including cost of all the materials i.e. cement, sand, HBG metal etc. including dewatering, shoring & shuttiring, including seigniorage charges and curing after concreting as per technical specification wherever necessary.	Each	2	20

Item No.	Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)	Unit	Appx Qty required for KM	Total Qty
11	Paving out and stringing the 55Sqmm AAAC over existing supports / newly erected supports and transport to the location and handling charges including pin binding, jointing, clamping, jumpering and strain insulator binding etc duly maintaining standard ground clearances duly following the technical specification	Conductor KM	5	50
12	Fixing of LT 3-Ph 5 wire cross arms with back clmaps, supply of nuts & bolts as per specification	Each	27	270
13	Fixing of LT 3-Ph 5 wire side arm with sturt with clamps, supply of nuts & bolts as per specification	Each	2	20
14	Fixing of 2 Nos LT 3-Ph 5 wire side arms with 75X40 mm MS Channal length 1.80 Mtrs with fish plates and 2Nos 50X50X6mm MS Angles of length 1.6 Mtrs as struts and Stay clamps for dead end poles, supply of nuts & bolts including transport, as per specification & drawing	Each	1	10
15	Fixing of Foot Cross arm with 50X50X6 mm MS angle of 0.61Mts.(2feet) long with Back Clamp for all the poles before erection, including transport,supply of nuts & bolts, as per specification	Each	25	250
16	Fixing of LT Pin Insulators with Pins including pin binding wherever necessary asper specification	Each	68	680
17	Fixing of LT CI Knob including pin binding wherever necessary asper specification	Each	17	170
18	Fixing of LT Shakle Insulators with metal parts including binding wherever necessary as per specification.	Each	60	600
19	Numbering of poles with AC Black paint back ground and numbering with white paint including cost of all materials .	Each	25	250

Schedule-IA : Supply and Construction of Control Room etc. for new 33/11KV Semi -Indoor Sub-station

Sl. No.	Description of work	Unit	Quantity
I	**Constructions of Control room**		
1	Earth work excavation in all types of soil which can be excavated with pick axes and crow bars and do not require blasting in all conditions such as dry, wet, slushy etc., upto 3m depth for foundations and depositing on bank for all lifts and with an initial lead of 10m including shoring, strutting and dewatering where ever necessary covering initial lead for foundations for finished item of work. etc as per SS - 20 B (APSS 308) as per Directions of Eng-in-Charge.	1 Cum	160.00
2	Filling with useful available excavated earth (excluding rock) in trenches, sides of foundations and basement with initial lead in layers not exceeding 15 cm thick, consolidating each deposited layer by watering and ramming including cost and conveyance of water to work site and all operational, incidental, labour charges, hire charges of T & P etc., complete for finished item of work. (APSS NO. 309 & 310) as per Directions of Eng-in-Charge.	1 Cum	135.00
3	Filling with sand in foundations and basement with initial lead in layers not exceeding 15 cm thick, consolidating each deposited layer by watering and ramming including, excluding Seionarage charges, conveyance of water to work site and all operational, incidental, labour charges, hire charges of T & P etc., complete for finished item of work. (APSS NO. 309 & 310)as per Directions of Eng-in-Charge.	1 Cum	22.50
4	Filling of gravel in trenches, sicks of foundations, basements etc. of approved quality in layers not exceeding 15 c.m. thick consolidating each deposited layer by watering and ramming including cost and conveyance of gravel ,excluding seignoirage charges, water to work site and operational, incidental, labour charges etc. complete for furnished item of work	1 Cum	115.00
5	Supply and spreading of quarry dust to a thickness of 25mm, excluding seigniorage (after consolidation of the earth work with a roller.)	CUM	8.00
6	Supply and spreading of 20mm size machine crushed blue granite metal to a thickness of 75 mm over spread quarry dust excluding seigniorage.	CUM	4.75

Schedule-'A' Supply and Construction of Control Room etc. for new 33/11KV Semi -Indoor Sub-station

Sl. No.	Description of work	Unit	Quantity
7	Plain Cement concrete (1:4:8) using 40 mm HBG metal machine mixed laid in positions in layers not exceeding 15 Cm thickness including cost and conveyance of all materials, , water to work site and all operational, incidental, labour charges such as machine mixing of concrete laying, tamping, curing etc., complete for finished item as per Direction sof Eng-in Charge	1 Cum	25.00
8	Providing HYSD/TMT/MS Steel bars(Fe415/Fe500 grade as per IS1786-1979) of different diameters for RCC works, including labour charges for straightening, cutting, bending to required sizes and shapes, placing in position with cover blocks of approved materials and size and tying and lap-splicing with binding wire of 18 SWG, forming grills for reinforcement work as per approved designs and drawings, including cost and conveyance of steel bars, including all wastages such as overlaps, couplings, chairs,spacer bars including cost and conveyance of binding wire, cover blocks and all incidental, operational, labour charges such as cutting, bending, placing in position, tying including sales and other taxes on all materials etc., complete for finished item of work in all floors.	1 MT	5.00
9	Providing Antitermite treatment as per IS 6315 (Part - 2) 2001 (Pre-constructional chemical treatment measures) along the internal & external vertical faces of the columns, plinth beams, basement and top surface of the basement filling below flooring bed as per the specified procedure conforming to IS 6315 (Part-2) 2001 and other relevant approved specification duly using Chlorpyriphos/ Lindane emulsifiable concentrate 20% with 1% concentration @ 7.5 Liters/ sqm of the vertical surface & @ 5.0 Liters/ sqm of the horizontal surface of the substructure to a depth of 500 mm around columns & 300 mm deep around plinth beams, basements & floor filling area including excavation channel along the wall & rodding etc & cost & conveyance of all materials to the site, cost of labour for spraying, rodding etc complete for finished item of work as per the approval of the Engineer-in-Charge	1 Sqm	115.00
10	RR Masonry in CM (1:6) cost and conveyance of all materials to site and all labour charges complete for finished item of work excluding Seionarage charges as per Directions of Eng-in-Charge.	1 Cum	30.00
11	Construction of Brick masonry walls in super structure in CM 1:6 using well burnt country bricks with compressive strength not less than 35 Kg/Sqm from approved source including cost and conveyance of all materials all labour charges etc.excluding Seionarage charges , complete for finished item of work as directed by the Engineer-in Charge.	1 Cum	75.00
12	RCC M- 25 Desgin mix (380 Kg Cement) corresponding to Table 9 of IS 456 using 20mm size graded machine crushed hard granite metal (coarse aggregate) from approved quarry including cost and conveyance of all materials like cement, fine aggregate (sand) coarse aggregate, water etc., to site and including sales & other taxes on all materials excluding Seionarage charges, including all operational, incidental and labour charges such as machine mixing, laying concrete, curing and steel centering with wooden scaffolding etc.,complete but excluding cost of steel and its fabrication charges for finished item of work as directed by Engineer-in-Charge..		
i	Footings	1 Cum	20.65
ii	Pedastal	1 Cum	2.63
iii	Plinth beams	1 Cum	8.05

Schedule-IA : Supply and Construction of Control Room etc. for new 33/11KV Semi -Indoor Sub-station

Sl. No.	Description of work	Unit	Quantity
iv	Lintel beams	1 Cum	1.25
v	Columns	1 Cum	12.75
viii	Piles	1 RM	135.00
viii	Pile caps	1 Cum	8.02
viii	Sunshades and Chajjas	1 Sqm	8.50
ix	Roof beams	1 Cum	10.00
x	Roof Slab	1 Cum	19.75
13	Construction of cable duct in the control room shall be of size 300 x 300mm with PCC 1:4:8 using 40mm metal 100mm thick and 115mm thick brick masonry on 2 sides and Plastering 3 sides with CM 1:5 closing of duct with cement slabs of 50mm - thick using RCC 1:2:4 using 10mm HBG metal includes cost of all materials and labour and the cost of cement excluding seionarge charges (as per Technical specification)	RMt	20.00
14	Providing impervious coat to exposed RCC roof slab surface with CM(1:3), 20mm thick with 1kg of water proof compound per bag of cement laid over roof when it is green including cost of all materials, conveyance charges of materials and including all operational, incidental and labour charges for mixing mortar, laying, rendering smooth and thread lining, curing, rounding off junctions of wall and slab etc,, complete for finished item of work excluding Seionarage charges for finished item of work as directed by Engineer-in-Charge.. .	1 Sqm	115.00
15	Plastering to ceiling 12 mm thick in one coat in CM(1:3) with Smooth finish at all heights including cost and conveyance charges of cement and all other materials to site, scaffolding charges, seigniorage charges, incidental and operational charges, all labour charges for mixing mortar, finishing, all leads and lifts, curing, cutting grooves excluding seionarage charges etc., complete for finished item of work and as directed by the Engineer in charge.	1 Sqm	150.00
16	Plastering 12 mm thick in one coat for superstructurefor even faces of walls with CM(1:5) with smooth finish at all heights including cost and conveyance charges of cement and all other materials to site, scaffolding charges, seigniorage charges, incidental and operational charges, all labour charges for mixing mortar, finishing, all leads and lifts, curing, cutting grooves, excluding Seionarage charges etc., complete for finished item of work and as directed by the Engineer in charge	1 Sqm	200.00
17	Plastering with CM(1:5), 20 mm thick for unevenfaces of walls with sponze finish at all heights including cost and conveyance charges of cement and all other materials to site, scaffolding charges, seigniorage charges, incidental and operational charges, all labour charges for mixing mortar, finishing, all leads and lifts, curing, cutting grooves , excluding Seionarage Charges etc., complete for finished item of work and as directed by the Engineer in charge.	1 Sqm	280.00
18	Plain Cement concrete (1:2:4) using 10 mm & 12mm metal with concrete mixer including cost and conveyance of all materials and all labour charges complete excluding Seionarge charges.	1 Cum	12.50

Schedule-IA : Supply and Construction of Control Room etc. for new 33/11KV Semi -Indoor Sub-station

Sl. No.	Description of work	Unit	Quantity
19	Flooring with vitrified polished floor tiles glossy finish premium colours of size not less than 598x598mmx8mm thickness of 1st quality(make Somany,HR Jhonson,Naveen Ceramics, Kajaria, Nitco, Sphinx) set over base coat of cement mortar (1:8), 12 mm thick over CC bed already laid or RCC roof slab, including neat cement slurry of honey like consistency spread @ 3.3.kgs per sqm & jointed neatly with white cement paste to full depth mixed with pigment of matching shade, including cost of all materials like cement, sand water and tiles etc., complete, complete for finished item of work including the cost of conveyance of all materials excluding Seionarage charges etc., complete for finished item of work and as directed by the Engineer in charge.	1 Sqm	75.00
20	Providing skirting to internal walls to 10 cm height/risers of steps vitrified polished floor tiles glossy finish premium colours of size not less than 598x598mmx8mm thickness of 1st quality(make Somany,HR Jhonson,Naveen Ceramics, Kajaria, Nitco, Sphinx) set over base coat of cement mortar (1:8), 12 mm thick over CC bed already laid or RCC roof slab, including neat cement slurry of honey like consistency spread @ 3.3.kgs per sqm & jointed neatly with white cement paste to full depth mixed with pigment of matching shade, including cost of all materials like cement, sand water and tiles etc., complete, complete for finished item of work including the cost of conveyance of all materials excluding Seionarage charges etc., complete for finished item of work and as directed by the Engineer in charge. .	1 Sqm	25.00
21	Flooring with Non-skid red or white full body Ceramic floor tiles of size 300 x 300 mm and thickness between 7-8 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs set over base coat of cement mortar (1:8), 12 mm thick over CC bed already laid or RCC roof slab, including neat cement slurry of honey like consistency spread @ 3.3.kgs per sqm & jointed neatly with white cement paste to full depth mixed with pigment of matching shade, including cost of all materials like cement, potable water, sand and tiles etc., complete for finished item of work.	1 Sqm	15.00
22	Dadooing in toilets and bath rooms with glazed full body porcelain wall tiles of size 300 x 600 mm with any type of design texture such as marble finish, wooden, bamboo, stone finishes etc., scratch less, stain free and thickness between 6-8 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs set over a base coat of CM (1:3) 12 mm thick with neat cement slurry of honey like consistency spread at the rate of 3.3 Kgs per Sqm and filling the joints with white cement paste mixed with pigment of matching shade is to be done including cost and conveyance charges of cement, potable water and all other materials to site, seigniorage charges, incidental and operational charges, all labour charges for mixing mortar, finishing, all leads and lifts, etc., complete for finished item of work and as directed by the Engineer in charge.	1 Sqm	15.00

Schedule-IA : Supply and Construction of Control Room etc. for new 33/11KV Semi -Indoor Sub-station

Sl. No.	Description of work	Unit	Quantity
23	Painting with Interior grade synthetic polymer plastic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/ litre of approved brand and shade two coats over a base coat of appropriate interior primer(grade-I) of Asian make, making 3 coats in all to give an even shade after thorughly brushing the surface to remove all dirt and remains of loose powdered materials, including cost and convyance of all materials, labour charges and incidental charges such as scaffolding, lift charges etc., complete for finished item of work and as directed by the Engineer in charge.	1 Sqm	350.00
24	Painting with acrylic exterior emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/ litre exterior grade of approved brand and colour/shade two coats over a base coat of appropriate primer (grade-I) of Asain make , making 3 coats in all to give an even shade after thorughly brushing the surface to remove all dirt and remains of loose powdered materials, including cost and convyance of all materials, labour charges and incidental charges such as scaffolding, lift charges etc., complete for finished item of work and as directed by the Engineer in charge.	1 Sqm	280.00
25	White washing two coats with whiting of approved quality to give an even shade after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials including cost of all materials, labour charges and incidental such as scaffolding, lift charges etc., complete for finished item of work, but excluding conveyance charges of materials	1 Sqm	150.00
26	Painting with synthetic enamel paint of approved brand and shade one coats over a base coat of approved primer making it two coats in all to give an even shade after thorughly brushing the surface to remove all dirt and remains of loose powdered materials, including cost and convyance of all materials, labour charges and incidental charges such as scaffolding, lift charges etc., complete for finished item of work.	1 Sqm	15.00
27	Supplying and fixing of Un plasticised Poly Vinyl Chloride (UPVC) sliding doors two track - only two glass shutters sliding - 95 -Series duly manufactured using UPVC reinforced profiles of 95.50 mm x 60 mm x 2.25 mm for outer frames, 66 mm x 42 mm x 2.25 mm for sliding door shutter frames capable of mounting single glazing system, structurally reinforced with hot dip galvanized up to 50 microns of minimum thickness of 1.2 mm prefabricated & welded through fusion welding the window sash shall be fitted with 5 mm thick clear float glass of reputed make duly fixed with EPDM weathering seal resistant accessories like clipping locking system made of aluminium 1 No., per set of sashes and the system is to be installed at the site using anchor fasteners, silicon rubber sealant, easy glazing/ deglazing at site etc., with iron safety grill with 10mm size square rod including two coats of synthetic enamel painting and including cost and conveyance of all materials, accessories, labour charges for transportation, erection at site with templates for casement sizing complete for finished item of work	1 RM	20.00
28	Providing R.C.C. racks of 38mm thick with R.C.C.(1:2:4) and plastering with CM(1:3),12mm thick excluding seigniorage cost and conveyance of all materials to site and all labour charges complete excluding seionarage charges and as directed by the Engineer in charge..	1 Sqm	4

Schedule-IA : Supply and Construction of Control Room etc. for new 33/11KV Semi -Indoor Sub-station

Sl. No.	Description of work	Unit	Quantity
29	Providing and fixing factory made solid Wood Polymer Composite (WPC) single extruded Door Frame section of size with encapsulation of 8MM rigid layer on all the six surfaces. The door frame will have a rebat of 32MM. Door Frame section of 63.5x100 MM .The two Vertical members are to be joined together with the horizontal member using 8x75 MM long MS Star full thread screws to be used with reverse forward speed control hand drilling machine. The ready/assembled door frame is fixed to the wall using hold fast or bolt fasteners. A minimum of 4 No.s of screws to be provided for each vertical member & minimum 2no.s for horizontal member.		
a	Door Frame section of 63.5x100 MM .The two Vertical members are to be joined together with the horizontal member using 8x75MM long MS Star full thread screws etc., rate vide item code BMT-N.83.C	1 RM	1.5
b	Providing and fixing 28 -30 MM thick solid Wood Polymer Composite(WPC) single extruded door shutter with 3MM top and bottom rigid layer with an overall density of 750kg/Cum. It will be fixed to the frame using 3 inch /4 inch hinges. A minimum of 4 hinges will be required for fixing the door with the frame including labour charges, 4Nos 125mm aluminium butt hinges, 1No 250mm aluminium aldrop, 1No 200mm aluminium tower bolt, 2Nos 150mm aluminium handles etc., complete for finished item of work as directed by the Engineer in charge.	1 Sqm	2.0
30	Supply and fixing of M.S. grill windows with 10mm square solid rods with 25mm x 25mm x 5mm L Angle and casting and fixing of MS Ladder with channels and L Angles to reach for water tank on terrace and approved design given by the department and as directed by the engineer at site including cost and conveyance of all materials and all labour charges etc., complete.	1 Sqm	20.0
31	Supply and fixing of European Water Closet of Ist quality with plastic seat and lid and PVC flushing tank 10 Lit capacity confirming to IS:2556-Part-2-1973 of Hidustan/Neycer or Parry ware make white glazed with 'S' trap including all materials ,labour etc complete as per directions of Eng-in-Charge.	Set	1
32	Supply and fixing of dia (4kg/sqcm) PVC pipes of make Prince/Sudhakar/Kisan/Supreme or any ISI Brand including bends, Tees etc., including cost and conveyance of all materials all labour charges etc., complete. as directed by the Engineer in charge.		
a	75 mm dia	RMt	5.00
b	110 mm dia	RMt	15
33	Supply and fixing 550 x 400mm size Indian make Flat Back Wash Hand basin with pedestal (HSW/Parryware/Neycer) 1st quality conforming to IS:2556-Part-4:1972 with waste fittings like rubber plug, chain, 32mm nominal size C.P. Fitting with parallel pipe thread conforming to IS:2963-1979 and fitted with 15mm nominal bore chromium plated pillar tap of 1st quality Indian make 400 grams Seiko/Senior/Nice/Esso or equivalent complete with standard CI brackets : 550 x 400 mm - double C.P. Pillar cock etc complete as directed by the Engineer in charge.	Set	1

Schedule-IA : Supply and Construction of Control Room etc. for new 33/11KV Semi -Indoor Sub-station

Sl. No.	Description of work	Unit	Quantity
34	Supply and fixing of Unplasticised PVC Pipes,10 kg/cm2 for potable water supplies conforming to IS : 4985/2000 (3rd revision) with bell ends (Socket) as per specification in light Grey/Natural Ivory Grey/ Any other Color including Labour charges for laying, fixing, and commissioning the pipes including couplers, bends, plugs, junctions, tees etc. with solvent jointing as per Standard practice for finished item work as directed by the Engineer-in-charge.		
a	25 mm dia	RMt	125
b	20mm dia	RMt	50
35	Supply and fixing of CP Long body bib cock fancy type delux heavy duty 12.7mm dia Indian make 400gm seiko or equivalent etc., complete for finished item of work as directed by the Engineer - In - Charge	Each	1.00
36	Supply and fixing of CP Short body bib cock fancy type delux heavy duty 12.7mm dia Indian make 400gm seiko or equivalent etc., complete for finished item of work as directed by the Engineer - In - Charge	Each	1.00
37	Supply and fixing of GM Gate (GM peet) valves as per IS 778 Class I -Indian make heavy type of different sizes including cost and conveyance of all materials and labour Charges complete for finished item work as directed by the Engineer-in-charge.		
a	25 mm GM Gate valve	Each	2.00
38	Supplying and Fixing 76.2 mm Nahny Trap 1st quality in RCC floors page No.121, Sl No.126)	1 No	1.00
39	Supply and fixing of soap stands in the washroms including cost and conveyance of all materials, labour charges etc.,	1 No	1.00
40	Supply and fixing of 25.4 mm dia& 609.6 mm long aluminium anodized towel rod with brackets and aluminium screws including cost and conveyance of all materials, labour charges etc., complete	1 No	1.00
41	Providing and placing on terrace (at all floor levels) 1000 Ltr capasity Polyethylene water storage tank double layer of SYNTEX or approved brand & manufacture with cover and suitable locking arrangement & making necessary holes for inlet & outlets and over flow pipes but without fittings and base support for tanks etc., complete for finished item of work as directed by the Engineer-in-charge.	1 No.	1.00
42	Supply and fixing 450 x 300 mm Belgium glass 6mm thick frameless mirror with stand mounted to wall including plugs and screws as directed by the Engineer in charge.	RMt	1.00
43	Supply and fixing CP Short body bib cock facy type deluxe heavy duty 12.7mm dia Indian make Seiko/Senior/Nice or equivalent	Each	24.00

Schedule-IA : Supply and Construction of Control Room etc. for new 33/11KV Semi -Indoor Sub-station

Sl. No.	Description of work	Unit	Quantity
44	Constructing 2’ x 2' brick masonry inspection chamber as per IS - 4111: Part-1:1986 with cement mortar (1:6) prop using 2nd Class Clay Bricks of 225 mm thick from approved source having a minimum crushing strength of 5 /sq.mmincluding plastering with cement mortar 1:3 prop; ½” thick both inside and outside fitted with 20” dia RCC manhole covers and frames including excavating pits up to a depth of 904 mm (3'-0") in all sorts of soils (excluding rock) and laying cement concrete (1:4:8) 150 mm thick using 40 mm HBG Metal and P.C.C. 1:2:4 benching and channel 100 mm thick as per Standard specification and including cost and conveyance of all materials like cement, sand, bricks, water etc. to site, and all incidental and operational, labour charges like mixing cement mortar, constructing masonry, lift charges, curing etc., complete for finished item of work as per Standard specification excluding Seionarage charges as directed by the Engineer in charge.	1 No	2.00
45	Supply and Fixing of 25mm dia 2mm thick P.V.C. pipe (ISI MARK) concealed in reinforcement and walls with all required accessories including masonary work for light, fan and separate plug point including all labour charges etc., complete.	RMt	200.00
46	Wiring with 2 runs of 14/0.3mm (1.0 Sq.mm) Fire Retardant (FR) P.V.C. insulated flexible copper cable (ISI MARK) in existing pipe with 6A modular switch, Ceiling rose and hot dip galvanized metal boxes with cover frame to switch control box including all labour charges etc., complete for light, bell, fan and exhaust fan points in Non-Residential Buildings (makes Anchor / Gold Medal / Million / Vimal / Maru / Milltec.) as directed by the Engineer in charge.	Each	30.00
47	Wiring with 2 runs of 14/0.3mm (1.0 Sq.mm) Fire Retardant (FR) P.V.C. insulated flexible copper cable (ISI MARK) in existing pipe with 6A modular switch and 3/2 pin socket hot dip galvanized metal boxes with cover frame to switch control box including all labour charges etc., complete for light, bell, fan and exhaust fan points in Non-Residential Buildings (makes Anchor / Gold Medal / Million / Vimal / Maru / Milltec.) as directed by the Engineer in charge.	Each	4
48	Wiring with 2 of 22/0.3mm (1.5 Sq.mm)P.V.C. insulated F.R. flexible copper cable (ISI MARK) in existing pipe with 16A modular switch control and 3 pin/16A sockets with hot dip galvanized box with cover frame on separate board including all labour charges etc., complete.	Each	8.00
49	Supply and run of 2 of 22/0.3mm (1.5 Sq.mm) F.R P.V.C. insulated flexible copper cable in existing pipe for MAINS Makes: Finolex / RR kabel /Havells/KEI/Polycab/Gloster /Goldmedal/GM inlcuding all labour charges etc., complete.	1 RM	400.00
50	Supply and run of 1 of 22/0.3mm (1.5 Sq.mm) F.R P.V.C. insulated flexible copper cable in existing pipe for earthing Makes: Finolex / RR kabel /Havells/KEI/Polycab/Gloster /Goldmedal/GM inlcuding all labour charges etc., complete.	1 RM	50
51	Supply and fixing of 8way TPN Distribution board with IP-20 protection suitable for 3 phase ELCB / RCCB / FP with 40A, 4pole isolator as incomer and 10kA-6-32A (12Nos) SP MCBs as out going including internal connection and labour charges for surface / flush mounting etc., complete as directed by the Engineer in charge.	Each	1

Schedule 'A' : Supply and Construction of Control Room etc. for new 33/11KV Semi -Indoor Sub-station

Sl. No.	Description of work	Unit	Quantity
52	Supply and fixing of 18W/20W, 1200mm length LED(with LED light) batten light with extruded alluminium housing and polycarbonate cover, input voltage AC 220 - 260 Volts with PF>0.9, Surge protection: 2KV,THD<15%, with inbuilt driver and frosted cover CCT: 3000K - 5700K, minimum CRI>70, .etc., complete. a) LUMINAIRE MAKE : Phillips / GE-Venture / Crompton / Wipro / Bajaj / Havells / Halonix/Jaquar/HPL/GM / GreenLites / Gold Medal/Eveready b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG/Everlight as per directions of Eng-in-Charge.	Each	15
53	S&F of 9W LED Lamps with Holder of standard make including cost of all fixture etc., complete as per directions of Eng-in-Charge.	Each	6
54	Supply and fixing 48" (1200mm) Sweep Ceiling Fan of makes (Crompton High speed/Bajaj Ultima/Havells Velocity/ Usha Astra/ Orient Summer Pride) with Modular Electronic Regulator of makes (Crab Tree/Feno Swtch/ Toyoma/Fortune Art/ Million / Gold Medal / Vimal / Anchor Roma) as directed by the Engineer in charge.	Each	4
55	Supply of 12" (300mm) ISI, 900 RPM Heavy duty exhaust fan with metallic blades with Mark. Makes : As per list of recommended brands. of makes (Crompton High speed/Bajaj Ultima/Havells Velocity/ Usha Astra/ Orient Summer Pride) with Modular Electronic Regulator of makes (Crab Tree/Feno Swtch/ Toyoma/Fortune Art/ Million / Gold Medal / Vimal / Anchor Roma)	1 No	6
56a	Supply,placing in alignment of RCC fencing post of 1.8m length including cost and conveyance of fencing post, labour charges for placing in alignment all are as specified by the Engineer-in-charge at site - - etc., complete.	Each	28.00
56b	Supply and fixing galvanised steel barbed wire (IS:278-1962 Type I) weighing 9.36kg per 100 mtrs (min), Straining and fixing to any type of standard, including securing galvanised mild steel wire etc., as directed by engineer - in - charge	RMt	650.00
57	Providing independent earthing by excavating a trench to a depth of 2.7 M in all soils, as per size specified in the Data, using 40mm dia 'B' class GI pipe of 2.5 Mtrs length with necessary accessories with hume pipe ring duly providing staggered holes including filling with equal proportion of Salt and Charcoal in layers and all labour charges etc., complete for small quarters.	Each	2.00
58	Supply and Run of No.8 SWG G.I wire including cost of all accessories and labour charges etc., complete.	1RM	50
59	Supply of steel office Table of size 4' x 2' x 30" with 18 mm plywood , Teakwood finishing with Drawers on right hand side and with automatic locking system(Godrej or equivalent make)as directed by engineer - in - charge.	Each	1
60	Supply of chairs with arms teak wood Frame 1" thick,seat & backs, 's' type in 1" dia pipe(Godrej or equivalent make)as directed by engineer - in - charge.	1 Sqm	2.00
61	Supply of Quartz wall clock 1' x 1'size of reputed make.	Each	1.00
62	Writing Name of the SS in Details on the Control room one side including cost & conveyance of all materials and all labour charges complete.	Each	1
63	Writing Name of the SS in Details on the Gate as directed by the Engineer in charge.	Each	1
64	Supply and keeping the 300 mm dia hume pipe in position including fixing collers etc.complete. For Running of Control Cables, XLPE Cable etc from Switch yard to Control Room, including excavation and backfilling etc	1RM	4.00

Schedule-IA : Supply and Construction of Control Room etc. for new 33/11KV Semi -Indoor Sub-station

Sl. No.	Description of work	Unit	Quantity
65	Site investigation charges for locating bore well point.	1 Job	1.00
66	Drilling of 165mm size Bore Well as directed by the Engineer in charge including cost of labour , flushing of borewell, transportation and hire charges for drilling equipment and all taxes complete as per the directions of the Engineer in charge for the finished item of work.	1RM	60.00
67	Supplying & fixing of PVC heavy duty casing pipe of 180mm dia , 10kg/sqcm for the above Bore hole including cost & conveyance of all materials ,labour ,leads, and lifts and all taxes etc., complete as per the directions of the Engineer in charge for the finished item of work.	1 RM	60.00
68	Supply, transportation & fixing of Single Phase submersible motor pump set , 21 stage (Crompton / Kirloskar / CRI / L&T / Varsha /Texmo make) of approved type suitable for 165mm dia bore well , as directed by Engineer in charge,of approved quality & make including nipples, bends, couplings etc., including cost & conveyance of all materials, labour charges, fitted with SIEMENS/ CROMPTON make starter with panel board fitted with related fittings such as Ammeter , volt meter and including nuts & bolts and GI sheet bore cover complete as per the directions of the Engineer in charge for the finished item of work.		
a	1.0 HP	Each	1
b	1.5 HP	Each	1
69	Supplying & fixing 40 mm dia HDPE pipe (12kg/Sqcm) of approved quality & make including nipples, bends, couplings etc., complete for finished item of work from bore well to delivery including cost & conveyance of all materials, specials\I fixtur	1 RM	55.00
70	Supply & fixing of Submersible Flat cable 2.5sq.mm or 3/20 equalint (Finolex) wire including cost & conveyance and all labor charges with all leads ans lifts and all other incidental charges etc; complete.	1 RM	80.00
	FOR SITES WHERE BORE WELL DIGGING IS NOT POSSIBLE TAP CONNECTION WITH TAP WATER STORAGE SUMP		
71	Earth work excavation in ordinary soils by manual means upto 3m depth for foundations and depositing on bank for all lifts and with an initial lead of 10m including all operational, incidental, labour charges such as shoring ,sheeting, planking, strutting, etc. complete for finished item of work excluding dewatering charges etc as per SS - 20 B (APSS 308) for water tank of size (2.0 MX2.5M X2.3 M).	1 Cum	25.0
72	Filling with useful available excavated earth (excluding rock) in trenches, sides of foundations and basement with initial lead in layers not exceeding 15 cm thick, consolidating each deposited layer by watering and ramming including cost and conveyance of water to work site and all operational, incidental, labour charges, hire charges of T & P etc., complete for finished item of work. (APSS NO. 309 & 310)	1 Cum	25.0

Schedule-IA : Supply and Construction of Control Room etc. for new 33/11KV Semi -Indoor Sub-station

Sl. No.	Description of work	Unit	Quantity
73	Filling with sand in foundations and basement with initial lead in layers not exceeding 15 cm thick, consolidating each deposited layer by watering and ramming including, seigniorage cost and conveyance of water to work site and all operational, incidental, labour charges, hire charges of T & P etc., complete for finished item of work. (APSS NO. 309 & 310)	1 Cum	1.5
74	Plain Cement concrete (1:4:8) using 40 mm metal with concrete mixer including seigniorage, cost and conveyance of all materials and all labour charges complete.	1 Cum	1.5
75	Construction of brick masonry in CM 1:6 using well burnt country bricks including seigniorage, cost and conveyance of all materials all labour charges etc., complete. Ground Floor	1 Cum	6.0
76	Plastering with CM (1:5), 12 mm thick in one coat for inernal faces of walls, ceilings etc.,including seigniorage, cost and conveyance of all materials all labour charges etc, complete. Ground Floor	1 Sqm	35.0
77	Providing HYSD/TMT/MS Steel bars(Fe415/Fe500 grade as per IS1786-1979) of different diameters for RCC works, including labour charges for straightening, cutting, bending to required sizes and shapes, placing in position with cover blocks of approved materials and size and tying and lap-splicing with binding wire of 18 SWG, forming grills for reinforcement work as per approved designs and drawings, including cost and conveyance of steel bars, including all wastages such as overlaps, couplings, chairs,spacer bars including cost and conveyance of binding wire, cover blocks and all incidental, operational, labour charges such as cutting, bending, placing in position, tying including sales and other taxes on all materials etc., complete for finished item of work in all floors.	1 MT	0.1
78	RCC M- 25 Desgin mix (380 Kg Cement) for slab corresponding to Table 9 of IS 456 using 20mm size graded machine crushed hard granite metal (coarse aggregate) from approved quarry including cost and conveyance of all materials like cement, fine aggregate (sand) coarse aggregate, water etc., to site and including Seigniorage charges, sales & other taxes on all materials including all operational, incidental and labour charges such as machine mixing, laying concrete, curing and steel centering with wooden scaffolding etc.,complete but excluding cost of steel and its fabrication charges for finished item of work.	1 Cum	1.0
79	Single Phase 1 HPMono-block Motor including giving Pipe line Connections with all bends, couplings and Running Joints etc., complete.	Each	1

Schedule-IB : Supply and Construction of Approach Road, Retaining Wall, Levelling of Site etc. for new 33/11KV Semi-Indoor Sub-station

Sl. No.	Description of work	Unit	Retaining wall with pile foundation	Retaining wall with Column foundation	Retaing wall with RR Masonary
	Construction of Approach road, Reaining wall, Levelling of site etc.				
1	Supply and filling of borrowed/naturally occuring good gravel in uniform layers and compacting with smooth wheel roller of 10t capacity to achieve the desired density, watering and compacting to the required density as per Technical Specification of MORD including cost and conveyance of all materials,all incidental and operational charges,hire charges of T&P etc. excluding seionrage charges etccomplete for finished item of work as directed by Engineer-in-charge.	Cum	400.00	400.00	400.00
2	Filling with useful available excavated earth (excluding rock) in trenches, sides of foundations and basement with initial lead in layers not exceeding 15 cm thick, consolidating each deposited layer by watering and ramming including cost and conveyance of water to work site and all operational, incidental, labour charges, hire charges of T & P etc., complete for finished item of work. (APSS NO. 309 & 310)as per directions of Eng-in-Charge.	Cum	40.00	40.00	40.00
	Formation of WBP Approach road:				
3	Supply and filling of borrowed/naturally occuring good gravel in uniform layers and compacting with smooth wheel roller of 10t capacity to achieve the desired density, watering and compacting to the required density as per Technical Specification of MORD including cost and conveyance of all materials,all incidental and operational charges,hire charges of T&P etc. excluding seionrage charges etccomplete for finished item of work as directed by Engineer-in-charge.	Cum	150.00	150.00	150.00
4	Providing, laying, spreading and compacting stone aggregates of 65 mm Single nominal size to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with three wheel 80-100 kN roller in stages to proper grade and camber, applying and brooming, crushable screening to fill-up the interstices of coarse aggregate, watering and compacting to the required density as per Technical Specification of MORDto a compacted thickness of 100 mm excluding seionrage charges etc. complete for finished item of work as directed by Engineer-in-charge.	Cum	30.00	30.00	30.00

Sl. No.	Description of work	Unit	Retaining wall with pile foundation	Retaining wall with Column foundation	Retaing wall with RR Masonary
	Construction of hume pipe culvert:				
5	Earth work excavation in all types of soil which can be excavated with pick axes and crow bars and do not require blasting in all conditions such as dry, wet, slushy etc., upto 3m depth for foundations and depositing on bank for all lifts and with an initial lead of 10m including shoring, strutting and dewatering where ever necessary covering initial lead for foundations for finished item of work. etc as per SS - 20 B (APSS 308) as per Directions of Eng-in-Charge.	Cum	17.00	17.00	17.00
6	Filling with sand in foundations and basement with initial lead in layers not exceeding 15 cm thick, consolidating each deposited layer by watering and ramming cost and conveyance of water to work site and all operational, incidental, labour charges, hire charges of T & P ,excluding seionarge charges etc., complete for finished item of work. (APSS NO. 309 & 310) etc. complete for finished item of work as directed by Engineer-in-charge.	Cum	3.00	3.00	3.00
7	Plain Cement concrete (1:4:8) using 40 mm HBG metal machine mixed laid in positions in layers not exceeding 15 Cm thickness including cost and conveyance of all materials, , water to work site and all operational, incidental, labour charges such as machine mixing of concrete laying, tamping, curing etc., complete for finished item as per Direction sof Eng-in Charge	Cum	3.00	3.00	3.00
8	RR Masonry in CM (1:6) cost and conveyance of all materials to site and all labour charges complete for finished item of work excluding Seionarage charges as per Directions of Eng-in-Charge.	Cum	10.00	10.00	10.00
9	Construction of Brick Masonrywalls in super structure in CM 1:6 using well burnt country bricks with compressive strength not less than 35 Kg/Sqm from approved source including cost and conveyance of all materials all labour charges etc.excluding Seionarage charges , complete for finished item of work as directed by the Engineer-in Charge.	Cum	8.00	8.00	8.00
10	Supply and filling of borrowed/naturally occuring good gravel in uniform layers and compacting with smooth wheel roller of 10t capacity to achieve the desired density, watering and compacting to the required density as per Technical Specification of MORD including cost and conveyance of all materials,all incidental and operational charges,hire charges of T&P etc. excluding seionrage charges etccomplete for finished item of work as directed by Engineer-in-charge.	Cum	8.00	8.00	8.00

Sl. No.	Description of work	Unit	Retaining wall with pile foundation	Retaining wall with Column foundation	Retaing wall with RR Masonary
11	Plastering with CM(1:5), 20 mm thick for unevenfaces of walls with sponze finish at all heights including cost and conveyance charges of cement and all other materials to site, scaffolding charges, seigniorage charges, incidental and operational charges, all labour charges for mixing mortar, finishing, all leads and lifts, curing, cutting grooves , excluding Seionarage Charges etc., complete for finished item of work and as directed by the Engineer in charge.	Sq. M	30.00	30.00	30.00
	Construction of Retaining wall around Switch yard:				
	With Pile foundation / Column Footings				
12	Earth work excavation in all types of soil which can be excavated with pick axes and crow bars and do not require blasting in all conditions such as dry, wet, slushy etc., upto 3m depth for foundations and depositing on bank for all lifts and with an initial lead of 10m including shoring, strutting and dewatering where ever necessary covering initial lead for foundations for finished item of work. etc as per SS - 20 B (APSS 308) as per Directions of Eng-in-Charge.	Cum	28.00	28.00	
13	Plain Cement concrete (1:4:8) using 40 mm HBG metal machine mixed laid in positions in layers not exceeding 15 Cm thickness including cost and conveyance of all materials, , water to work site and all operational, incidental, labour charges such as machine mixing of concrete laying, tamping, curing etc., complete for finished item as per Direction sof Eng-in Charge	Cum	2.50	2.50	
14	Providing HYSD/TMT/MS Steel bars(Fe415/Fe500 grade as per IS1786-1979) of different diameters for RCC works, including labour charges for straightening, cutting, bending to required sizes and shapes, placing in position with cover blocks of approved materials and size and tying and lap-splicing with binding wire of 18 SWG, forming grills for reinforcement work as per approved designs and drawings, including cost and conveyance of steel bars, including all wastages such as overlaps, couplings, chairs,spacer bars including cost and conveyance of binding wire, cover blocks and all incidental, operational, labour charges such as cutting, bending, placing in position, tying including sales and other taxes on all materials etc., complete for finished item of work in all floors.	1 MT	1.50	1.50	

Sl. No.	Description of work	Unit	Retaining wall with pile foundation	Retaining wall with Column foundation	Retaing wall with RR Masonary
15	RCC M- 25 Desgin mix (380 Kg Cement) corresponding to Table 9 of IS 456 using 20mm size graded machine crushed hard granite metal (coarse aggregate) from approved quarry including cost and conveyance of all materials like cement, fine aggregate (sand) coarse aggregate, water etc., to site and including sales & other taxes on all materials excluding Seionarage charges, including all operational, incidental and labour charges such as machine mixing, laying concrete, curing and steel centering with wooden scaffolding etc.,complete but excluding cost of steel and its fabrication charges for finished item of work as directed by Engineer-in-Charge..				
i	Footings	1 Cum		5.25	
ii	Columns	1 Cum		1.15	
iii	Piles	1 RM	84.00		
iv	Pile caps	1 Cum	1.75		
v	Plinth Beams	1 Cum	4.20	4.20	
vi	RCC bed block	1 Cum	1.85	1.85	
16	Construction of Brick Masonrywalls in super structure in CM 1:6 using well burnt country bricks with compressive strength not less than 35 Kg/Sqm from approved source including cost and conveyance of all materials all labour charges etc.excluding Seionarage charges , complete for finished item of work as directed by the Engineer-in Charge.	1 Cum	18.50	18.50	
17	Plastering with CM(1:5), 20 mm thick for unevenfaces of walls with sponze finish at all heights including cost and conveyance charges of cement and all other materials to site, scaffolding charges, seigniorage charges, incidental and operational charges, all labour charges for mixing mortar, finishing, all leads and lifts, curing, cutting grooves , excluding Seionarage Charges etc., complete for finished item of work and as directed by the Engineer in charge.	1 Cum	80.00	80.00	
18	Supply and keeping the 600 mm dia hume pipe in position including fixing collers etc.complete.	Rmt	12.00	12.00	12.00

Sl. No.	Description of work	Unit	Retaining wall with pile foundation	Retaining wall with Column foundation	Retaing wall with RR Masonary
	With RR Masonary wall				
19	Earth work excavation in all types of soil which can be excavated with pick axes and crow bars and do not require blasting in all conditions such as dry, wet, slushy etc., upto 3m depth for foundations and depositing on bank for all lifts and with an initial lead of 10m including shoring, strutting and dewatering where ever necessary covering initial lead for foundations for finished item of work. etc as per SS - 20 B (APSS 308) as per Directions of Eng-in-Charge.	1 Cum			45.00
20	Filling with sand in foundations and basement with initial lead in layers not exceeding 15 cm thick, consolidating each deposited layer by watering and ramming and conveyance of water to work site and all operational, incidental, labour charges, hire charges of T & P,excluding seionarge charges etc., complete for finished item of work. (APSS NO. 309 & 310)	1 Cum			4.80
21	Plain Cement concrete (1:4:8) using 40 mm HBG metal machine mixed laid in positions in layers not exceeding 15 Cm thickness including cost and conveyance of all materials, , water to work site and all operational, incidental, labour charges such as machine mixing of concrete laying, tamping, curing etc., complete for finished item as per Direction sof Eng-in Charge	1 Cum			4.80
22	RR Masonry in CM (1:6) cost and conveyance of all materials to site and all labour charges complete for finished item of work excluding Seionarage charges as per Directions of Eng-in-Charge.	1 Cum			90.00
23	Plastering with CM(1:5), 20 mm thick for unevenfaces of walls with sponze finish at all heights including cost and conveyance charges of cement and all other materials to site, scaffolding charges, seigniorage charges, incidental and operational charges, all labour charges for mixing mortar, finishing, all leads and lifts, curing, cutting grooves , excluding Seionarage Charges etc., complete for finished item of work and as directed by the Engineer in charge.	1 Cum			80.00
24	Supply and erection of MS gate made out of MS rods, angles,channels, flats etc. for main entrance gate fixed in to the gate pillars including cost and conveyance of all the materials, fabrication charges,fixing charges, labour charges etc., complete for finished item of work as directed by the Engineer-in-charge.	1 Kg	250	250	250

Schedule-II : Electrical works for new 33/11KV Semi -Indoor Sub-station

Sl. No	Description of Item	Unit	Qty. (With 1No 5MVA PTR, 3Nos. Feeders)
1	**Erection of Power Transformer :** Loading, Unloading, Erection, and wiring complete as per departmental standards excluding testing and commissioning of 33/11KV **5MVA Power transformer** with all accessories like radiators, conservator etc., including RTCC (Remote Tap Changer Control) panels in control room, unloading of power transformers, fixing of radiators, filling of transformer oil complete, to the substation site (With new/retrived 5MVA PTR received directly to Substation site (including transport)	Each	1
2	Supply and Fixing of 105 lb rail poles of 3 Mtr. Length each over the transformer plinth including cost of rail poles, with stoppers.	Each	2
3	Supply, loading , unloading and Erection and wiring complete as per departmental standards, testing and commissioning of the following equipment including all incidental handling by skilled, unskilled personnel, T&P bolts and nuts required etc. complete. Any drilling, welding, grouting jobs, slab holes etc. connected with the above works has to be carriedout and the rate quoted is including of all the jobs as per the technical specification. (including Transport)		
i)	Indoor 33KV **Air Insulated switchgear** for incoming cubicles & transformer incoming cubicles: 33KV, 25KA 1250A Vaccum type indoor AIS switchgear type circuit breakers of APEPDCL approved make for incommers, transformer control cubicles, feeder cubicles complete with aluminium bus bar connectors/control cables, glands, CTs(class 5p10 & 0.2s)& CR Panels with IED relays, bus bars and electrical equipment fitted with electrical wiring, annunciation board with digital 3 1/2 digit ammeter & voltmeter and electronic TVR meter make L&T /Secure with mod bus facility (RS 232 port) and MRI compability with class of accuracy 0.2S and relays of Asidha/ABB/Areva/ L&T/ Siemens/Schneider as per section 5 of technical specification.		
(a)	Feeder cubicles with IED relay	Each	2
(b)	Transformer cubicles with IED relay	Each	1
(c)	Bus coupler with bus raiser cubicles with IED relay	Each	1
(d)	Supply and Erection of set of 3Nos 33 KV single phase PTs of ratio 33KV/SQRT(3)/110*SQRT(3) of 0.2 class, Burden 25 VA	Set of 3Nos	2

Sl. No	Description of Item	Unit	Qty. (With 1No 5MVA PTR, 3Nos. Feeders)
ii)	Indoor 11KV switchgear for three outgoing cubicles, one tranformer outgoing cubicles and one for capacitor cubicle 11KV, 25KA 1250A Vacuum type indoor switchgear with drawout type circuit breakers of APEPDCL approved make for transformer control cubicles, feeder cubicles and cubicles complete with aluminium busbar connectors/control cables, glands, CTs & CR Panels with relays (class 0.2s) and electrical equipment fitted with electrical wiring annunciation board with digital 3 1/2 digit ammeter & voltmeter and electronic TVR meter make L&T or Secure with mod bus facility (RS 232 port) and MRI compability with class of accuracy 0.5 and relays ABB/Areva/ L&T/ Siemens as per section 5 of technical specification.		
(a)	For feeder cubicles with IED relay	Each	3
(b)	For Transformer cubicles with IED relay	Each	1
(c)	For Bus coupler cubicles with IED relay	Each	1
(d)	11 KV 3 - Phase PTs of ratio 11 KV/110Volts, Class 0.2, Burden 100 VA	Each	1
4	Erection of 3 Phase 25 KVA CSP Station Transformer with accessories complete (Wiring,Earthing) including cost of supply & erection of pole, LT Distribution box,PVC Cabling shall be done from DTR to AC Distribution panel in the control room including transport, loading and unloading charges of all materials. (DTR will be supplied by APEPDCL)		
a	Supply,transport and erection of 1No. 9.1M/280 Kg WL PSCC pole for DTR	Each	1
b	Erection of 3 Phase 25 KVA CSP Station Transformer on pole with Mounting arrangement	Each	1
c	Supply & Erection of 11KV Isolator 200Amps with single break with single phase arrangement	Each	1
d	Supply & Erection of 11KV HG fuse set with accessories complete	Each	1
e	Supply & Erection of LT Distribution box (SMC) size : 900mm (L) X 275mm(B) X 475mm(H) thickness 2 mm minimum for 2 No's Out going feeders including 6 No's 300A 500V knife type porcelain fuse units and red oxide paint	Each	1
f	HT/LT wiring with PVC Cable 95Sq.mm from Station DTR to LT distribution box to AC distribution Panel in control room including DTR earthing with No.8 GI wire and terminal cable connections with Al.lugs.	Rmt	45
5	**Power cable for 33KV supply :** Supply, making terminations, testing and commissioning of 33KV, 3cx400Sqmm, XLPE armoured cable jointing kits suitable for indoor breakers.		
i)	33KV 3X400Sqmm heat shrinkable cable End Termination Kits suitable for Indoor type.	Each	5
ii)	33KV 3X400Sqmm heat shrinkable cable End Termination Kits suitable for Outdoor type.	Each	5
iii)	33KV 3X400Sqmm heat shrinkable cable Straight through Termination Kits	Each	1

Sl. No	Description of Item	Unit	Qty. (With 1No 5MVA PTR, 3Nos. Feeders)
6	**Power cable for 11KV supply:** Supply, making end terminations, testing and commissioning of 11KV, 3cx185Sqmm, XLPE armoured cable with heat shrinkable cable jointing kits suitable for indoor		
i)	11KV 3X185Sqmm heat shrinkable cable End Termination Kits suitable for Indoor type.	Each	6
ii)	11KV 3X185Sqmm heat shrinkable cable End Termination Kits suitable for Outdoor type.	Each	6
iii)	11KV 3X185Sqmm heat shrinkable cable Straight through Termination Kits	Each	1
7 (a)	Excavation of cable trench of width 0.50mts X and 1.20 mtrs depth from road level and filling with sand for 50 mm including seigniorage charges for aying of 33 KV/11 KV XLPE UG Cables wherever required and covering the cable with a sand layer of 250mm above, providing of protective cover of shabed stones (0.3x0.5m) with 2 inch thickness over the sand and backfilling the trench with earth, leveling removing the debris if any excluding laying of 33/11 KV XLPE UG Cables for laying, Commissioning and Testing of 33KV line with 3X400 Sq.mm. UG Cable from 33KV DP structure to Substation	RMtr	205
7 (b)	Excavation of cable trench of width 0.50mts X and 1.00 mtrs depth from road level and filling with sand for 50 mm including seigniorage charges for laying of 33KV/11 KV XLPE UG Cables wherever required and covering the cable with a sand layer of 250mm above, providing of protective cover of shabed stones (0.3x0.5m) with 2 inch thickness over the sand and backfilling the trench with earth, leveling removing the debris if any excluding laying of 33/11 KV XLPE UG Cables. for laying, Commissioning and Testing of 11KV line with 3X185 Sq.mm. UG Cable from Substation to 11 KV DP structure	RMtr	100
7 (c)	Laying and testing of 33 KV, 3core, 400 Sq.mm XLPE aluminium UG cable in the Open cable trench as per the specification and cable separation with machine cut bricks horizontally for every 3 meters as directed by the Engineer in Charge. This includes all costs of labour, plant and machinery required for laying,cost of machine cut bricks, warning tapes & laying, transportation of all materials from Stores to work spot, loading and unloading.	Mtr.	450
7 (d)	Laying and Testing of 185Sq.mm, 11KV, 3Core, XLPE aluminium UG cable in the Open Cable trench as per the specification and separation with machine cut bricks horizontally for every 3 meters as per the specification. This includes the cost of laying of cable, cable warning tapes, cost of machine cut bricks & laying, transportation of all materials from Stores to work spot, loading and unloading.	Mtr.	300

Sl. No	Description of Item	Unit	Qty. (With 1No 5MVA PTR, 3Nos. Feeders)
8 (a)	Supply, laying, testing and commissioning of LT 3 1/2C 50Sq.mm XLPE armoured cable from station transformer to main distribution box should run partly under the ground and partly on tray with proper dressing & clamping including termination on both ends, loading unloading and transport.	Mtr.	100
8 (b)	Cable terminations to the switchgear, Marshalling boxes /Panel terminal blocks/control & relay panels, LTAC panel including providing suitable ferrules and lugs as per specification (including cost of ferrules and lugs) LT 50Sq mm sqmm cable with copper/Aluminium lugs each core at both ends.	Each	16
9	**Control cables :**		
	Supply and laying of various sizes of control cables in the cable trenches and the cable should run on cable GI trays (wherever necessary) with covers and proper clamping arrangements and providing of suitable glands and lugs and junction boxes wherever necessary includes loading unloading and transportation.		
(a)	2 Core 2.5Sq.mm copper cable for all breakers from DC distribution box	Mtr.	400
(b)	4 Core 2.5 Sq.mm copper cable from battery to DC distribution box	Mtr.	400
(c)	10 Core 2.5 Sq.mm Copper cable	Mtr.	10
(d)	Cable terminations to the switchgear, Marshalling boxes / Panel terminal blocks/ control & relay panels, LTAC panel including providing suitable ferrules and lugs as per specification (including cost of ferrules and lugs) 2.5 sqmm Copper cable with copper lugs each core at both ends.	Each	150
10	Supply and erection of ladder type, G.I cable trays for		
(a)	Supply and installation transportof **300 mm x 50 mm x 1.6 mm** thick GI perforated cable tray without cover along with required angle supports, with coupler plates, Anchor bolts and nut shorizontal and vertical bends, reducers tees,cross members and other accessories as required etc complete and the tray should be fitted on the stone masonary wall by providing hole in the wall wherever necessary and also including necessary masonary work etc. complete for take off arrangement at PTR on HV and LV side as per direction of Emgineer-In-charge	Mtr.	10
(b)	Supply and installation transport of **450 mm x 50 mm x 2 mm** thick GI perforated cable tray without cover along with required angle supports, with coupler plates, Anchor bolts and nut shorizontal and vertical bends, reducers tees,cross members and other accessories as required etc complete and the tray should be fitted on the stone masonary wall by providing hole in the wall wherever necessary and also including necessary masonary work etc. complete for take off arrangement at PTR on HV and LV side as per direction of Emgineer-In-charge	Mtr.	10

Sl. No	Description of Item	Unit	Qty. (With 1No 5MVA PTR, 3Nos. Feeders)
11	Supply and Erection of Supply and Erection ofLT AC Panel Board with 2/1.6 mm thick MS Sheet 1.2mt lenth/width suitable for fixing 63 Amps and Al bus bar 3ph 4P MCCB (I/C)-63A, 3P-32A MCBs-1, and 6 Nos.2 pole 32 Amps MCBs, Digital Volt meter, Digital Ammeter in powder coating & Led indication lamps, CTs 125/5A at incomimg to MCCB includingmounting on channel including giving all connections as per dirctions of Engineer - in Charge	Each	1
12 (a)	Excavation of earth pit, putting cast iron pipe with flange on one end (as per ISS 718/74) of nominal dia 150 mm and 2.75 meters long (for PTR neutral and LAs) inside the pit and back filling the pit with bentonite compound and black cotton soil, and filling the earth pit with Bentonite Powder including back filling, cement collar of size 600mm dia and 600 mm height as per departmental standards, including cost of all materials, labour etc. complete.	Each Earth pit	2
12 (b)	Excavation of earth pit, putting cast iron pipe with flange on one end (as per ISS 718/74) of nominal dia 80 mm and 2.5 meters long (for the balance earth electrodes) inside the pit and back filling the pit with bentonite compound and black cotton soil, and filling the earth pit with Bentonite Powder including back filling, cement collar of size 600mm dia and 600 mm hight as per departmental standards, including cost of all materials, labour etc. complete.	Each earth pit	8
13 (a)	Connecting of neutral of PTR to earth pit with 2 Nos 75x8mm MS Flat. Run both flats by over laping as one from neutral stud to earth pit and terminating with 2 Nos.flexible copper jumpers of size 50x6 mm 15 inches length including cost of all materials, labour etc. complete on necessary support structure with post type insulators.	RMt	16
13 (b)	Connecting of earth mat(grid) and connection between earth electrodes and earth grid with 75x8mm MS Flat including cost of all materials, labour etc. complete.	RMt	300
14 (a)	Supply and erection of Sand Bucket stand with 4 Nos. buckets	Set	1
14 (b)	Supply and fixing of Co2 type Fire Extinguishers 4.5 Kg capacity confirming to IS 2878 made from ISI marked steam less cylinder confirming to IS:7285 & CE certified and fitted with ISI marked controlled valve confirming to IS:3224, high pressure 1 Mtr discharge hose & horn complete with initial gas charged with carrying handle with wheels and wall mounting bracket. Squeeze lever discharge, used unused indicator, Aphoxy coated paint (Red) with 93% gloss with 2 years warranty Safex / Kenex / Bharat / Reliance/NewTech make) Including transportation, all taxes and all labour charges etc complete.(rate as per R&B SSR 21-22, Item No.610 cat-II),	Each	3

Sl. No	Description of Item	Unit	Qty. (With 1No 5MVA PTR, 3Nos. Feeders)
14 (c)	Supply and fixing of ISI mark (IS:15683) Mono ammonium phosphate powder 90 (MAP) 4 Kg Fire extinguisher, stored pressure type, pressure gauge, gross wt. 6.9 kg, empty wt.2.9 kg, Discharge time minimum 13sec, controllable discharge mechanism, range min. 4 mts applicable on classes A,B, C & electrically started fire, A rating -3 A, B rating -34 B, can construction: Deep drawn and Co2 mig welding, Valve construction: Forging & Machining, internal coating of can: Epoxy powder coating, External coating of Can:Epoxy polyster powder coating, sheet metal thickness:1.60mm, Helium leak detection tested with 5 years warranty Including transportation, all taxes and all labour charges etc complete.	Each	2
15 (a)	Supply of tools - Standard Tool Box with Taparia make Tools consisting of tools and plant as per Annexure **1** of the Technical specification in section 5	Set	1
15 (b)	Earth Discharging rods of 10 feet long for HT/LT lines made out of cane stick in PVC Pipe 32mm dia and 2 mm thick, fully covered, at one end fixed with copper strip of size 25X3 mm of 250mm length by 2 Nos. brass bolts and wing nuts with washers having 6 Sqmm PVC flexible copper wire of 20 Mt length.	Each	2
16	Supply and erection of Synthetic Rubber Mats as Per IS 15652 in control room 2.5 mm thick	Sqmtr	30
17	Supply & erection of Yard lighting supports including pit excavation and Concreting 0.6x0.6x1.5Mts. with C.C.(1:3:6) using 20 mm and 12mm HBG metal with 8.0Mtrs/200 Kg WL PSCC Poles (Poles are to be supplied by the contractor) includes loading unloading and transportation.	Each	5
18	Supply & installation of 60W LED Street light Luminaire made of pressure diecast alluminium body with powder coated, having protective toughned glass, Supply Input voltage 120 - 270 V AC, P.F > 0.90, high power LED's having System efficacy > 100 lm/W and junction temprature < 70°C, with Ingrees protection IP66, Luminaire performance complies to IS 10322 (Part 5/Sec-3), Driver surge protection 4KV, In house additional Surge protection 10 KV with optics distribution , THD<10% at 110 Volts AC, driver efficiency >90%, CCT: 3000K - 5700K, minimum CRI>70, etc., complete a) LUMINAIRE MAKE : Wipro(Skyline) / Philips (Green line) / GE-Venture / Crompton(Neo Series) / Bajaj (Edge) / Halonix(Lumos - Super) / Havells (Endura Series) /Capart(Premium)/Greenlites(Hi-Lux) /Polycab/Keselec/ HPL(City Vision)/ Jaquar(Premium)/Eveready/ Surya (Pollux) / FortuneArrt (Leaf) b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG / LG by using LT AC cable 2 core 6 Sq.mm, GI Pipe 3/4" dia, MS Clamp set to Hold GI Pipe with Bolt & Nuts, 155 X 210 X 92 Size thermo plastic cable junction boxes with IP66/67 weather proof, for outdoor installation with konckouts for cable entry including terminals etc., complete (sizes in mm) Make : Hensel/Sadhrish, along with 5 Amp Fuse Unit.	Each	5

Sl. No	Description of Item	Unit	Qty. (With 1No 5MVA PTR, 3Nos. Feeders)
19	Supply and fixing of 125 mm dia 3 mm thick GI Pipe Vertically from bottom to top of DP and laying of 33KV/11KV UG cable through pipes in complete shape for cable take off / tapping arranements	RMt	25
20	Supply and erection of line DP structure with poles as per drawing enclosed (fixing of 2Nos 100x50mm MS channel cross arm at top and 2nos 100x50mm MS channel crossarms at bottom & 2nos 65x65x6mm MS angle for brasing with necessary back clamps with 75x8mm MS flat at various locations including supply and erection of 6Nos. 33KV Ploymer disc insulators with hard ware including jumpering providing suitable size alluminium T' clamps (but excluding concreting of poles) including supply and erection of 1 No. CI earth pipe with flange (80mm dia, 2.5Mt long) as per drawing, double earthing should be done for all the structure parts including AB switch with 4mm GI wire and coil earthing is to be done for AB switch handle erection of earth pipe and supply and refiling the earth pit with bentonite compound and black cotton soil (in 1:6 ratio) and giving connections as per departmental standards as per drawing enclosed spun pipe of 2 feet dia. and 2 feet height (cement collar) shall be provided around each earth electrode and all the earth wires should run through 1"dia PVC pipe 3' above the ground level and 2' below the grond level along the pole (wherever alluminium feerules are used, alluminium tape is to be wound over the conductor to have better grip). Line D.P. with A.B.Switch with 12.5Mts Spun poles for 33KV cable incoming AB switch	Each	1
21	Supply and erection of line DP structure with poles as per drawing enclosed (fixing of 2Nos 100x50mm MS channel cross arm at top and 2nos 100x50mm MS channel crossarms at bottom & 2nos 65x65x6mm MS angle for brasing with necessary back clamps with 75x8mm MS flat at various locations including supply and erection of 6Nos. 33KV Ploymer disc insulators with hard ware including jumpering providing suitable size alluminium T' clamps (but excluding concreting of poles) including supply and erection of 1 No. CI earth pipe with flange (80mm dia, 2.5Mt long) as per drawing, double earthing should be done for all the structure parts including AB switch with 4mm GI wire and coil earthing is to be done for AB switch handle erection of earth pipe and supply and refiling the earth pit with bentonite compound and black cotton soil (in 1:6 ratio) and giving connections as per departmental standards as per drawing enclosed spun pipe of 2 feet dia. and 2 feet height (cement collar) shall be provided around each earth electrode and all the earth wires should run through 1"dia PVC pipe 3' above the ground level and 2' below the grond level along the pole (wherever alluminium feerules are used, alluminium tape is to be wound over the conductor to have better grip). Line D.P. with A.B.Switch with 11.0Mts Spun poles for 11KV outgoing AB switches	Each	3

Sl. No	Description of Item	Unit	Qty. (With 1No 5MVA PTR, 3Nos. Feeders)
22	Supply, erection, testing and commissioning of 220V, 80AH sealed, maintenance free battery set with chargers & **DCDB** and supporting structure complete including supply, erection, testing and commissioning of float/boost chargers suitable for the above batteries with necessary panels as per the technical specification. includes loading unloading and transportation.	Each	1
23	Supply and fixing of chequered plates for closing the cable duct including drilling,welding,grouting , holes etc and painting with two coats synthetic enamel paint over a coat of red oxide includes loading unloading and transportation.	Kg	320
24	Geotagging of 33/11KV Substation including all equipments details-Locating Co-ordinates(Lattitude & Longitude) using GPS , Collection/Updation of attribute data base of Electrical Network through field survey , development, codification mapping & indexing with their upstream source of supply and Collecting GIS co-ordinates of each asset in Substation , collect attribute information and the SLD approval to be taken from Engineer in Charge for up loading the data.	Nos	1
25	Supply and fixing of 2 Nos. earths for each SS with Rail pole 90 lb rail poles of each minimum of 14 mts length (jointing 2 Nos 7 mts rail poles) for earthing duly drilling of bore well pneumatic compressor of bore 6 1/2 " dia suitable for 6" , 14Mts length M.S.casing pipe (7M each earthing) including cost of T & P and labour and watering arrangement for improving earth resistance and filling the earth pit with Bentonite Powder including back filling, cement collar of size 600mm dia and 600 mm hight as per departmental standards, including cost of all materials, labour etc. complete.	Set	1
26	Supply and Fixing of Danger Notice Board of size 250x200mm for high voltage system, the plate shall be made from mild steel sheet of at least 1.6mm thick and vitreous enameled white, with letters, figures and the conventional skull and cross-bones in signal red colour (refer IS:5-1978) on the front side. The rear side of the plate shall also be enamelled and also the corners of the plate shall be rounded off as per the specification IS:2551-1982	Each	2

Erection of 1-Ph DTRs			1
Item No.	**Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)**	**Unit**	Total Qty
	Erection of 1 Phase 16 KVA DTRs and structure materials		
1	Excavation of pits in all soils, i.e, mixture of gravel and soft disintegrated rock like shales ordinary gravel, stony earth and earth mixed with fair sized boulders except hard rock which requires blasting and drilling.		
1.1	For 8m PSCC Poles (Size of pit is 2'x2'x5' or 0.6mx0.6mx1.5m)	Pit	1
1.2	For 9.1m PSCC Poles (Size of pit is 2'x2'x5' or 0.6mx0.6mx1.5m)	Pit	1
2	Erection of PSCC Poles in position, aligning and setting to work as per specification including supply of labour, T&P, back filling the earth, ramming for consolidation,Cost of transportation of Pole of up to pit location fixing earth coils wherever necessary and Geotagging of all all poles -Locating Co-ordinates(Lattitude & Longitude) using GPS as per Technical specification but excluding the cost of pit excavation.		
2.1	8m/200 KG PSCC Pole	Each	1
2.2	9.1m/280 KG PSCC Pole	Each	1
3	Concreting of the pole locations of pit size 0.6x0.6x1.5Mts. with 1:3:6 cement concreting mix using 20mm HBG metal including cost of all the materials i.e. cement, sand, HBG metal etc. including dewatering, shoring & shuttiring, including seigniorage charges and curing after concreting as per technical specification including DPs & Single Pole Structures and other location wherever necessary. (For 9.1 Mts PSCC Poles)	Each	1
4	Erection and commissioning of 1Ø 16 KVA Distribution Transformer on structure carefully without causing any damage to bushing including labour and transport to site from stores complete including earthing as per department standards and Geotagging -Locating Co-ordinates(Lattitude & Longitude) using GPS as per Technical specification and drawing	Each	1
5	Erection of 6.3 KV S-Ph AB switch complete with polymer insulators with operating pipe with earthing arrangement and necessary jumpers with fixing of necessary mounting arrangements, supporting M.S channel with back clamp for fixing of Insulators,double earthing incl supply of Bolts, Nuts & Washers, cost of Jumpers as per Technical specification and drawing which includes fabrication charges,painitng and consumables but excluding the cost of M.S. Materials	Each	1
6	Erection of 6.3 KV HG Fuse sets complete with double earthing as per specification and drawing	Each	1
7	Erection of Stay clamp set for fixing of 11 KV Polymer Disc Insulators	Each	1
8	Erection of 11KV Top cleat with clamp incl supply of Bolts, Nuts & Washers as per Specification and drawing	Each	1
9	Fixing of 11 KV Polymer Insulators with pin binding	Each	1
10	Fixing of 11 KV Polymer Disc Insulators with metal parts	Each	1
10	Erection of SP Structure (seating arrangement) complete for mounting 1-Ph 16KVA Transformer including earthing as per departmental standards with 75x40mm MS Channels, 50x50x6mm MS Angles and 50x6mm MS flat as per specification which includes supply of M.S. Bolts , Nuts and Washers, fabrication charges,painitng and consumables but excluding the cost of M.S. Materials	Each	1

Item No.	Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)	Unit	Total Qty
11	***LT Distribution box & Terminal arrangements***		
11.1	Erection of Distribution box with 100A, 500V Knife type Fuse Units for 1-Feeder (SMC) for 1-Ph DTRs incl supply of Bolts, Nuts & Washers and cost of fabrication charges for labour and consumables as per as per specification and drawing.	Each	1
11.2	Erection of LT terminal arrangements with Single core 50 Sq.mm LT XLPE Cable from LT bushing of DTR to LT Distribution box and from LT Distribution box to OH line through the DTR LV CT Meter including including transport, **supply** & fixing of plastic cleats at equal intervals mounted on 4nos angle cross arms of 25x25x3mm size for running LT XLPE cable neatly as per departmental standards so that cable load is not incident either on OH line or on fuse box. Aluminium lugs of suitable size are to be supplied for each phase of distribution box at Incoming and out going terminals and crimped properly using crimping tool as per departmental standards as per Technical specification	Each Loc	1
12	Fixing of LT Side arm with Struts with back clamps and strut clamps suitable for LT Take off arrangement,with 50x50x6mm MS Angles and 50x6mm MS flat as per specification which includes supply of M.S. Bolts , Nuts and Washers, fabrication charges,painitng and consumables but excluding the cost of M.S. Materials as per specification and drawing.	Each	1
13	Fixing of LT Shackle Insulators with metal parts including binding wherever necessary as per specification.	Each	2
14	Earthing with 25x3mm GI flat duly earthing of DTR Structure equipment, and DTR as per Specification including erection of 2nos GI pipes, 40 mm dia., 1.8 Mt. Long including supply of bentonite powder and mixing soil with ratio 1:6 and giving connections etc., as per departmentat standards. for SPh DTRs incl supply of Bolts, Nuts & Washers and cost of fabrication charges for labour and consumables & supply of 2 Nos Earth Pit Collars (2Ft x 2 Ft) as per specification	Each Loc	1
15	Fixing of sign board of weather proof plate of size 1 feet x 1 feet made of CR sheet 14 guage (1.6mm) at DTR loacations as per the drawing including transport asper specification	Each	1
16	Fixing of Danger Notice Board of size 250x200mm for high voltage system incl supply of Bolts , Nuts & Washers	Each	1

BoQ - Supply of material for 33KV Overhead Lines with 100sq.mm. AAA Conductor over 12.5Mtrs SPUN Poles

KM 10

Sl. No	Qty per KM	Cost Data Qty	Description of Goods (including inland transportation, Loading & unloading and other services required in India to convey the goods to their final destination)	Unit	Qty per 10 KM
1	18	18	Supply of 12.5 Mts./350 Kgs Spun Poles as per specification and drawing.	Each	180
2	6	4	Supply of 9.1 Mts./280 Kgs PSCC Poles as per specification and drawing.	Each	60
3	16	16	Supply of **33KV V cross arm** with 100x50mm MS channel with curved clamp welding to be done for more grip and Back Clamp with 75x8mm MS flat for 12.5/11mts spun poles as per Specification and drawing.	Each	160
4	16	16	Supply of **33KV top cleat** (65x65x6mm MS angle) without Backclamp for 12.5/11 Mts Spun poles as per specification and drawing.	Each	160
5	1	3	Supply of **Horizontal Cross arm** with 100x50mm MS channel with curved clamp welding to be done for more grip and Back clamp with 75X8mm MS Flat as per specification and drawing		10
6	122		Supply of M.S. Channel 100X50 mm as per Technical Specification	Kgs	1220
7	44		Supply of M.S. Angle 65X65X6 mm as per Technical Specification	Kgs	440
8	58		Supply of M.S. Flat 75X8 mm as per Technical Specification	Kgs	580
9	6		Supply of Stay Clamps with 75X8mm MS Flat Including Bolts & Nuts for 12.5 Mts SPUN pole for strut poles	Set	60
10	6		Supply of Stay Clamps with 75X8mm MS Flat Including Bolts & Nuts for 9.1Mts PSCC Pole for strut poles	Set	60
11	51	48	Supply of 33 KV Polymer Pin Insulator with GI Pins as per Specification and drawing.	Each	510
12	15	12	Supply of 33 KV Polymer Disc Insulators with metal parts (B&S Type) as per Specification and drawing..	Each	150
13	3.06	3.06	Supply of 100 Sqmm AAAConductor as per Specification and drawing.	Km	30.60
14	12		Supply of Aluminium T Clamps for 100sq.mm AAA conductor as per Specification and drawing. (6 Nos T Clamps shall be used for each cutpoint , for double jumpering work for cutpoints)	Each	120

Sl. No	Qty per KM	Cost Data Qty	Description of Goods (including inland transportation, Loading & unloading and other services required in India to convey the goods to their final destination)	Unit	Qty per 10 KM
15	4.8		Supply Pad Clamps suitable for AB Switch (12 Nos Pad Clamps shall be provided at each AB Switch for double jumpering)	Each	48
16	0.4		Supply of 33 KV 800 A double break pipe type AB Switch as per Specification and drawing.	Nos	4
17	0.4		Supply of 40 mm, 1.8Mts GI Earth Pipe as per Specification and drawing.	Nos	4
18	4		Supply of GI wire No.8 as per Specification	Kgs	40
19	18		Supply of Spiral earth coil as per Specification and drawing.	Nos	180
20	1		Supply of Danger Boards fabricated with MS Sheet of size minimum 250x200mm and thickness minimum 1.6 mm with conventional skull and cross-bones in accordance with IS:2551-1982 or the latest version	Each	10
21	1	-	11 KV Horizontal Cross Arm with 75 X 40 mm MS Channel with curved clamp welding to be done for more grip with 50x6 mm MS Back Clamp and MS Back clamp with 50 x6 mm MS Flat	Each	10
22	3	-	Supply of 11 KV Polymer Pin Insulators with GI Pins as per specification	Each	30
23	1	-	Supply of LT 3-ph 5 W Cross arm with 50x6 mm MS Back clamps suitable for SPUN Poles as per drawing and specification	Each	10
24	4	-	Supply of LT Pin Insulators with GI Pins as per specification	Each	40
25	18		Supply of Foot Cross arm with 50X50X6 mm MS Angle of 0.61Mts.(2feet) Long with Back Clamp suitable for 12.5 Mts SPUN Pole		180
26	5		Supply of Guarding with suitable GI wire, along with necessary supporting channels as per specifications at all the crossings of over-head power lines with roads and telecommunication lines whereever mandatatory as per safety rules .	RMT	50

Note : 1. If specifications & drawings are not provided in the Bid document for any BoQ items, relavant REC specifications & Drawings shall be followed

2. For Iron materials only Net weight of the finished products will be considered billing purpose. Bidders are requested to quote the prices

BOQ- ERECTION of 33 KV Line on 12.5 mtrs SPUN Poles with 100Sq.mm AAA conductor -For 10 Km

KM 10

Sl. No	Qty per KM	Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)	Unit	Qty per 10 KM
1	1	Detailed GIS Survey, pit marking and way leaves Clearence including Clearing of heavy jungle, Cutting and removing other kind of trees	Km	10.00
2		Excavation of pits in all soils, i.e, mixture of gravel and soft disintegrated rock like shales ordinary gravel, stony earth and earth mixed with fair sized boulders except hard rock which requires blasting and drilling.		
2.1	6	For 9.1m PSCC Poles (Size of pit is 2'x2'x5' or 0.6mx0.6mx1.5m)	Pit	60
2.2	17	12.5m Spun Poles (2'6"x2'6"x7' or 0.75mx0.75mx2.1m)	Pit	170
3		Excavation of pole pit in hard rock by drilling where blasting is not possible		
3.1	1	12.5m Spun Poles (2'6"x2'6"x7' or 0.75mx0.75mx2.1m)	Pit	10
4		Erection of PSCC/Spun Poles in position, aligning and setting to work as per specification including supply of labour, T&P, back filling the earth, ramming for consolidation,Cost of transportation of Pole of up to pit location fixing earth coils wherever necessary and Geotagging of all all poles -Locating Co-ordinates(Lattitude & Longitude) using GPS as per Technical specification but excluding the cost of pit excavation.		
4.1	6	9.1m/280 KG PSCC Pole	Each	60
4.2	18	12.5 Mts SPUN Poles	Each	180
5	18	Concreting of the pole locations of pit size 0.75x0.75x2.1Mts. up to 0.1Mts. as base concrete before erecting the pole and 2Mts. upto ground level after erecting the pole as pole concrete for **12.5 Mtr Spun** pole with 1:3:6 cement concreting mix using 20mm HBG metal including cost of all the materials i.e. cement, sand, HBG metal etc. including dewatering, shoring & shuttiring and curing after concreting as per technical specification including DPs & Single Pole Structures and other location wherever necessary.	Each	180
6	16	Erection of **33KV V cross arm** with 100x50mm MS channel and Back Clamp with 75x8mm MS flat incl. Cost of Bolts , Nuts and washers as per Specification and drawing.	Each	160
7	16	Erection of **33KV top cleat** (65x65x6mm MS angle) with clamp incl. Cost of Bolts , Nuts and washers as per specification and drawing	Each	160

BOQ- ERECTION of 33 KV Line on 12.5 mtrs SPUN Poles with 100Sq.mm AAA conductor -For 10 Km

KM 10

Sl. No	Qty per KM	Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)	Unit	Qty per 10 KM
8	1	Erection of **Horizontal Cross arm** with 100x50mm MS channel and Back clamp with 75X8mm MS Flat incl. supply of Bolts , Nuts & washers as per specification and drawing	Each	10
9	224	Erection of all types of fabricated cross arms in complete shape with M.S Channel including M.S Angle struts, M.S Flat Clamps & Fish plates other than V Cross arm and Horizontal cross arm as per the drawing and specification provided by the Engineer In charge as per the field condition after completion of field survey (Ex: VF, Cut Point , Rising Cross arm , Side arm ..etc) which includes the cost of fabrication charges , paint and other consumables, MS Bolts & Nuts and washers which also includes the cost of labour , transport and stacking charges to the site but excludes the cost of M.S Materials (M.S Channel , M.S Angle , M.S Flat as required)	Kgs	2240
10	51	Fixing of 33 KV Polymer Disc Insulators with metal parts	Each	510
11	15	Fixing of 33 KV Polymer Insulators with pin	Each	150
12	3	Paving out and stringing the 100 Sqmm AAAC (1 Wire) over existing supports / newly erected supports and transport to the location and handling charges including pin binding with re-inforcement pieces , jointing, clamping, double jumpering and strain insulator binding etc duly maintaining ground clearances as per IE rule and providing sutable size aluminium T clamps wherever jumpering is required and providing sutable aluminium double ferrule wherever mid span jointing is required duly following the technical specification (wherever aluminium T clamps are used , aluminium tape of 1mm thick is to be wound in 3 layers over the conductor to have better grip and contact)	km	30
13		**Erection of 33 KV Line DP Structure :** Fixing of Base channels, Angle struts, Clamps for AB switch structure and operating pipe and earthing as per the drawing which includes the cost of MS Bolts, Nuts & Washers , bentonite powder , Earth pit collar (2 ft x 2 ft), fabrication charges,consumables and labour & transport charges excluding the cost of AB switch and MS Channels, Angles, Flat and GI Pipe & GI Wire No.8.		
13.1	0.2	Line D.P. with A.B.Switch over 12.5 Mts Spun poles with AB switch .	Each	2

BOQ- ERECTION of 33 KV Line on 12.5 mtrs SPUN Poles with 100Sq.mm AAA conductor -For 10 Km

KM 10

Sl. No	Qty per KM	Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)	Unit	Qty per 10 KM
13.2	0.2	Line D.P. without A.B.Switch over 12.5 Mts Spun poles with 3 Nos. 33KV Polymer Pin Insulator with GI Pins	Each	2
14	18	Numbering of poles with white paint and AC black paint as back ground including supply of materials	Each	180
15	1	Erection of 11 KV Horizontal Cross Arm with 75 X 40 mm MS Channel with curved clamp welding to be done for more grip with 50x6 mm MS Back Clamp and MS Back clamp with 50 x6 mm MS Flat incl. supply of Bolts (5/8" X 3 ") , Nuts & Washers	Each	10
16	3	Fixing of 11 KV Polymer Insulators with pin binding with re-inforcement pieces	Each	30
17	1	Fixing of LT 3-Ph 5 wire cross arm with back clamps suitable for SPUN poles as per specification incl supply of Bolts , Nuts & Washers	Each	10
18	4	Fixing of LT Pin insulators with GI Pins as per specification	Each	40
19	18	Fixing of Foot Cross arm with 50X50X6 mm MS Angle of 0.61Mts.(2feet) Long with Back Clamp, incl supply of Bolts , Nuts & Washers for all the poles	Each	180
20	1	Fixing of Danger Notice Board of size 250x200mm for high voltage system incl supply of Bolts , Nuts & Washers	Each	10
21	5	Erecton of Guarding with suitable GI wire, along with necessary supporting channels as per specifications at all the crossings of over-head power lines with roads and telecommunication lines whereever mandatatory as per safety rules incl supply of Bolts , Nuts & Washers .	RMT	50

Note : 1.If specifications & drawings are not provided in the Bid document for any BoQ items,, relavant REC specifications & Drawings shall be followed.

BOQ- Supply of Materials for 11 KV Line on 11 mtrs SPUN Poles with 100Sq.mm AAA conductor -For 10 Km

Total CKM **10**

Line Item No.	11 mtrs SPUN Poles with 100 Sq.mm per KM Qty	Cost Data Qty	Description of Goods (including inland transportation, Loading & unloading and other services required in India to convey the goods to their final destination)	Unit	Quantity for 10 KM
1	21	22	Supply of 11 M long SPUN pole as per Specification and drawing	Each	210
2	4	4	Supply of 9.1M 280Kg WL PSCC Poles as per Specification and drawing	Each	40
3	18	20	Supply of 1.07 Mtrs. V 'X' arms for spun poles with curved clamp welding to be done for more grip to the 75x40 MS Channel and Back Clamp with 50X6 mm MS Flat for 11 Mts SPUN Poles as per specification and drawing	Set	180
4	18	20	Supply of 11 KV Top Cleat without Clamp as per specification and drawing	Each	180
5	1	3	Supply of **1.5 Mtrs 11KV Tapping cross Arm** made up of 100X50 mm MS Channel with curved clamp welding to be done for more grip and Back Clamp made up of 75X8 mm MS Flat for 11 Mts SPUN Poles as per specification and drawing	Each	10
6	65	-	Supply of M.S. Channel 75X40 mm as per Technical Specification	Kgs	650
7	36	-	Supply of M.S. Angle 50X50X6 mm as per Technical Specification	Kgs	360
8	30	-	Supply of M.S. Flat 50X6 mm as per Technical Specification	Kgs	300
9	2	4	Supply of Stay set with Clamps complete including bow,binding of eye bolts, anchor rods, guy insulators and GI Stay wire 7/3.15 mm (with base plate) as per specification	Each	20
10	4		Supply of Stay Clamps for 11.0 Mts SPUN pole with 75X8mm MS Flat Including Bolts & Nuts for strut poles	Set	40
11	4		Supply of Stay Clamps for 9.1Mts PSCC Pole with 75X8mm MS Flat Including Bolts & Nuts for Strut poles	Set	40
12	57	60	Supply of 11KV Polymer insulators with pins as per specification.	Each	570
13	12	12	Supply of 11KV Polymer Disc Insulators (B&S) with metal parts (B&S) suitable for 100 Sqmm AAAC as per specification.	Each	120

Line Item No.	11 mtrs SPUN Poles with 100 Sq.mm per KM Qty	Cost Data Qty	Description of Goods (including inland transportation, Loading & unloading and other services required in India to convey the goods to their final destination)	Unit	Quantity for 10 KM
14	21		Supply of Spiral earth coil as per Specification	Each	210
15	3.06		Supply of 100Sq.mm AAA Conductor	KM	30.6
16	8.4		Supply of Aluminium T Clamps for 100sq.mm AAA conductor (6 Nos T Clamps shall be used for each cutpoint, for double jumpering work for cutpoints)	Each	84
17	4.8		Supply Pad Clamps suitable for AB Switch (12 Nos Pad Clamps shall be provided at each AB Switch for double jumpering)	Each	48
18	0.4		Supply of 11 KV Isolators (400 A) double break with Post type Insulator as per specifications and drawing.	Each	4
19	0.4		Supply of 40 mm, 1.8Mts GI Earth Pipe as per Specification and drawing.	Each	4
20	4		Supply of GI wire No.8 as per Specification	Kgs	40
21	21		Supply of Foot Cross arm with 50X50X6 mm MS Angle of 0.61Mts.(2feet) Long with Back Clamp	Each	210
22	1	-	Supply of Danger Board 250x200mm for high voltage system, the plate shall be made from mild steel sheet of at least 1.6mm thick and vitreous enameled white, with letters, figures and the conventional skull and cross-bones in signal red colour (refer IS:5-1978) on the front side. The rear side of the plate shall also be enamelled and also the corners of the plate shall be rounded off as per the specification IS:2551-1982	Each	10
23	1	-	Supply of LT 3-ph 5 W Cross arm with 50x6 mm MS Back clamps suitable for SPUN Poles as per drawing and specification	Each	10
24	4	-	Supply of LT Pin Insulators with GI Pins as per specification	Each	40
25	5	-	Supply of Guarding with suitable GI wire, along with necessary supporting channels as per specifications at all the crossings of over-head power lines with roads and telecommunication lines whereever mandatatory as per safety rules .	RMT	50
			Total Supply		

Note : 1. If specifications & drawings are not provided in the Bid document for any BoQ items, relavant REC specifications & Drawings shall be followed.

2. For Iron materials only Net weight of the finished products will be considered billing purpose. Bidders are requested to quote the prices of raw materials accordingly.

BOQ- ERECTION of 11 KV Line on 11 mtrs SPUN Poles with 100Sq.mm AAA conductor -For 10 Km

Total CKM **10**

Line Item No.	Per kM Qty	Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)	Unit	Quantity
1	1	Detailed GIS Survey, pit marking and way leaves Clearence including Clearing of heavy jungle, Cutting and removing other kind of trees	KM	10.00
2	-	Excavation of pits in all soils, i.e, mixture of gravel and soft disintegrated rock like shales ordinary gravel, stony earth and earth mixed with fair sized boulders except hard rock which requires blasting and drilling.		
2.1	4	For 9.1m PSCC Poles (Size of pit is 2'x2'x5' or 0.6mx0.6mx1.5m)	Pit	40
2.2	20	11m Spun Poles (2'6"x2'6"x6' or 0.75mx0.75mx1.8m)	Pit	200
3	-	Excavation of pole pit in hard rock by drilling where blasting is not possible		
3.1	1	11m Spun Poles (2'6"x2'6"x6' or 0.75mx0.75mx1.8m)	Pit	10
4	2	Excavation of Stay pit size 0.45 x 0.45 x 1.34 Mts in all soils except hard murrum and disintegrated rock which requires blasting	Pit	20
5	-	Erection of PSCC/Spun Poles in position, aligning and setting to work as per specification including supply of labour, T&P, back filling the earth, ramming for consolidation,Cost of transportation of Pole of up to pit location fixing earth coils wherever necessary and Geotagging of all all poles -Locating Co-ordinates(Lattitude & Longitude) using GPS as per Technical specification but excluding the cost of pit excavation.		
5.1	4	9.1m/280 KG PSCC Pole	Each	40
5.2	21	11m/350KG Spun pole	Each	210
6	2	Erection of MS Stay Set with HT Guy Insulator and 7/3.15mm GI stay wire Complete as per Drawing where ever necessary including Erection of anchor rod and anchor plate in the pit, and connecting the stay to the pole as per departmental standards but excluding excavation of Stay pit of size 0.45x0.45x1.34Mts incl supply of Bolts, Nuts & Washers.	Each	20
7	21	Concreting of the pole locations of pit size 0.75x0.75x1.8Mts. up to 0.1Mts. as base concrete before erecting the pole and 1.7Mts. upto ground level after erecting the pole as pole cocrete with 1:3:6 cement concreting mix using 20mm HBG metal including cost of all the materials i.e. cement, sand, HBG metal etc. including dewatering, shoring & shuttiring, including seigniorage charges and curing after concreting as per technical specification including DPs & Single Pole Structures and other location wherever necessary	Each	210
8	2	Concreting of 33KV/11KV/LT Stay locations wherever necessary for anchor rod of the stay set up to ground level of size 0.45x0.45x1.34Mts. with 1:3:6 cement concreting mix using 20 mm and 12mm HBG metal including cost of all the materials i.e. cement, sand, HBG metal etc. including dewatering, shoring & shuttiring, including seigniorage charges and curing after concreting as per technical specification including DPs & Single Pole Structures and other location wherever necessary.	Each	20

Line Item No.	Per kM Qty	Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)	Unit	Quantity
9	18	Erection of 1.07 Mtrs. V 'X' arms for spun poles with curved clamp welding to be done for more grip to the 75x40 mm MS Channel and Back Clamp with 50X6 mm MS Flat incl. supply of Bolts (5/8" X 3 ") , Nuts & Washers as per Specification and drawing	Each	180
10	18	Erection of 11KV Top cleat incl supply of Bolts, Nuts & Washers as per Specification and drawing	Each	180
11	1	Erection of 1.5 Mtrs 11KV Tapping cross Arm made up of 100X50 mm MS Channel and Back Clamp made up of 75X8 mm MS Flat incl. supply of Bolts (5/8" X 3 ") , Nuts & Washers as per Specification and drawing.	Each	10
12	131	Erection of all types of fabricated cross arms in complete shape with M.S Channel including M.S Angle struts, M.S Flat Clamps & Fish plates other than V Cross arm and Horizontal cross arm as per the drawing and specification provided by the Engineer In charge as per the field condition after completion of field survey (Ex: VF, Cut Point , Rising Cross arm , Side arm ..etc) which includes the cost of fabrication charges , paint and other consumables, MS Bolts & Nuts and washers which also includes the cost of labour , transport and stacking charges to the site but excludes the cost of M.S Materials (M.S Channel , M.S Angle , M.S Flat as required)	Kgs	1,310
13		**Erection of Line DP Structure/SP structure with 11 KV 400 A AB switch :** Fixing of Base channels, Angle struts, Clamps for AB switch structure and operating pipe and earthing as per the drawing which includes the cost of MS Bolts, Nuts & Washers , bentonite powder , Earth Pit collar (2 ft x 2 ft) , fabrication charges,consumables and labour & transport charges excluding the cost of AB switch and MS Channels, Angles, Flat and GI Pipe & GI Wire No.8.		-
13.1	0.2	Line **DP** structure with AB switch	Each	2
13.2	0.2	Line **SP** structure with AB switch **(Whereever erection of DP structure is not feasible)**	Each	2
14	3.00	Paving out and stringing the 100 Sqmm AAAC over existing supports / newly erected supports and transport to the location and handling charges including pin binding with re-inforcement pieces, jointing, clamping, jumpering an strain insulator binding etc duly maintaining standerd ground clearances and providing sutable size alluminium T clamps wherever jumpering is required and providing sutable alluminium double ferrule wherever mid span jointing is required duly following the technical specification (wherever alluminium T clamps are used , alluminiam tape of 1mm thick is to be wound in 3 layers over the conductor to have better grip and contact).	Conductor KM	30
15	57	Fixing of 11 KV Polymer Insulators with pins	Each	570
16	12	Fixing of 11 KV Polymer Disc Insulators with metal parts	Each	120
17	21	Fixing of Foot Cross arm with 50X50X6 mm MS Angle of 0.61Mts.(2feet) Long with Back Clamp, incl supply of Bolts , Nuts & Washers for all the poles	Each	210
18	1	Fixing of Danger Notice Board of size 250x200mm for high voltage system incl supply of Bolts , Nuts & Washers	Each	10

Line Item No.	Per kM Qty	Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)	Unit	Quantity
19	21	Numbering of poles with AC Black paint back ground and numbering with white paint including cost of all materials .	Each	210
20	1	Fixing of LT 5 wire cross arm with back clamps suitable for SPUN poles as per specification incl supply of Bolts , Nuts & Washers	Each	10
21	4	Fixing of LT Pin insulators with GI Pins as per specification	Each	40
22	5	Erecton of Guarding with suitable GI wire, along with necessary supporting channels as per specifications at all the crossings of over-head power lines with roads and telecommunication lines whereever mandatatory as per safety rules incl supply of Bolts , Nuts & Washers .	RMT	50
		Total Ex-works		

Note : 1.If specifications & drawings are not provided in the Bid document for any BoQ items,, relavant REC specifications & Drawings shall be followed.

BOQ Supply of Materials for 11 KV Line on 9.1 mtrs PSCC Poles with 100Sq.mm AAA conductor-For 10 KM

Total CKM **10**

Line Item No.	9.1 mtrs PSCC Poles with 100 Sq.mm	Cost Data Qty	Description of Goods (including inland transportation, Loading & unloading and other services required in India to convey the goods to their final destination)	Unit	Quantity for 10 KM
1	21	22	Supply of 9.1M 280Kg WL PSCC Poles as per Specification and drawing	Each	210
2	4	4	Supply of 8.0 Mts long 200KG WL PSCC poles as per Specification and drawing	Each	40
3	18	20	Supply of 1.07 Mtrs. V 'X' arms With Back Clamp made up of 75X40 mm MS Channel and 50X6 mm MS Flat as per specification and drawing for 9.1 Mtrs PSCC Pole	Set	180
4	18	20	Supply of 11 KV Top Cleat with MS Back Clamp 50x6 mm MS Flat for 9.1 Mts PSCC Pole as per specification and drawing	Each	180
5	1	3	Supply of **1.5 Mtrs 11KV Tapping cross Arm** made up of 100X50 mm MS Channel and Back Clamp made up of 75X8 mm MS Flat for 9.1 Mts PSCC Pole as per specification and drawing	Each	10
6	65		Supply of M.S. Channel 75X40 mm as per Technical Specification	Kgs	650
7	36		Supply of M.S. Angle 50X50X6 mm as per Technical Specification	Kgs	360
8	26		Supply of M.S. Flat 50X6 mm as per Technical Specification	Kgs	260
9	2	4	Supply of Stay set with Clamps complete including bow,binding of eye bolts, anchor rods, guy insulators and GI Stay wire 7/3.15 mm (with base plate) as per specification	Each	20
10	4	4	Supply of Stay Clamps for 9.1Mts PSCC Pole with 75X8mm MS Flat Including Bolts & Nuts for strut poles	Set	40
11	4	4	Supply of Stay Clamps for 8Mts PSCC Pole with 75X8mm MS Flat Including Bolts & Nuts for strut poles	Set	40
12	57	60	Supply of 11KV Polymer insulators with pins as per specification.	Each	570
13	12	12	Supply of 11KV Polymer Disc Insulators (B&S) with metal parts (B&S) suitable for 100 Sqmm AAAC as per specification.	Each	120
14	21		Supply of Spiral earth coil as per Specification	Each	210
15	3.06	3.06	Supply of 100Sq.mm AAA Conductor	KM	30.6
16	8.4		Supply of Aluminium T Clamps for 100sq.mm AAA conductor (6 Nos T Clamps shall be used for each cutpoint, for double jumpering work for cutpoints)	Each	84

Line Item No.	9.1 mtrs PSCC Poles with 100 Sq.mm	Cost Data Qty	Description of Goods (including inland transportation, Loading & unloading and other services required in India to convey the goods to their final destination)	Unit	Quantity for 10 KM
17	4.8		Supply Pad Clamps suitable for AB Switch (12 Nos Pad Clamps shall be provided at each AB Switch for double jumpering)	Each	48
18	0.4		Supply of 11 KV Isolators (400 A) double break with Post type Insulator as per specifications and drawing.	Each	4
19	0.4		Supply of 40 mm, 1.8Mts GI Earth Pipe as per Specification and drawing.	Each	4
20	4		Supply of GI wire No.8 as per Specification	Kgs	40
21	21		Supply of Foot Cross arm with 50X50X6 mm MS Angle of 0.61Mts.(2feet) Long with Back Clamp	Each	210
22	1		Supply of Danger Board 250x200mm for high voltage system, the plate shall be made from mild steel sheet of at least 1.6mm thick and vitreous enameled white, with letters, figures and the conventional skull and cross-bones in signal red colour (refer IS:5-1978) on the front side. The rear side of the plate shall also be enamelled and also the corners of the plate shall be rounded off as per the specification IS:2551-1982	Each	10
23	1	-	Supply of LT 3-ph 5 W Cross arm with 50x6 mm MS Back clamps for 9.1 Mts PSCC pole as per drawing and specification	Each	10
24	4	-	Supply of LT Pin Insulators with GI Pins as per specification	Each	40
25	5	-	Supply of Guarding with suitable GI wire, along with necessary supporting channels , Bolts & Nuts as per specifications at all the crossings of over-head power lines with roads and telecommunication lines whereever mandatatory as per safety rules .	RMT	50
			Total Supply		

Note : If specifications & drawings are not provided in the Bid document for any BoQ items,, relavant REC specifications & Drawings shall be followed.

2. For Iron materials only Net weight of the finished products will be considered billing purpose. Bidders are requested to quote the prices of raw materials accordingly.

BOQ- ERECTION of 11 KV Line on 9.1 mtrs PSCC Poles with 100Sq.mm AAA conductor -For 10 Km

Total CKM **10**

Line Item No.	Per kM Qty	Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)	Unit	Quantity
1		2	3	4
1	1	Detailed GIS Survey, pit marking and way leaves Clearence including Clearing of heavy jungle, Cutting and removing other kind of trees	KM	10.00
2	-	Excavation of pits in all soils, i.e, mixture of gravel and soft disintegrated rock like shales ordinary gravel, stony earth and earth mixed with fair sized boulders except hard rock which requires blasting and drilling.		
2.1	4	For 8m PSCC Poles (Size of pit is 2'x2'x5' or 0.6mx0.6mx1.5m)	Pit	40
2.2	16	For 9.1m PSCC Poles (Size of pit is 2'x2'x5' or 0.6mx0.6mx1.5m)	Pit	160
3	-	Excavation of pole pit in hard rock by drilling where blasting is not possible		
3.1	1	For 9.1m PSCC Poles (Size of pit is 2'x2'x5' or 0.6mx0.6mx1.5m)	Pit	10
4	4	Excavation of pole pit in all soils with pole digging Machine	Pit	40
5	2	Excavation of Stay pit size 0.45 x 0.45 x 1.34 Mts. In all soils except hard murrum and disintegrated rock which requires blasting	Pit	20
6	-	Erection of PSCC Poles in position, aligning and setting to work as per specification including supply of labour, T&P, back filling the earth, ramming for consolidation,Cost of transportation of Pole of up to pit location fixing earth coils wherever necessary and Geotagging of all all poles -Locating Co-ordinates(Lattitude & Longitude) using GPS as per Technical specification but excluding the cost of pit excavation.		
6.1	4	8m/200 KG PSCC Pole	Each	40
6.2	21	9.1m/280 KG PSCC Pole	Each	210
7	2	Erection of MS Stay Set with HT Guy Insulator and 7/3.15mm GI stay wire Complete as per Drawing where ever necessary including Erection of anchor rod and anchor plate in the pit, and connecting the stay to the pole as per departmental standards but excluding excavation of Stay pit of size 0.45x0.45x1.34Mts incl supply of Bolts, Nuts & Washers.	Each	20

Line Item No.	Per kM Qty	Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)	Unit	Quantity
1		2	3	4
8	5	Concreting of the pole locations of pit size 0.6x0.6x1.5Mts. with 1:3:6 cement concreting mix using 20mm HBG metal including cost of all the materials i.e. cement, sand, HBG metal etc. including dewatering, shoring & shuttiring, including seigniorage charges and curing after concreting as per technical specification including DPs & Single Pole Structures and other location wherever necessary. (For 9.1 Mts PSCC Poles)	Each	50
9	2	Concreting of 11KV Stay locations wherever necessary for anchor rod of the stay set up to ground level of size 0.45x0.45x1.34Mts. with 1:3:6 cement concreting mix using 20 mm and 12mm HBG metal including cost of all the materials i.e. cement, sand, HBG metal etc. including dewatering, shoring & shuttiring, including seigniorage charges and curing after concreting as per technical specification including DPs & Single Pole Structures and other location wherever necessary.	Each	20
10	18	Erection of 1.07 Mtrs. V 'X' arms for PSCC Poles with 75x40 mm MS Channel and Back Clamp with 50X6 mm MS Flat incl supply of Bolts (5/8" X 3 "), Nuts & Washers as per Specification and drawing	Each	180
11	18	Erection of 11KV Top cleat with clamp incl supply of Bolts, Nuts & Washers as per Specification and drawing	Each	180
12	1	Erection of 1.5 Mtrs 11KV Tapping cross Arm made up of 100X50 mm MS Channel and Back Clamp made up of 75X8 mm MS Flat incl supply of Bolts (5/8" X 3 "), Nuts & Washers as per Specification and drawing.	Each	10
13	127	Erection of all types of fabricated cross arms in complete shape with M.S Channel including M.S Angle struts, M.S Flat Clamps & Fish plates other than V Cross arm and Horizontal cross arm as per the drawing and specification provided by the Engineer In charge as per the field condition after completion of field survey (Ex: VF, Cut Point , Rising Cross arm , Side arm ..etc) which includes the cost of fabrication charges , paint and other consumables, MS Bolts & Nuts and washers which also includes the cost of labour , transport and stacking charges to the site but excludes the cost of M.S Materials (M.S Channel , M.S Angle , M.S Flat as required)	Kgs	1,270

Line Item No.	Per kM Qty	Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)	Unit	Quantity
1		2	3	4
14		**Erection of Line DP Structure/SP structure with 11 KV 400 A AB switch :** Fixing of Base channels, Angle struts, Clamps for AB switch structure and operating pipe and earthing as per the drawing which includes the cost of MS Bolts, Nuts & Washers , bentonite powder , Earth Pit Collar (2 ft x 2 ft) , fabrication charges,consumables and labour & transport charges excluding the cost of AB switch and MS Channels, Angles, Flat and GI Pipe & GI Wire No.8		
14.1	0.2	Line **DP** structure with AB switch	Each	2
14.2	0.2	Line **SP** structure with AB switch **(Whereever erection of DP structure is not feasible)**	Each	2
15	3.00	Paving out and stringing the 100 Sqmm AAAC over existing supports / newly erected supports and transport to the location and handling charges including pin binding with re-inforcement pieces, jointing, clamping, jumpering an strain insulator binding etc duly maintaining standerd ground clearances and providing sutable size alluminium T clamps wherever jumpering is required and providing sutable alluminium double ferrule wherever mid span jointing is required duly following the technical specification (wherever alluminium T clamps are used , alluminiam tape of 1mm thick is to be wound in 3 layers over the conductor to have better grip and contact).	Conductor KM	30
16	57	Fixing of 11 KV Polymer Insulators with pins	Each	570
17	12	Fixing of 11 KV Polymer Disc Insulators with metal parts	Each	120
18	21	Fixing of Foot Cross arm with 50X50X6 mm MS Angle of 0.61Mts.(2feet) Long with Back Clamp, incl supply of Bolts, Nuts & Washers	Each	210
19	1	Fixing of Danger Notice Board of size 250x200mm for high voltage system incl supply of Bolts , Nuts & Washers	Each	10
20	21	Numbering of poles with AC Black paint back ground and numbering with white paint including cost of all materials .	Each	210
21	1	Fixing of LT 5 wire cross arm with back clamps suitable for PSCC poles as per specification incl supply of Bolts, Nuts & Washers	Each	10
22	4	Fixing of LT Pin insulators with GI Pins as per specification	Each	40
23	5	Erecton of Guarding with suitable GI wire, along with necessary supporting channels as per specifications at all the crossings of over-head power lines with roads and telecommunication lines whereever mandatatory as per safety rules incl supply of Bolts, Nuts & Washers	RMT	50
		Total Ex-works		

Note : 1. If specifications & drawings are not provided in the Bid document for any BoQ items,, relavant REC specifications & Drawings shall be followed.

Schedule-I : Supply and Construction of Control Room etc. for new 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Quantity
I	**Constructions of Control room**		
1	Earth work excavation in all types of soil which can be excavated with pick axes and crow bars and do not require blasting in all conditions such as dry, wet, slushy etc., upto 3m depth for foundations and depositing on bank for all lifts and with an initial lead of 10m including shoring, strutting and dewatering where ever necessary covering initial lead for foundations for finished item of work. etc as per SS - 20 B (APSS 308) as per Directions of Eng-in-Charge.	1 Cum	60.00
2	Filling with useful available excavated earth (excluding rock) in trenches, sides of foundations and basement with initial lead in layers not exceeding 15 cm thick, consolidating each deposited layer by watering and ramming including cost and conveyance of water to work site and all operational, incidental, labour charges, hire charges of T & P etc., complete for finished item of work. (APSS NO. 309 & 310) as per Directions of Eng-in-Charge.	1 Cum	50.00
3	Filling with sand in foundations and basement with initial lead in layers not exceeding 15 cm thick, consolidating each deposited layer by watering and ramming including, excluding Seionarage charges, conveyance of water to work site and all operational, incidental, labour charges, hire charges of T & P etc., complete for finished item of work. (APSS NO. 309 & 310)as per Directions of Eng-in-Charge.	1 Cum	25.00
4	Plain Cement concrete (1:4:8) using 40 mm HBG metal machine mixed laid in positions in layers not exceeding 15 Cm thickness including cost and conveyance of all materials, , water to work site and all operational, incidental, labour charges such as machine mixing of concrete laying, tamping, curing etc., complete for finished item as per Direction sof Eng-in Charge	1 Cum	10.00
5	Providing HYSD/TMT/MS Steel bars (Fe415/ Fe500 grade as per IS1786-1979) of different diameters for RCC works, including labour charges for straightening, cutting, bending to required sizes and shapes, placing in position with cover blocks of approved materials and size and tying and lap-splicing with binding wire of 18 SWG, forming grills for reinforcement work as per approved designs and drawings, including cost and conveyance of steel bars, including all wastages such as overlaps, couplings, chairs,spacer bars including cost and conveyance of binding wire, cover blocks and all incidental, operational, labour charges such as cutting, bending, placing in position, tying including sales and other taxes on all materials etc., complete for finished item of work in all floors.	1 MT	1.60
6	Providing Antitermite treatment as per IS 6315 (Part - 2) 2001 (Pre-constructional chemical treatment measures) along the internal & external vertical faces of the columns, plinth beams, basement and top surface of the basement filling below flooring bed as per the specified procedure conforming to IS 6315 (Part-2) 2001 and other relevant approved specification duly using Chlorpyriphos/ Lindane emulsifiable concentrate 20% with 1% concentration @ 7.5 Liters/ sqm of the vertical surface & @ 5.0 Liters/ sqm of the horizontal surface of the substructure to a depth of 500 mm around columns & 300 mm deep around plinth beams, basements & floor filling area including excavation channel along the wall & rodding etc & cost & conveyance of all materials to the site, cost of labour for spraying, rodding etc complete for finished item of work as per the approval of the Engineer-in-Charge	1 Sqm	40.00

Schedule-I : Supply and Construction of Control Room etc. for new 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Quantity
7	RR Masonry in CM (1:6) cost and conveyance of all materials to site and all labour charges complete for finished item of work excluding Seionarage charges as per Directions of Eng-in-Charge.	1 Cum	35.00
8	Construction of Brick masonry walls in super structure in CM 1:6 using well burnt country bricks with compressive strength not less than 35 Kg/Sqm from approved source including cost and conveyance of all materials all labour charges etc.excluding Seionarage charges , complete for finished item of work as directed by the Engineer-in Charge.	1 Cum	25.00
9	11.5 cm wide Brick masonry for super-structure on ground floor in cm (1:3) using second class traditional size bricks including cost of all materials and it's conveyance, labour and all operations for constructing half brick masonry, mixing cement mortar, curing etc.,complete. at locations given below, excluding Seionarage charges:	1 Cum	5.00
10	Filling of gravel in trenches, sicks of foundations, basements etc. of approved quality in layers not exceeding 15 c.m. thick consolidating each deposited layer by watering and ramming including cost and conveyance of gravel ,excluding seignoirage charges, water to work site and operational, incidental, labour charges etc. complete for furnished item of work	1 Cum	25.00
11	RCC M- 25 Desgin mix (380 Kg Cement) corresponding to Table 9 of IS 456 using 20mm size graded machine crushed hard granite metal (coarse aggregate) from approved quarry including cost and conveyance of all materials like cement, fine aggregate (sand) coarse aggregate, water etc., to site and including sales & other taxes on all materials excluding Seionarage charges, including all operational, incidental and labour charges such as machine mixing, laying concrete, curing and steel centering with wooden scaffolding etc.,complete but excluding cost of steel and its fabrication charges for finished item of work as directed by Engineer-in-Charge..		
i	Footings	1 Cum	4.50
ii	Plinth beams	1 Cum	2.00
iii	Lintel beams	1 Cum	1.50
iv	Columns	1 Cum	2.00
v	Piles	1 RM	40.00
vi	Pile caps	1 Cum	2.00
vii	Sunshades and Chajjas	1 Sqm	10.00
viii	Roof beams	1 Cum	2.20
ix	Roof Slab	1 Cum	4.75
12	Providing R.C.C. racks of 38mm thick with R.C.C.(1:2:4) and plastering with CM(1:3),12mm thick excluding seigniorage cost and conveyance of all materials to site and all labour charges complete excluding seionarage charges and as directed by the Engineer in charge..	1 Sqm	10

Schedule-I : Supply and Construction of Control Room etc. for new 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Quantity
13	Construction of cable duct in the control room shall be of size 300 x 300mm with PCC 1:4:8 using 40mm metal 100mm thick and 115mm thick brick masonry on 2 sides and Plastering 3 sides with CM 1:5 closing of duct with cement slabs of 50mm - thick using RCC 1:2:4 using 10mm HBG metal includes cost of all materials and labour and the cost of cement excluding seionarge charges (as per Technical specification)	RMt	5
14	Supply and keeping the 300 mm dia hume pipe in position including fixing collers etc.complete. For Running of Control Cables, XLPE Cable etc from Switch yard to Control Room, including excavation and backfilling etc	Rmt	5
15	Providing impervious coat to exposed RCC roof slab surface with CM(1:3), 20mm thick with 1kg of water proof compound per bag of cement laid over roof when it is green including cost of all materials, conveyance charges of materials and including all operational, incidental and labour charges for mixing mortar, laying, rendering smooth and thread lining, curing, rounding off junctions of wall and slab etc,, complete for finished item of work excluding Seionarage charges for finished item of work as directed by Engineer-in-Charge.. .	1 Sqm	45.00
16	Plastering to ceiling 12 mm thick in one coat in CM(1:3) with Smooth finish at all heights including cost and conveyance charges of cement and all other materials to site, scaffolding charges, seigniorage charges, incidental and operational charges, all labour charges for mixing mortar, finishing, all leads and lifts, curing, cutting grooves excluding seionarage charges etc., complete for finished item of work and as directed by the Engineer in charge.	1 Sqm	40.00
17	Plastering 12 mm thick in one coat for superstructurefor even faces of walls with CM(1:5) with smooth finish at all heights including cost and conveyance charges of cement and all other materials to site, scaffolding charges, seigniorage charges, incidental and operational charges, all labour charges for mixing mortar, finishing, all leads and lifts, curing, cutting grooves, excluding Seionarage charges etc., complete for finished item of work and as directed by the Engineer in charge	1 Sqm	120.00
18	Plastering with CM(1:5), 20 mm thick for unevenfaces of walls with sponze finish at all heights including cost and conveyance charges of cement and all other materials to site, scaffolding charges, seigniorage charges, incidental and operational charges, all labour charges for mixing mortar, finishing, all leads and lifts, curing, cutting grooves , excluding Seionarage Charges etc., complete for finished item of work and as directed by the Engineer in charge.	1 Sqm	170.00
19	Flooring with a bed of 100mm thick in CC (1:4:8) with 40mm & 20mm size HBG Metal from approved quarry including cost and conveyance charges of cement and all other materials to site, seigniorage charges, labour charges for machine mixing, laying concrete, finishing top surface to the required level, curing etc., complete for finished item of work	1 Cum	6.00

Schedule-I : Supply and Construction of Control Room etc. for new 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Quantity
20	Flooring with vitrified polished floor tiles glossy finish premium colours of size not less than 598x598mmx8mm thickness of 1st quality(make Somany,HR Jhonson,Naveen Ceramics, Kajaria, Nitco, Sphinx) set over base coat of cement mortar (1:8), 12 mm thick over CC bed already laid or RCC roof slab, including neat cement slurry of honey like consistency spread @ 3.3.kgs per sqm & jointed neatly with white cement paste to full depth mixed with pigment of matching shade, including cost of all materials like cement, sand water and tiles etc., complete, complete for finished item of work including the cost of conveyance of all materials excluding Seionarage charges etc., complete for finished item of work and as directed by the Engineer in charge.	1 Sqm	30.00
21	Providing skirting to internal walls to 10 cm height/risers of steps vitrified polished floor tiles glossy finish premium colours of size not less than 598x598mmx8mm thickness of 1st quality(make Somany,HR Jhonson,Naveen Ceramics, Kajaria, Nitco, Sphinx) set over base coat of cement mortar (1:8), 12 mm thick over CC bed already laid or RCC roof slab, including neat cement slurry of honey like consistency spread @ 3.3.kgs per sqm & jointed neatly with white cement paste to full depth mixed with pigment of matching shade, including cost of all materials like cement, sand water and tiles etc., complete, complete for finished item of work including the cost of conveyance of all materials excluding Seionarage charges etc., complete for finished item of work and as directed by the Engineer in charge. .	1 Sqm	4.00
22	Flooring with Non-skid red or white full body Ceramic floor tiles of size 300 x 300 mm and thickness between 7-8 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs set over base coat of cement mortar (1:8), 12 mm thick over CC bed already laid or RCC roof slab, including neat cement slurry of honey like consistency spread @ 3.3.kgs per sqm & jointed neatly with white cement paste to full depth mixed with pigment of matching shade, including cost of all materials like cement, potable water, sand and tiles etc., complete for finished item of work.	1 Sqm	15.00
23	Dadooing in toilets and bath rooms with glazed full body porcelain wall tiles of size 300 x 600 mm with any type of design texture such as marble finish, wooden, bamboo, stone finishes etc., scratch less, stain free and thickness between 6-8 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades and designs set over a base coat of CM (1:3) 12 mm thick with neat cement slurry of honey like consistency spread at the rate of 3.3 Kgs per Sqm and filling the joints with white cement paste mixed with pigment of matching shade is to be done including cost and conveyance charges of cement, potable water and all other materials to site, seigniorage charges, incidental and operational charges, all labour charges for mixing mortar, finishing, all leads and lifts, etc., complete for finished item of work and as directed by the Engineer in charge.	1 Sqm	10.00

Schedule-I : Supply and Construction of Control Room etc. for new 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Quantity
24	Painting with Interior grade synthetic polymer plastic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/ litre of approved brand and shade two coats over a base coat of appropriate interior primer(grade-I) of Asian make, making 3 coats in all to give an even shade after thorughly brushing the surface to remove all dirt and remains of loose powdered materials, including cost and convyance of all materials, labour charges and incidental charges such as scaffolding, lift charges etc., complete for finished item of work and as directed by the Engineer in charge.	1 Sqm	120.00
25	Painting with acrylic exterior emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/ litre exterior grade of approved brand and colour/shade two coats over a base coat of appropriate primer (grade-I) of Asain make , making 3 coats in all to give an even shade after thorughly brushing the surface to remove all dirt and remains of loose powdered materials, including cost and convyance of all materials, labour charges and incidental charges such as scaffolding, lift charges etc., complete for finished item of work and as directed by the Engineer in charge.	1 Sqm	170.00
26	Supply and fixing of doors with well seasaned country wood frames 3" x 4" (1H.2V) (sal wood / Kamba wood) of the required sizes as given in drawing using 35mm thick flush door shutters solid bond wood block board type with commercial ply on both sides and both the surfaces are decorated with 1.5mm thick laminate sheets glossy finish and polishing the frame and with aluminium accessories like aldrops, hinges, door handles, door stopper etc.,including painting two coats with synthetic enamel paint over coat of wood primer with putty including cost of wood and all materials to site and all labour charges etc., complete for finished item of work and as directed by the Engineer in charge.	1 Sqm	2.75
27	Supply & fixing of windows with well seasoned country wood with outer and centre frame size 3" x 4" (Sal wood / Kamba wood) with hold fasts with two shutters with 5mm thick pinheaded glass panels including cost of wood, cost of making charges and fixing iron grills of approved design with 9mm size square rod and aluminium accessories like window stay, tower bolts, hinges etc., including painting two coats with synthetic enamel paint over coat of wood primer with putty including cost and conveyance of materials, labour charges, hard ware, fixing etc., complete for finished item of work and as directed by the Engineer in charge.	1 RM	5.00
28	Supply and Fixing of 25mm dia 2mm thick P.V.C. pipe (ISI MARK) concealed in reinforcement and walls with all required accessories including masonary work for light, fan and separate plug point including all labour charges etc., complete for finished item of work and as directed by the Engineer in charge.	1 RM	50
29	Wiring with 2 runs of 14/0.3mm (1.0 Sq.mm) Fire Retardant (FR) P.V.C. insulated flexible copper cable (ISI MARK) in existing pipe with 6A modular switch, Ceiling rose and hot dip galvanized metal boxes with cover frame to switch control box including all labour charges etc., complete for light, bell, fan and exhaust fan points in Non-Residential Buildings (makes Anchor / Gold Medal / Million / Vimal / Maru / Milltec.) as directed by the Engineer in charge.	Each	25

Schedule-I : Supply and Construction of Control Room etc. for new 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Quantity
30	Wiring with 2 runs of 14/0.3mm (1.0 Sq.mm) Fire Retardant (FR) P.V.C. insulated flexible copper cable (ISI MARK) in existing pipe with 6A modular switch and 3/2 pin socket hot dip galvanized metal boxes with cover frame to switch control box including all labour charges etc., complete for light, bell, fan and exhaust fan points in Non-Residential Buildings (makes Anchor / Gold Medal / Million / Vimal / Maru / Milltec.) as directed by the Engineer in charge.	Each	3
31	Wiring with 2 of 22/0.3mm (1.5 Sq.mm)P.V.C. insulated F.R. flexible copper cable (ISI MARK) in existing pipe with 16A modular switch control and 3 pin/16A sockets with hot dip galvanized box with cover frame on separate board including all labour charges etc., complete.	Each	1.00
32	Supply and run of 2 of 22/0.3mm (1.5 Sq.mm) F.R P.V.C. insulated flexible copper cable in existing pipe for MAINS Makes: Finolex / RR kabel / Havells/ KEI/Polycab/Gloster /Goldmedal/ GM inlcuding all labour charges etc., complete.	1 RM	100.00
33	Supply and run of 1 of 22/0.3mm (1.5 Sq.mm) F.R P.V.C. insulated flexible copper cable in existing pipe for earthing Makes: Finolex / RR kabel /Havells/KEI/Polycab/ Gloster /Goldmedal/ GM inlcuding all labour charges etc., complete.	1 RM	100
34	Supply and fixing of 8way TPN Distribution board with IP-20 protection suitable for 3 phase ELCB / RCCB / FP with 40A, 4pole isolator as incomer and 10kA-6-32A (12Nos) SP MCBs as out going including internal connection and labour charges for surface / flush mounting etc., complete as directed by the Engineer in charge.	Each	1
35	Supply and fixing of 18W/20W, 1200mm length LED(with LED light) batten light with extruded alluminium housing and polycarbonate cover, input voltage AC 220 - 260 Volts with PF>0.9, Surge protection: 2KV,THD<15%, with inbuilt driver and frosted cover CCT: 3000K - 5700K, minimum CRI>70, .etc., complete. a) LUMINAIRE MAKE : Phillips / GE-Venture / Crompton / Wipro / Bajaj / Havells / Halonix/Jaquar/ HPL/GM / GreenLites / Gold Medal/ Eveready b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG/ Everlight as per directions of Eng-in-Charge.	Each	4
36	S&F of 9W LED Lamps with Holder of standard make including cost of all fixture etc., complete as per directions of Eng-in-Charge.	Each	4
37	Supply and fixing 48" (1200mm) Sweep Ceiling Fan of makes (Crompton High speed/Bajaj Ultima/Havells Velocity/ Usha Astra/ Orient Summer Pride) with Modular Electronic Regulator of makes (Crab Tree/Feno Swtch/ Toyoma/Fortune Art/ Million / Gold Medal / Vimal / Anchor Roma) as directed by the Engineer in charge.	Each	3
38	Providing and fixing factory made solid Wood Polymer Composite (WPC) single extruded Door Frame section of size with encapsulation of 8MM rigid layer on all the six surfaces. The door frame will have a rebat of 32MM. Door Frame section of 63.5x100 MM .The two Vertical members are to be joined together with the horizontal member using 8x75 MM long MS Star full thread screws to be used with reverse forward speed control hand drilling machine. The ready/assembled door frame is fixed to the wall using hold fast or bolt fasteners. A minimum of 4 No.s of screws to be provided for each vertical member & minimum 2no.s for horizontal member.		
a	Door Frame section of 63.5x100 MM .The two Vertical members are to be joined together with the horizontal member using 8x75MM long MS Star full thread screws etc., rate vide item code BMT-N.83.C	1 RM	1.5

Schedule-I : Supply and Construction of Control Room etc. for new 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Quantity
b	Providing and fixing 28 -30 MM thick solid Wood Polymer Composite(WPC) single extruded door shutter with 3MM top and bottom rigid layer with an overall density of 750kg/Cum. It will be fixed to the frame using 3 inch /4 inch hinges. A minimum of 4 hinges will be required for fixing the door with the frame including labour charges, 4Nos 125mm aluminium butt hinges, 1No 250mm aluminium aldrop, 1No 200mm aluminium tower bolt, 2Nos 150mm aluminium handles etc., complete for finished item of work as directed by the Engineer in charge.	1 Sqm	2.0
39	Supply and fixing of European Water Closet of Ist quality with plastic seat and lid and PVC flushing tank 10 Lit capacity confirming to IS:2556-Part-2-1973 of Hidustan/Neycer or Parry ware make white glazed with 'S' trap including all materials ,labour etc complete as per directions of Eng-in-Charge.	Set	1
40	Supply and fixing 550 x 400mm size Indian make Flat Back Wash Hand basin with pedestal (HSW/Parryware/Neycer) 1st quality conforming to IS:2556-Part-4:1972 with waste fittings like rubber plug, chain, 32mm nominal size C.P. Fitting with parallel pipe thread conforming to IS:2963-1979 and fitted with 15mm nominal bore chromium plated pillar tap of 1st quality Indian make 400 grams Seiko/Senior/Nice/Esso or equivalent complete with standard CI brackets : 550 x 400 mm - double C.P. Pillar cock etc complete as directed by the Engineer in charge.	Set	1
41	Supply and fixing 450 x 300 mm Belgium glass 6mm thick frameless mirror with stand mounted to wall including plugs and screws as directed by the Engineer in charge.	RMt	1.00
42	Supply and fixing of Unplasticised PVC Pipes,10 kg/cm2 for potable water supplies conforming to IS : 4985/2000 (3rd revision) with bell ends (Socket) as per specification in light Grey/Natural Ivory Grey/ Any other Color including Labour charges for laying, fixing, and commissioning the pipes including couplers, bends, plugs, junctions, tees etc. with solvent jointing as per Standard practice for finished item work as directed by the Engineer-in-charge.		
a	25 mm dia	RMt	40
b	20mm dia	RMt	20
43	Supply and fixing of CP Long body bib cock fancy type delux heavy duty 12.7mm dia Indian make 400gm seiko or equivalent etc., complete for finished item of work as directed by the Engineer - In - Charge	Each	2.00
44	Supply and fixing of dia (4kg/sqcm) PVC pipes of make Prince/Sudhakar/Kisan/Supreme or any ISI Brand including bends, Tees etc., including cost and conveyance of all materials all labour charges etc., complete. as directed by the Engineer in charge.		
a	75 mm dia	RMt	5.00
b	110 mm dia	RMt	20

Schedule-I : Supply and Construction of Control Room etc. for new 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Quantity
45	Constructing 2’ x 2' brick masonry inspection chamber as per IS - 4111: Part-1:1986 with cement mortar (1:6) prop using 2nd Class Clay Bricks of 225 mm thick from approved source having a minimum crushing strength of 5 /sq.mmincluding plastering with cement mortar 1:3 prop; ½” thick both inside and outside fitted with 20” dia RCC manhole covers and frames including excavating pits up to a depth of 904 mm (3'-0") in all sorts of soils (excluding rock) and laying cement concrete (1:4:8) 150 mm thick using 40 mm HBG Metal and P.C.C. 1:2:4 benching and channel 100 mm thick as per Standard specification and including cost and conveyance of all materials like cement, sand, bricks, water etc. to site, and all incidental and operational, labour charges like mixing cement mortar, constructing masonry, lift charges, curing etc., complete for finished item of work as per Standard specification excluding Seionarage charges as directed by the Engineer in charge.	Each	1.00
46	Providing of pheripheral fencing arround the site as given in the drawing including cost of R.C.C. fencing poles, G.I. barbed wire & stringing etc., complete for finished item of work. (excluding cost of excavation of pits & concreting)		
a	Supply,placing in alignment of RCC fencing post of 1.8m length including cost and conveyance of fencing post, labour charges for placing in alignment all are as specified by the Engineer-in-charge at site - - etc., complete.	Each	60.00
b	Supply and fixing galvanised steel barbed wire (IS:278-1962 Type I) weighing 9.36kg per 100 mtrs (min), Straining and fixing to any type of standard, including securing galvanised mild steel wire etc., as directed by engineer - in - charge	RMt	1200.00
II	**Erection of Control Equipment and Accessories in Control Room**		
47	Supply & Erection, and wiring complete as per departmental standards excluding testing and commissioning of the following equipment of LTAC panels, annunciation panels in the control room, duly mounting them on channels and grouting them with foundation bolts including cost of cable laying in the trench of size 300 x 300 mm		
a	LTAC panel (as per Section 5) in the Control Room on Cable Duct with necessary Channel Supports	Each	1
b	DC Annunciation Board (as per section 5) with Hylam sheet of 8mm thickness (on M.S.Angle stand of 1.25x1.25 M, & height 1.25M (M.S.angle 50 x 50 X 6 mm) with 33KV & 11KV Bus PT Volt Meter (Voltmeter shall have selection option to read all the three phase voltages).With multi tone electronic hooter (24 Volts DC), indicators and Push Type Switches in the Control Room on Cable Duct with necessary Channel Supports	Each	1
c	RTCC (Remote Tap Changer Control) Pane, wiring complete duly mounting on Channels in the Control Room. (RTCC panel will be supplied along with PTR)	Each	1

Schedule-I : Supply and Construction of Control Room etc. for new 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Quantity
48	Providing independent earthing by excavating a trench to a depth of 2.7 M in all soils, as per size specified in the Data, using 40mm dia 'B' class GI pipe of 2.5 Mtrs length with necessary accessories with hume pipe ring duly providing staggered holes including filling with equal proportion of Salt and Charcoal in layers and all labour charges etc., complete for small quarters.	Each	2.00
49	Supply and Run of No.8 SWG G.I wire including cost of all accessories and labour charges etc., complete.	Each	10
50	Supply of steel office Table of size 4' x 2' x 30" with 18 mm plywood , Teakwood finishing with Drawers on right hand side and with automatic locking system(Godrej or equivalent make)as directed by engineer - in - charge.	Each	1
51	Supply of chairs with arms teak wood Frame 1" thick,seat & backs, 's' type in 1" dia pipe(Godrej or equivalent make)as directed by engineer - in - charge.	1 Sqm	2.00
52	Supply of Quartz wall clock 1' x 1'size of reputed make.	Each	1.00
53	Writing Name of the SS in Details on the Control room one side as directed by the Engineer in charge.	Each	1
54	Writing Name of the SS in Details on the Gate as directed by the Engineer in charge.	Each	1

Schedule-II(A) : Supply and Construction of Switchyard CIVIL at 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Quantity
I	**Civil Works for Switch Yard**		
1	Earth work excavation in all types of soil which can be excavated with pick axes and crow bars and do not require blasting in all conditions such as dry, wet, slushy etc., upto 3m depth for foundations and depositing on bank for all lifts and with an initial lead of 10m including shoring, strutting and dewatering where ever necessary covering initial lead for foundations for finished item of work. etc as per SS - 20 B (APSS 308) as per Directions of Eng-in-Charge.	CUM	95.00
2	Laying foundations for main and auxiliary structures, supports, breaker and transformer plinths, coping of supports etc., shoring, shuttering, and dewatering the pits before and during the process of laying concrete in following proportions and curing for 14 days including concreting of beam upto mother soil as per the direction of the Engineer incharge certified by Quality Control and Civil drawings (Rate quoted shall be inclusive of fixing and concreting foundation bolts wherever necessary excluding seionarage cahrges) (Sketches enclosed) (as per Technical specification)		
a	a. Cement concrete 1:3:6 using 12 to 20 mm H.B.G.metal	CUM	13.00
b	b.Cement concrete 1:3:6 using 20 to 40 mm H.B.G.metal	CUM	127.00
3	Plastering the foundation plinths with 12mm thick in 1:3 cement mortar and white washing (two coats) with White Cement or equivalent cement paint, including cost of all materials and cement excluding seionarge charges.	Sq.M	160.00
4	Supply and Fixing of 105 lb rail poles of 3 Mtr. Length each over the transformer plinth including cost of rail poles, with stoppers.	Each	2.00
5	Excavation of cable trench of size 300 x 300 mm in the switch yard including cost of all materials and labour complete(as per Technical specification) for laying of LT Cable from DTR to Control Room	RMt	70.00
6	Construction of security wall on the existing R.R retaining wall/Brick Masonary wall including providing P.C.C 1:2:4 with 20mm HBG metal of 50 mm thick and construction of Brick Masonary wall of CM 1:6 for about 300mm height all over the security fencing and construction of brick pillers of size 230 mm X 230mm for fixing of jally 900mm X 600 mm size and providing RCC plates of width 230mm and thickness 50mm over the jally and brick pillers properly and plastering the entire portion with Cm 1:5 20mm thick and white washing the area with two coats including cost of all materials, labour etc complete excluding seionarage charges for finished item of work as per dawing as per directions of Eng-in-charge.	RMt	105.00
7	Supply and spreading of quarry dust to a thickness of 25mm, excluding seigniorage (after consolidation of the earth work with a roller.)	CUM	20.00
8	Supply and spreading of 20mm size machine crushed blue granite metal to a thickness of 75 mm over spread quarry dust excluding seigniorage.	CUM	50.00

Schedule-II(A) : Supply and Construction of Switchyard CIVIL at 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Quantity
II	**Providing of Pipe Line for Earth Pits in the Switch Yard, minimum 2 Sections to be made in Switch Yard using Gate Valves**		
1	Supply and fixing of different dia.Unplasticised PVC Pipes,10 kg/cm2 for potable water supplies conforming to IS : 4985/2000 (third revision) with bell ends (Socket) as per specification in light Grey/Natural Ivory Grey/ Any other Color including Labour charges for laying, fixing, and commissioning the pipes including couplers, bends, plugs, junctions, tees etc. with solvent jointing as per Standard practice for finished item work as directed by the Engineer-in-charge.		
a	32mm dia UPVC pipe	1 RM	120.00
b	25mm dia UPVC pipe	1 RM	145.00
c	20mm dia UPVC pipe	1 RM	40.00
2	Supply and fixing CP Short body bib cock facy type deluxe heavy duty 12.7mm dia Indian make Seiko/Senior/Nice or equivalent	Each	30.00
3	Supply and fixing of GM Gate (GM peet) valves as per IS 778 Class I -Indian make heavy type of different sizes including cost and conveyance of all materials and labour Charges complete for finished item work as directed by the Engineer-in-charge.		
a	32 mm GM Gate valve	Each	1.00
b	25 mm GM Gate valve	Each	2.00
c	Electrical Works		
III	***Electrical Works***		
1	Supply, fabrication, welding & erection of structural supports (BF beams 150x150 mm & drilling holes with machine) each 8/8.5/9.0Mtrs in length (As per the directions of the Engineer-In-charge), Structural Members (M.S.Channel 100 x 50mm, MS angle 65X65X6 mm) and seating channels including bolts & Nuts for BF beams & MS Channel as per section-5 and as per relevant Indian standard	MT	15.50
2	Formation of 33KV & 11KV strung bus with single 200Sq.mm Panther AAAC/ACSR conductor for each phase including hoisting of insulators and hardware, stretching, measuring, cutting, stringing, tensioning, clamping of the conductor, fixing of post type insulator to support the conductor wherever necessary and fixing of disc insulators including cost of all materials, conveyance, labour and with all leads for substation with single power transformer as per Technical Specification in complete shape (For Two PTR with 4 feeders with 33KV Auxillary bus)	Each	1.00
3	Connecting the equipment to bus and for another equipment with single 200sq.mm Panther AAAC/ACSR conductor including measuring, Cutting, Clamping and also fixing of post type insulators assembly to support the conductor wherever necessary including cost of all materials, conveyance, labour and with all leads for substation	Each	207.00

Schedule-II(A) : Supply and Construction of Switchyard CIVIL at 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Quantity
4	Connecting the equipment to bus and for another equipment with single 100 Sq.mm AAAC, including measuring, Cutting, Clamping and also fixing of post type insulators assembly to support the conductor wherever necessary including cost of all materials, conveyance, labour and with all leads for substation	Each	30.00
5	Earthing Connecting Body of Equipment, Structures to Earthpits/Earthmat with MS Flat (raisers) specified. All the Raisers should be provided with Jute beading over a Coat of keeltar. Another Coat of Keeltar should be provided over the Jute Beading as per Technical Specification including Cost of all materials, Lablour etc. Complete		
a	With 50x6mm MS flat (for all raisers from body of Equipment to Grid).	RMT	800.00
b	With 2nos. 75 x 8mm MS Flat for neutral of PTR to earth pit are to be Run, both flats by over laping as one end to neutral stud terminating with 2 Nos.flexible copper jumpers of size 50x6 mm 15 inches length, other to earth pit/Grid and to Run the MS Flats on 100x50MS Channel support structure with post type insulators.	RMT	8.00
c	With 75x8mm MS Flat (for Grid)	RMT	445.00
6	Excavation of Earth Pit, Putting Earth Pipe (Cast Iron / Galvanized Iron) with Flange on One End (as per ISS 718/74) inside the Pit i.e. 200mm below the Ground Level and Back filling the Pit with Bentonite Compound and Black Cotton Soil in 1:4 Ratio and Providing Cement Collar of Size 600mm Dia and 600mm Height as per Departmental Standards, including cost of all Materials, labour etc Complete		
a	CI Earth Pipe of nominal dia 150 mm and 2.75 meters long (for PTR neutral and 33KV Station Type LAs)	Each Earth pit	2.00
b	CI Earth Pipe of nominal dia 80 mm and 2.5 meters long (for the balance earth electrodes)	Each earth pit	24.00
c	GI earth pipe of nominal dia 40 mm and 2.5 meters long complete without connecting to the Earth Mat (i.e. Grid) for maintaining the independent earth during issuing LCs on the Feeders and also for Battery Chargers Body Earthing	Each earth pit	8.00
7	Supply pavingout and Laying of control cables of all sizes in the excavated cable trench and Cable terminations to the Switchgear marshalling boxes/panel terminal blocks/ control & relay panels, LTAC panel, including providing suitable ferrules and lugs on both ends of each core as per specification (including cost of Ferrules and lugs and glands and labour complete as per technical specification). Note: This includes transportation of cables, running cables in control room, SWITCH YARD and Road crossing etc.,		
a	2Core 2.5 sq.mm.unarmored multi stranded Copper cable	RMT	200.00
b	4 Core 2.5 sq.mm.unarmored multi stranded Copper cable	RMT	500.00
c	10 Core 2.5 sq.mm.unarmored multi stranded Copper cable	RMT	120.00
8	Painting of MS structure supports, and members two coats of 1st class red oxide paint with two coats of Aluminium paint of Asian/Nerolac/ Berger make as per Technical specification including cost of paint and accessories	SQM	645.00
9	Painting of operating rods of 33 KV, 11KV AB Switches with postal Red colour including cost of paint and accessories	Each	16.00

Schedule-II(A) : Supply and Construction of Switchyard CIVIL at 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Quantity
10	Painting of all supports for a height of 0.3 M above the coping with bitumen paint (Black colour) and painting of coping with two coats of white cement (Janatha cement) including cost of paint and accessories	Each	24.00
11	Supply & erection of Yard lighting supports including pit excavation and Concreting 0.6x0.6x1.5Mts. with C.C.(1:3:6) using 20 mm and 12mm HBG metal with 8.0Mtrs/200 Kg WL PSCC Poles (Poles are to be supplied by the contractor)	Each	8.00
12	Supply & installation of 60W LED Street light Luminaire made of pressure diecast alluminium body with powder coated, having protective toughned glass, Supply Input voltage 120 - 270 V AC, P.F > 0.90, high power LED's having System efficacy > 100 lm/W and junction temprature < 70°C, with Ingrees protection IP66, Luminaire performance complies to IS 10322 (Part 5/Sec-3), Driver surge protection 4KV, In house additional Surge protection 10 KV with optics distribution , THD<10% at 110 Volts AC, driver efficiency >90%, CCT: 3000K - 5700K, minimum CRI>70, etc., complete a) LUMINAIRE MAKE : Wipro(Skyline) / Philips (Green line) / GE-Venture / Crompton(Neo Series) / Bajaj (Edge) / Halonix(Lumos - Super) / Havells (Endura Series) /Capart(Premium)/Greenlites(Hi-Lux) /Polycab/Keselec/ HPL(City Vision)/ Jaquar(Premium)/Eveready/ Surya (Pollux) / FortuneArrt (Leaf) b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG / LG by using LT AC cable 2 core 6 Sq.mm, GI Pipe 3/4" dia, MS Clamp set to Hold GI Pipe with Bolt & Nuts, 155 X 210 X 92 Size thermo plastic cable junction boxes with IP66/67 weather proof, for outdoor installation with konckouts for cable entry including terminals etc., complete (sizes in mm) Make : Hensel/Sadhrish, along with 5 Amp Fuse Unit.	Each	8.00
13	Erection and Wiring Complete as per Departmental Standards excluding testing and Commissioning of the Following equipment including cost of Transport, Labour, handling Charges etc (as per Section 5)		
a	11KV Circuit Breakers with C.T's (feeder) and control panel with HTTVR meter of Class 0.2S, with DLMS protocol, MRI / Laptop Compatibility.	Each	4.00
b	11KV Circuit Breakers with C.T's (LV) and control panel with HTTVR meter , of Class 0.2S, with DLMS protocol, MRI/ Laptop Compatibility (With / without Differential Protection)	Each	1.00
c	33KV Circuit Breakers with C.T's (feeder) and control panel with HTTVR meter of Class 0.2S, with DLMS protocol, MRI / Laptop Compatibility.(With/without Differential Protection	Each	1.00
14	Supply, Erection and wiring complete for Potential Transformers as per departmental standards excluding testing and commissioning of the following equipment including cost of transport, labour, incidental handling charges etc. (as per section 5)		
a	33 KV, 100VA, class:0.2 Potential Transformer (single phase) set consists of 3Nos	Set	1.00
b	11 KV, 100VA, class:0.2 Potential transformer cubicle (3 Phase type)	Each	1.00
15	Supply, Erection and wiring complete as per departmental standards excluding testing and commissioning of 24 V, 40AH Battery Charger with batteries including cost of all materials	Each	6.00

Schedule-II(A) : Supply and Construction of Switchyard CIVIL at 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Quantity
16	Supply as per specifications and erection and wiring complete as per departmental standards for Lightning Arresters excluding testing and commissioning of the following equipment including cost of all materials, transport, labour, incidental handling charges etc. (as per section 5)		
a	30 KV Lightning Arrestor (Station type)	Each	3.00
b	30 KV Lightning Arrestor (Line type)	Each	6.00
c	9 KV 10 KA lighting arrester (Station Type)	Each	3.00
d	9 KV 5 KA lighting arrester (Line Type)	Each	12.00
17	Supply as per specifications and erection, and wiring complete as per departmental standards excluding testing and commissioning of the following equipment including cost of all materials, transport, labour, incidental handling charges etc. (as per section 5)		
a	33 KV Isolators (800 A) double break, horizontal (Pipe type)	Each	3.00
b	11KV Isolators (800A) with centrally operated, horizontal (LV) double break (Pipe type), Bus Coupler	Each	1.00
c	11KV Isolators (400A) centrally operated horizontal double break for feeders (Knife type)	Each	8.00
d	33 KV HG Fuse Set with accessories complete with Copper Flat 25 x 3mm Size for Horns	Each	1.00
18	**Erection and wiring complete as per departmental standards excluding testing and commissioning of 3-Ph, 11KV/415V, 25KVA Station Transformer and supply and erection of 11 KV HG Fuse Set, 11KV AB Switch, A type Distribution box with 2 feeders, including supply and erection of LT knife type fuse units with insulated handle running of earths complete with cost of all material. DTR to be Mounted on already erected Sitting channels (100X50mm), already Provided MS angles (50 X 50 X 6 mm) as belting supports and existing Flat earthing for Body and existing Flat Earthing for Neutral of DTR as per departmental standards.**	Each	1.00
19	**Unloading, Erection, and wiring complete as per departmental standards excluding testing and commissioning of 33/11KV 5MVA Power transformer with all accessories like radiators, conservator etc., including unloading of RTCC (Remote Tap Changer Control) panels, unloading of power transformers, fixing of radiators, filling of transformer oil complete, to the substation site (With new/retrived 5MVA PTR received directly to Substation site)**	Each	1.00
20 a)	Supply & Erection, and wiring complete as per departmental standards excluding testing and commissioning of the following equipment of LTAC panels, annunciation panels in the control room, duly mounting them on channels and grouting them with foundation bolts including cost of cable laying in the trench of size 300 x 300 mm - LT AC Cable 25/50 Sq.mm 3 1/2 Core	RMT	60.00
b)	Supply and erection of LTAC panel (as per Section 5)	Each	1.00

Schedule-II(A) : Supply and Construction of Switchyard CIVIL at 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Quantity
c)	Supply and erection DC Annunciation Board (as per section 5) with Hylam sheet of 8mm thickness (on M.S.Angle stand of 1.25x1.25 M, & height 1.25M (M.S.angle 50 x 50 X 6 mm) with 33KV & 11KV Bus PT Volt Meter (Voltmeter shall have selection option to read all the three phase voltages).With multi tone electronic hooter (24 Volts DC), indicators and Push Type Switches	Each	1.00
21	Supply and erection of marshalling Box on the structure (pole mounted type).	Each	3.00
22	Supply and Erection of Fire Fighting Equipment of the Following		
a	Sand Bucket stand with 4 Nos. buckets	Set	1.00
b	CO2 Cylinder 4 Nos of 5 Kgs supply and fixing of CO2 type fire extinguishers capacity confirming to IS 2878 made from ISI mark (1 set)	Set	1.00
c	ISI mark (IS:15683) Mono ammonium phosphate powder 90 (MAP) 2 Kg Fire extinguisher, stored pressure type, pressure gauge, gross wt. 3.6 kg, empty wt.1.6 kg, Discharge time minimum 8 sec, controllable discharge mechanism, range min. 2 mts applicable on classes A,B, C & electrically started fire, A rating -2 A, B rating -21 B, can construction: Deep drawn and Co2 mig welding, Valve construction: Forging & Machining, internal coating of can: Epoxy powder coating, External coating of Can:Epoxy polyster powder coating, sheet metal thickness:1.60mm, Helium leak detection tested with 5 years warranty Including transportation, all taxes and all labour charges etc complete. Makes : Safex / Kenex / Bharat / Reliance/NewTech	Set	1.00
23(a)	Supply of tools - Standard Tool Box with Taparia make Tools consisting of tools and plant as per Annexure 1 of the Technical specification in section 5	Each	1.00
23(b)	Earth Discharging rods of 10 feet long for HT/LT lines made out of cane stick in PVC Pipe 32mm dia and 2 mm thick, fully covered, at one end fixed with copper strip of size 25X3 mm of 250mm length by 2 Nos. brass bolts and wing nuts with washers having 6 Sqmm PVC flexible copper wire of 20 Mt length.		
24	Supply and Erection of 11 KV 2 MVAR Capacitor banks with associated equipment (Normal) Type A (incl Capacitor bank, Equipment Structure, Capacitor Switch, VCB, LA, RVT, C&R panel & Earthing Material) incl Civil, Erection, testing & Commissioning of complete Capacitor bank	Each	1.00
25	Geotagging of 33/11KV Substation including all equipments details-Locating Co-ordinates(Lattitude & Longitude) using GPS , Collection/Updation of attribute data base of Electrical Network through field survey , development, codification mapping & indexing with their upstream source of supply and Collecting GIS co-ordinates of each asset in Substation , collect attribute information and the SLD approval to be taken from Engineer in Charge for up loading the data.	Each	1.00

Schedule-III : Supply and Construction of Approach Road, Retaining Wall, Levelling of Site etc. for new 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Retaining wall with pile foundation	Retaining wall with Column foundation	Retaing wall with RR Masonary
I	**Construction of Approach road, Reaining wall, Levelling of site etc.**				
1	Supply and filling of borrowed/naturally occuring good gravel in uniform layers and compacting with smooth wheel roller of 10t capacity to achieve the desired density, watering and compacting to the required density as per Technical Specification of MORD including cost and conveyance of all materials,all incidental and operational charges,hire charges of T&P etc. excluding seionrage charges etccomplete for finished item of work as directed by Engineer-in-charge.	Cum	700.00	700.00	700.00
2	Filling with useful available excavated earth (excluding rock) in trenches, sides of foundations and basement with initial lead in layers not exceeding 15 cm thick, consolidating each deposited layer by watering and ramming including cost and conveyance of water to work site and all operational, incidental, labour charges, hire charges of T & P etc., complete for finished item of work. (APSS NO. 309 & 310)as per directions of Eng-in-Charge.	Cum	100.00	100.00	100.00
II	Formation of WBP Approach road:				
1	Supply and filling of borrowed/naturally occuring good gravel in uniform layers and compacting with smooth wheel roller of 10t capacity to achieve the desired density, watering and compacting to the required density as per Technical Specification of MORD including cost and conveyance of all materials,all incidental and operational charges,hire charges of T&P etc. excluding seionrage charges etccomplete for finished item of work as directed by Engineer-in-charge.	Cum	200.00	200.00	200.00
2	Providing, laying, spreading and compacting stone aggregates of 65 mm Single nominal size to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with three wheel 80-100 kN roller in stages to proper grade and camber, applying and brooming, crushable screening to fill-up the interstices of coarse aggregate, watering and compacting to the required density as per Technical Specification of MORDto a compacted thickness of 100 mm excluding seionrage charges etc. complete for finished item of work as directed by Engineer-in-charge.	Cum	60.00	60.00	60.00

Sl. No.	Description of work	Unit	Retaining wall with pile foundation	Retaining wall with Column foundation	Retaing wall with RR Masonary
III	Construction of hume pipe culvert:				
1	Earth work excavation in all types of soil which can be excavated with pick axes and crow bars and do not require blasting in all conditions such as dry, wet, slushy etc., upto 3m depth for foundations and depositing on bank for all lifts and with an initial lead of 10m including shoring, strutting and dewatering where ever necessary covering initial lead for foundations for finished item of work. etc as per SS - 20 B (APSS 308) as per Directions of Eng-in-Charge.	Cum	17.00	17.00	17.00
2	Filling with sand in foundations and basement with initial lead in layers not exceeding 15 cm thick, consolidating each deposited layer by watering and ramming cost and conveyance of water to work site and all operational, incidental, labour charges, hire charges of T & P ,excluding seionarge charges etc., complete for finished item of work. (APSS NO. 309 & 310) etc. complete for finished item of work as directed by Engineer-in-charge.	Cum	3.00	3.00	3.00
3	Plain Cement concrete (1:4:8) using 40 mm HBG metal machine mixed laid in positions in layers not exceeding 15 Cm thickness including cost and conveyance of all materials, , water to work site and all operational, incidental, labour charges such as machine mixing of concrete laying, tamping, curing etc., complete for finished item as per Direction sof Eng-in Charge	Cum	3.00	3.00	3.00
4	RR Masonry in CM (1:6) cost and conveyance of all materials to site and all labour charges complete for finished item of work excluding Seionarage charges as per Directions of Eng-in-Charge.	Cum	10.00	10.00	10.00
5	Construction of Brick Masonrywalls in super structure in CM 1:6 using well burnt country bricks with compressive strength not less than 35 Kg/Sqm from approved source including cost and conveyance of all materials all labour charges etc.excluding Seionarage charges , complete for finished item of work as directed by the Engineer-in Charge.	Cum	8.00	8.00	8.00
6	Supply and filling of borrowed/naturally occuring good gravel in uniform layers and compacting with smooth wheel roller of 10t capacity to achieve the desired density, watering and compacting to the required density as per Technical Specification of MORD including cost and conveyance of all materials,all incidental and operational charges,hire charges of T&P etc. excluding seionrage charges etccomplete for finished item of work as directed by Engineer-in-charge.	Cum	30.00	30.00	30.00

Sl. No.	Description of work	Unit	Retaining wall with pile foundation	Retaining wall with Column foundation	Retaing wall with RR Masonary
7	Plastering with CM(1:5), 20 mm thick for unevenfaces of walls with sponze finish at all heights including cost and conveyance charges of cement and all other materials to site, scaffolding charges, seigniorage charges, incidental and operational charges, all labour charges for mixing mortar, finishing, all leads and lifts, curing, cutting grooves , excluding Seionarage Charges etc., complete for finished item of work and as directed by the Engineer in charge.	Sq. M	30.00	30.00	30.00
8	Supply and keeping the 600 mm dia hume pipe in position including fixing collers etc.complete as per directions of Eng-in-Charge.	Rmt	12.00	12.00	12.00
IV	**Construction of Retaining wall around Switch yard:**				
	With Pile foundation / Column Footings				
1	Earth work excavation in all types of soil which can be excavated with pick axes and crow bars and do not require blasting in all conditions such as dry, wet, slushy etc., upto 3m depth for foundations and depositing on bank for all lifts and with an initial lead of 10m including shoring, strutting and dewatering where ever necessary covering initial lead for foundations for finished item of work. etc as per SS - 20 B (APSS 308) as per Directions of Eng-in-Charge.	Cum	45.00	45.00	
2	Plain Cement concrete (1:4:8) using 40 mm HBG metal machine mixed laid in positions in layers not exceeding 15 Cm thickness including cost and conveyance of all materials, , water to work site and all operational, incidental, labour charges such as machine mixing of concrete laying, tamping, curing etc., complete for finished item as per Direction sof Eng-in Charge	Cum	6.30	6.30	
3	Providing HYSD/TMT/MS Steel bars(Fe415/Fe500 grade as per IS1786-1979) of different diameters for RCC works, including labour charges for straightening, cutting, bending to required sizes and shapes, placing in position with cover blocks of approved materials and size and tying and lap-splicing with binding wire of 18 SWG, forming grills for reinforcement work as per approved designs and drawings, including cost and conveyance of steel bars, including all wastages such as overlaps, couplings, chairs,spacer bars including cost and conveyance of binding wire, cover blocks and all incidental, operational, labour charges such as cutting, bending, placing in position, tying including sales and other taxes on all materials etc., complete for finished item of work in all floors.	1 MT	2.20	2.20	

Sl. No.	Description of work	Unit	Retaining wall with pile foundation	Retaining wall with Column foundation	Retaing wall with RR Masonary
4	RCC M- 25 Desgin mix (380 Kg Cement) corresponding to Table 9 of IS 456 using 20mm size graded machine crushed hard granite metal (coarse aggregate) from approved quarry including cost and conveyance of all materials like cement, fine aggregate (sand) coarse aggregate, water etc., to site and including sales & other taxes on all materials excluding Seionarage charges, including all operational, incidental and labour charges such as machine mixing, laying concrete, curing and steel centering with wooden scaffolding etc.,complete but excluding cost of steel and its fabrication charges for finished item of work as directed by Engineer-in-Charge..				
i	Footings	1 Cum		5.60	
ii	Columns	1 Cum		1.90	
iii	Piles	1 RM	114.00		
iv	Pile caps	1 Cum	2.30		
v	Plinth Beams	1 Cum	5.75	5.75	
vi	RCC bed block	1 Cum	3.75	3.75	
5	Construction of Brick Masonrywalls in super structure in CM 1:6 using well burnt country bricks with compressive strength not less than 35 Kg/Sqm from approved source including cost and conveyance of all materials all labour charges etc.excluding Seionarage charges , complete for finished item of work as directed by the Engineer-in Charge.	1 Cum	25.00	25.00	
6	Plastering with CM(1:5), 20 mm thick for unevenfaces of walls with sponze finish at all heights including cost and conveyance charges of cement and all other materials to site, scaffolding charges, seigniorage charges, incidental and operational charges, all labour charges for mixing mortar, finishing, all leads and lifts, curing, cutting grooves , excluding Seionarage Charges etc., complete for finished item of work and as directed by the Engineer in charge.	1 Cum	110.00	110.00	
	With RR Masonary wall				
1	Earth work excavation in all types of soil which can be excavated with pick axes and crow bars and do not require blasting in all conditions such as dry, wet, slushy etc., upto 3m depth for foundations and depositing on bank for all lifts and with an initial lead of 10m including shoring, strutting and dewatering where ever necessary covering initial lead for foundations for finished item of work. etc as per SS - 20 B (APSS 308) as per Directions of Eng-in-Charge.	1 Cum			90.00

Sl. No.	Description of work	Unit	Retaining wall with pile foundation	Retaining wall with Column foundation	Retaing wall with RR Masonary
2	Filling with sand in foundations and basement with initial lead in layers not exceeding 15 cm thick, consolidating each deposited layer by watering and ramming and conveyance of water to work site and all operational, incidental, labour charges, hire charges of T & P,excluding seionarge charges etc., complete for finished item of work. (APSS NO. 309 & 310)	1 Cum			6.50
3	Plain Cement concrete (1:4:8) using 40 mm HBG metal machine mixed laid in positions in layers not exceeding 15 Cm thickness including cost and conveyance of all materials, , water to work site and all operational, incidental, labour charges such as machine mixing of concrete laying, tamping, curing etc., complete for finished item as per Direction sof Eng-in Charge	1 Cum			6.50
4	RR Masonry in CM (1:6) cost and conveyance of all materials to site and all labour charges complete for finished item of work excluding Seionarage charges as per Directions of Eng-in-Charge.	1 Cum			117.00
5	Plastering with CM(1:5), 20 mm thick for unevenfaces of walls with sponze finish at all heights including cost and conveyance charges of cement and all other materials to site, scaffolding charges, seigniorage charges, incidental and operational charges, all labour charges for mixing mortar, finishing, all leads and lifts, curing, cutting grooves , excluding Seionarage Charges etc., complete for finished item of work and as directed by the Engineer in charge.	1 Cum			130.00
6	Supply and erection of MS gate made out of MS rods, angles,channels, flats etc. for main entrance gate fixed in to the gate pillars including cost and conveyance of all the materials, fabrication charges,fixing charges, labour charges etc., complete for finished item of work as directed by the Engineer-in-charge.	1 Kg	250	250	250

Schedule-IV : Supply and Construction of Borewell for new 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Quantity
1	Site investigation charges for locating bore well point.	1 Job	1 Job
2	Drilling of 165mm size Bore Well as directed by the Engineer in charge including cost of labour , flushing of borewell, transportation and hire charges for drilling equipment and all taxes complete as per the directions of the Engineer in charge for the finished item of work.	1RM	60.00
3	Supplying & fixing of PVC heavy duty casing pipe of 180mm dia , 10kg/sqcm for the above Bore hole including cost & conveyance of all materials ,labour ,leads, and lifts and all taxes etc., complete as per the directions of the Engineer in charge for the finished item of work.	1 RM	60.00
4	Supply, transportation & fixing of Single Phase submersible motor pump set , 21 stage (Crompton / Kirloskar / CRI / L&T / Varsha /Texmo make) of approved type suitable for 165mm dia bore well , as directed by Engineer in charge,of approved quality & make including nipples, bends, couplings etc., including cost & conveyance of all materials, labour charges, fitted with SIEMENS/ CROMPTON make starter with panel board fitted with related fittings such as Ammeter , volt meter and including nuts & bolts and GI sheet bore cover complete as per the directions of the Engineer in charge for the finished item of work.		
a	1.0 HP	Each	1
b	1.5 HP	Each	1
5	Supplying & fixing 40 mm dia HDPE pipe (12kg/Sqcm) of approved quality & make including nipples, bends, couplings etc., complete for finished item of work from bore well to delivery including cost & conveyance of all materials, specials\l fixtur	1 RM	60.00
6	Providing and placing on terrace (at all floor levels) 1000 Ltr capasity Polyethylene water storage tank double layer of SYNTEX or approved brand & manufacture with cover and suitable locking arrangement & making necessary holes for inlet & outlets and over flow pipes but without fittings and base support for tanks etc., complete for finished item of work as directed by the Engineer-in-charge.	Each	1
7	Supply & fixing of Submersible Flat cable 2.5sq.mm or 3/20 equalint (Finolex) wire including cost & conveyance and all labor charges with all leads ans lifts and all other incidental charges etc; complete.	1 RM	135.00
	FOR SITES WHERE BORE WELL DIGGING IS NOT POSSIBLE TAP CONNECTION WITH TAP WATER STORAGE SUMP		
1	Earth work excavation in ordinary soils by manual means upto 3m depth for foundations and depositing on bank for all lifts and with an initial lead of 10m including all operational, incidental, labour charges such as shoring ,sheeting, planking, strutting, etc. complete for finished item of work excluding dewatering charges etc as per SS - 20 B (APSS 308) for water tank of size (2.0 MX2.5M X2.3 M).	1 Cum	25.0

Schedule-IV : Supply and Construction of Borewell for new 33/11KV Outdoor Sub-station

Sl. No.	Description of work	Unit	Quantity
2	Filling with useful available excavated earth (excluding rock) in trenches, sides of foundations and basement with initial lead in layers not exceeding 15 cm thick, consolidating each deposited layer by watering and ramming including cost and conveyance of water to work site and all operational, incidental, labour charges, hire charges of T & P etc., complete for finished item of work. (APSS NO. 309 & 310)	1 Cum	25.0
3	Filling with sand in foundations and basement with initial lead in layers not exceeding 15 cm thick, consolidating each deposited layer by watering and ramming including, seigniorage cost and conveyance of water to work site and all operational, incidental, labour charges, hire charges of T & P etc., complete for finished item of work. (APSS NO. 309 & 310)	1 Cum	1.5
4	Plain Cement concrete (1:4:8) using 40 mm metal with concrete mixer including seigniorage, cost and conveyance of all materials and all labour charges complete.	1 Cum	1.5
5	Construction of brick masonry in CM 1:6 using well burnt country bricks including seigniorage, cost and conveyance of all materials all labour charges etc., complete. Ground Floor	1 Cum	6.0
6	Plastering with CM (1:5), 12 mm thick in one coat for inernal faces of walls, ceilings etc.,including seigniorage, cost and conveyance of all materials all labour charges etc, complete. Ground Floor	1 Sqm	35.0
7	Providing HYSD/TMT/MS Steel bars(Fe415/Fe500 grade as per IS1786-1979) of different diameters for RCC works, including labour charges for straightening, cutting, bending to required sizes and shapes, placing in position with cover blocks of approved materials and size and tying and lap-splicing with binding wire of 18 SWG, forming grills for reinforcement work as per approved designs and drawings, including cost and conveyance of steel bars, including all wastages such as overlaps, couplings, chairs,spacer bars including cost and conveyance of binding wire, cover blocks and all incidental, operational, labour charges such as cutting, bending, placing in position, tying including sales and other taxes on all materials etc., complete for finished item of work in all floors.	1 MT	0.1
8	RCC M- 25 Desgin mix (380 Kg Cement) for slab corresponding to Table 9 of IS 456 using 20mm size graded machine crushed hard granite metal (coarse aggregate) from approved quarry including cost and conveyance of all materials like cement, fine aggregate (sand) coarse aggregate, water etc., to site and including Seigniorage charges, sales & other taxes on all materials including all operational, incidental and labour charges such as machine mixing, laying concrete, curing and steel centering with wooden scaffolding etc.,complete but excluding cost of steel and its fabrication charges for finished item of work.	1 Cum	1.0
9	Single Phase 1 HPMono-block Motor including giving Pipe line Connections with all bends, couplings and Running Joints etc., complete.	Each	1