DEVELOPMENT OF DISTRIBUTION INFRASTRUCTURE AT AHMEDABAD DISTRICT of GUJARAT UNDER REVAMPED
Bill of Quantity

Bidder's Name & Address:

Installation / Erection Quantity :

A (I)	Augmentation, Renovation and Modernisation of existing Distribution Transformer		
Service No.	**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**
A (I)	**Augmentation & Renovation of 11/0.4 kV Distribution Transformer**		
1.00	**Erection, testing & commissioning of augmented/new Distribution Transformer by reconnecting 11 kV, LT, earthing circuit providing suitable lugs, bi-metallic clamps including supporting structure etc as required as per technical specifications, approved drawings and scope of the work. Replaced material and DTR to be deposited in Employer's store:**		
1.01	New 63 KVA (11/0.4 kV) Aluminium wound DTR (Replacing 25KVA old DTR),	No	25
1.02	New 100 KVA (11/0.4 kV) Aluminium wound DTR (Replacing 63 KVA old DTR),	No	96
1.03	New 200 KVA (11/0.4 kV) Aluminium wound DTR (Replacing 100 KVA old DTR),	No	71
1.04	New 500 KVA (11/0.4 kV) Copper wound DTR (Replacing 200 KVA old DTR),	No	2

DEVELOPMENT OF DISTRIBUTION INFRASTRUCTURE AT AHMEDABAD DISTRICT of GUJARAT UNDER REVAMPED REFORMS-BASED AND RESULTS-LINKED, DISTRIBUTION SECTOR SCHEME

Bill of Quantity

Bidder's Name & Address:

Installation / Erection Quantity :

A (II)	Crossing Removal (Safety)		
Service No.	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
1.00	**Cables:**		
1.01	Installation,Testing & commissioning of 11 kV,(E),XLPE insulated Aluminium Conductor, Armoured cable as per enclosed specification 3 core 185 sq. mm. as perenclosed specification including rates for approval of local Authorities for laying of cable.(Make as approved by UGVCL) Laying of 11 KV (E) XLPE insulated aluminium armoured cable in ground up to 1200 mm deep, 500 mm wide cable trench provinding sand cushioning before and after laying cable and covering with half round Hume pipe and refilling the trench.(rate shall include cost of excavation of trench and jumpering with existing overhead HT Line) as per technical specification, approved drawings and scope of work.	Mtr	6605.00
1.02	Laying of HDPE ducts confirming to IS:4984 having dia OD 110 mm, 6kg/cm2, 11.63 kg/6 RMT at a minimum depth of 1200mm below the road surface by pushthrough method by drilling the road with HDD machine without breaking the road surface for laying of cable for internal road crossing for enclosing HT/LT XLPE insulated aluminum armoured cable up to 240/185 sqmm through the duct as per the instructions of EIC as per technical specification, approved drawings and scope of work.	Mtr	560.00
2.00	**Indoor application: HT push on/heat shrink type end termination preferably for at switchgear end boxes, transformer(PAD/Pole mounted) for 11 kV XLPE Aluminium Conductor Armoured cable as specified with connection of leads including cutting,stripping of cable, insulations,providing compression type terminals,crimping of lugs with suitable crimping tool, as per technical specification, approved drawings and scope of work.**		
2.01	3Cx185 mm 2 11 KV XLPE	No	0.00
3.00	**Outdoor application: HT push on/heat shrink type end termination preferably for at switchgear end boxes, transformer(PAD/Pole mounted) for 11 kV XLPE Aluminium Conductor Armoured cable as specified with connection of leads including cutting,stripping of cable, insulations,providing compression type terminals,crimping of lugs with suitable crimping tool, as per technical specification, approved drawings and scope of work.**		
3.01	3Cx185 mm 2 11 KV XLPE	No	46.00
4.00	**Straight Joint: HT push on/heat shrink type straight joint preferably for 11 kV XLPE Aluminium Conductor Armoured cable as specified with connection of leads including cutting,stripping of cable, insulations,providing compression type terminals,crimping of lugs with suitable crimping tool.as per technical specification, approved drawings and scope of work.**		
4.01	3Cx185 mm 2 11 KV XLPE	No	6.00
5.00	**Earthing arrangement as per technical specificatons, approved drawings and scope of work.**		
5.01	Erecting earth pit of minimum bore dia. 150 mm size approved make safe Earthing Electrode consisting Pipe in pipe Technology as per IS 3043-1987 made of corrosion free G.I. Pipes having Outer pipe dia of 50 mm having 80-200 Micron galvanising connections, terminal dia of 12 mm with constant ohmic value surrounded by highly conductive compound with high charge dissipation with civil works ofearthing chamber. For Electrical installation covering Transformer neutrals,HT & LT switchgears for independent earthing in normal soil, Length of Pipe 3 mtrs.Backfilling compound 2 bagsof 25 Kg each	No	46.00
5.02	Installation & commissioning of earthing conductor 38 x 3 G.I. strip for pole mounted transformer and upto FSP,RMU as well as connection to be made to the earth pit. Rates inclusive of hot dipped hardwares.	Mtr	368.00
6.00	**Providing 11kV Double Pole Structure with AB Switch 12kV, 600A, 25kA for 3sec, 3-ph, 3 Pin type, Vertical Mounting type (as desired by DISCOM), Gang Operated, AB Switch along with Support Insulators, Base Channel down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings on 8 Mtr PSC Polesas per approved drawings by Engineer in charge as per Technical Specification**	No	5.00
7.00	**Cable Laying above ground in air for termination of cable on pole with necessary accessories and wooden clamp as per Engineer Incharge**	Mtr	184.00
8.00	**Fixing of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the ground**	Mtr	138.00
9.00	**Stay Set (Galvanised) with 50x8 mm stay clamp, stay insulator (2 Nos.), anchor plate (200x200x6), nut bolts, 2 Nos turn-buckles, 1.8 m long, 16 mm diameter solid GS stay rod & 7/3.15 mm dia GI stranded wire complete as per technical specification, approved drawings and scope of work.**	Set	46.00
10.00	**Cable Route Marker: Erecting RCC cable Route marker as per drawing duly marked with "DANGER" Mark, "UGVCL POWER CABLE" and Arrow of route of cable.**	No	137.00
11.00	**RCC CABLE TRENCH: Construction of RCC cable trench (Three tier / Four tier) as per approved design and drawing and as per directives of engineer-in-charge with required excavation as per site condition, Base concreting, providing and laying of reinforcement as per design, concreting of M-20 grade for Pardi and Raft, Precast RCC cover of 75 mm thick, fabrication of cable tray as per design with one coat of red oxide and two coats of oil paintaing to structural steel, two coats of waterproof cement paint to all inside, outside surfaces of cable trench with top cover. the work to be done as per drawing and PWD specification. Detail description of major civil work activites involved are as under.**		
	i. Excavation for foundation in dense or hard soil up to 1.5 M depth including sorting out and stacking of useful materials and disposing of the excavated stuff up to 50 meter lead. And filling excavated stuff in trenches and besides cable trench in layers not exceeding 20 cm in depth with consolidating/watering etc. complete.		
	ii. Providing and laying cement concrete 1:4:8 (1 cement :4 coarse sand :8 Machine crush metal aggregates 40 mm nomial size) and curing complete including cost of form work in foundation etc. complete.		
	iii. Providing and laying control cement concrete M200 and curing complete including cost of form work and reinforcement for reinforced cement concrete work in (A)Raft Foundations, vertical pardi etc.(Form work of steel sheet to be utilized.)		
	iv. Providing and placing 75mm thick Precast RCC cover of size 1500 x 300mm, made in M-200 cement concrete with necessary reinforcement of 3 Nos. of 10 mm TMT bars bars as main bar and 8 mm TMT distribution bars at 200mm c/c incl providing 8mm TMT bars hook for lifting arrangement & curing, finishing all the surfaces etc complete incl. placing in position at site.		
	v. Providing and fabrication of structural steel for cable tray including cuting,erecting, fixing in position and applying one coat of red oxide & two coats of oil painting in angles, flat and like section etc complete.		
	vi.Expansion Joint: Providing and placing 12 mm thick premoulded asphalt or bitumen cork board filler joint at every 50 Mtr length.		
	(VII) Painting the inside, outside of Cable trench wall including precast cover with two coats of water proofing cement paint.		
	Three tier cable trench as per approved design and drawing	RMT	1195.00
12.00	**RCC Stopper Wall at end of cable trench:** Construction of 150 mm thick RCC stopper wall at end of cable trench as per approved drawing in cement concrete 1:2:4 including TMT bar reinforcement main/vertical bars and distribution bar of 8 mm dia @ 200 mm c/c both side including bending, binding and placing in position as per drawing and form work of steel sheets so as to give a fair finish including centering, shuttering, strutting and propping etc including providing & fixing 110 mm dia. PVC pipe(6 kg/cm2) of 400mm length across the stopper wall with coupler & plug for future cable laying etc complete as per drawing and as directed by EIC.	JOB	6.00
13.00	**DISMENTALLING**		
13.01	Dismentallling PSC Pole 8 Mtr with cross arm,insulators,hardwares etc.and return it to UGVCL store.While dismentalling utmost care shall be taken so that the material so that the same can be reused by UGVCL.	No	310.00
13.02	Dismentallling PSC 10 Mtr/Rail/RSJ pole with cross arm,insulators,hardwares etc.and return it to UGVCL store.While dismentalling utmost care shall be taken so that the material so that the same can be reused by UGVCL.	No	20.00
13.03	Dismentalling of ACSR/Earth wire conductor & line material & after making coil and stacking the same at UGVCL store.Conductor length	Per Cond./kM	7.83

DEVELOPMENT OF DISTRIBUTION INFRASTRUCTURE AT AHMEDABAD DISTRICT of GUJARAT UNDER REVAMPED REFORMS-BASED AND RESULTS-LINKED, DISTRIBUTION SECTOR SCHEME

Bill of Quantity

Bidder's Name & Address:

Installation / Erection Quantity :

A (III)	**New Feeder / Feeder Bifurcation**		
Service No.	**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**
1.00	**Excavation of pole pit (of depth 1/6th of pole length) in normal soil as per scope of work, approved drawings and specifications:**		
1.01	10 m / 275 kgs PSC Poles - (PSC Pole as per state practice)	No	244
1.02	8 m / 200 kgs PSC Poles - (PSC Pole as per state practice)	No	0
2.00	**Erection of following types of poles for 11 KV overhead line by providing and installing danger plate, anti-climbing devices (barbed wire), earthing material (coil and 8SWG GI wire), red oxide & aluminium paint, pole numbering including cement concrete foundation or refilling by bolders using cement concreting foundation 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) or/and 200 mm average size bolders mixed with excavated earth etc as per scope of work, approved drawings and specifications:**		
2.01	10 m / 275 Kgs PSC Poles with Cement concreting 0.5 cmt	No	244
2.02	8 m / 200 Kgs PSC Poles with Cement concreting 0.5 cmt	No	0
3.00	**Erection, testing & commissioning of pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp, etc made of MS Channels, MS angle, MS flats of given sizes for over head structures and MS nuts, bolts & washers including painting by red oxide & aluminium paint as per technical specification, approved drawings and scope of work.**	MT	2.10
4.00	**Earthing arrangement as per technical specificatons, approved drawings and scope of work.**		
4.01	Erecting earth pit of minimum bore dia. 150 mm size approved make safe Earthing Electrode consisting Pipe in pipe Technology as per IS 3043-1987 made of corrosion free G.I. Pipes having Outer pipe dia of 50 mm having 80-200 Micron galvanising connections, terminal dia of 12 mm with constant ohmic value surrounded by highly conductive compound with high charge dissipation with civil works ofearthing chamber. For Electrical installation covering Transformer neutrals,HT & LT switchgears for independent earthing in normal soil, Length of Pipe 3 mtrs.Backfilling compound 2 bagsof 25 Kg each	No	322.00
4.02	Installation & commissioning of earthing conductor 38 x 3 G.I. strip for pole mounted transformer and upto FSP,RMU as well as connection to be made to the earth pit. Rates inclusive of hot dipped hardwares.	Mtr	2576.00
5.00	**Excavation of stay pit in following type of soils, as per scope of work, approved drawings and specifications:**		
5.01	Normal soil	No	78
6.00	**Erection of complete stay set with GI stay wire (7x3.15 mm dia), binding of stay wire, by providing Guy stay insulator (2 Nos.) and 0.2 cmt concreting 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) as per technical specifications, approved drawings and scope of works.**	Set	78
7.00	**Erection, testing and commissioning of 11 kV insulator including their hardware fittings as per technical specification, approved drawings and scope of work.**		
7.01	11 kV Pin insulator with GI pin	Set	250
7.02	11 kV Disc insulator with strain hardware	Set	60
8.00	**Paying out, tensioning, binding of conductor and tightening of stays and stringing, testing and commissioning of ACSR Conductor of following sizes including jointing sleeves, helical formed fittings, jumpering and by providing & erecting PG Clamps etc as required as per approved drawings, scope of work and technical specifications**		
8.01	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog	kM	15.15
8.02	AL.Alloy Conductor 55mm² Size	kM	0
9.00	**Erection, Testing and Commissioning of 11 kV AB Switch along with Support Insulators, Base Channel, down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Set	25
10.00	**Cables:**		
10.01	Installation,Testing & commissioning of 11 kV,(E),XLPE insulated Aluminium Conductor, Armoured cable as per enclosed specification 3 core 185 sq. mm. as perenclosed specification including rates for approval of local Authorities for laying of cable.(Make as approved by UGVCL) Laying of 11 KV (E) XLPE insulated aluminium armoured cable in ground up to 1200 mm deep, 500 mm wide cable trench providing sand cushioning before and after laying cable and covering with half round Hume pipe and refilling the trench.(rate shall include cost of excavation of trench) as per technical specification, approved drawings and scope of work.	Mtr	12450.00
10.02	Laying of HDPE (DWC) ducts confirming to IS:4984 having dia OD/ID 120/90.mm, 6kg/cm2, 11.63 kg/6 RMT at a minimum depth of 1200mm below the road surface by pushthrough method by drilling the road with HDD machine without breaking the road surface for laying of cable for internal road crossing for enclosing HT/LT XLPE insulated aluminum armoured cable up to 240/185 sqmm through the duct as per the instructions of EIC as per technical specification, approved drawings and scope of work.	Mtr	4000.00
11.00	**Indoor application: HT push on/heat shrink type end termination preferably for at switchgear end boxes, transformer(PAD/Pole mounted) for 11 kV XLPE Aluminium Conductor Armoured cable as specified with connection of leads including cutting,stripping of cable, insulations,providing compression type terminals,crimping of lugs with suitable crimping tool, as per technical specification, approved drawings and scope of work.**		
11.01	3Cx185 mm 2 11 KV XLPE	No	9.00
12.00	**Outdoor application: HT push on/heat shrink type end termination preferably for at switchgear end boxes, transformer(PAD/Pole mounted) for 11 kV XLPE Aluminium Conductor Armoured cable as specified with connection of leads including cutting,stripping of cable, insulations,providing compression type terminals,crimping of lugs with suitable crimping tool, as per technical specification, approved drawings and scope of work.**		
12.01	3Cx185 mm 2 11 KV XLPE	No	88.00
13.00	**Straight Joint: HT push on/heat shrink type straight joint preferably for 11 kV XLPE Aluminium Conductor Armoured cable as specified with connection of leads including cutting,stripping of cable, insulations,providing compression type terminals,crimping of lugs with suitable crimping tool.as per technical specification, approved drawings and scope of work.**		
13.01	3Cx185 mm 2 11 KV XLPE	No	11.00
14.00	**Earthing arrangement as per technical specificatons, approved drawings and scope of work.**		
14.01	Erecting earth pit of minimum bore dia. 150 mm size approved make safe Earthing Electrode consisting Pipe in pipe Technology as per IS 3043-1987 made of corrosion free G.I. Pipes having Outer pipe dia of 50 mm having 80-200 Micron galvanising connections, terminal dia of 12 mm with constant ohmic value surrounded by highly conductive compound with high charge dissipation with civil works ofearthing chamber. For Electrical installation covering Transformer neutrals,HT & LT switchgears for independent earthing in normal soil, Length of Pipe 3 mtrs.Backfilling compound 2 bagsof 25 Kg each	No	10.00
14.02	Installation & commissioning of earthing conductor 38 x 3 G.I. strip for pole mounted transformer and upto FSP,RMU as well as connection to be made to the earth pit. Rates inclusive of hot dipped hardwares.	Mtr	100.00
15.00	**Cable Laying above ground in air for termination of cable on pole with necessary accessories and wooden clamp as per Engineer Incharge**	Mtr	392.00
16.00	**Fixing of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the ground**	Mtr	274.00
17.00	**Cable Route Marker: Erecting RCC cable Route marker as per drawing duly marked with "DANGER" Mark, "UGVCL POWER CABLE" and Arrow of route of cable.**	No	244.00
18.00	**ERECTION, TESTING & COMMISSIONING OF 11 KV LINE FOR UNDER GROUND RAILWAY CROSSING BY 2 Nos (INCLUDING ONE SPARE) 3Cx185 Sqmm XLPE Armoured Cable (0.3 km each) , USING 150MM DIA GI PIPES, OUTDOOR HEAT SHRINKABLE CABLE JOINTING KITS, LUGS, 4 Nos GI 3-METERS LONG EARTHING PIPE, 6 SWG GI WIRES, CABLE MARKERS, BI METALLICK CLAMPS, JUMPERING WITH 11 KV ARIAL BUNCHED CABLES (200mm dia, 10 mtrs), 11 KV STATION TYPE LIGHTENING ARRESTORS (6 NOS.), ETC AS REQUIRED AS PER TECHNICAL SPECIFICATIONS, APPROVED DRAWINGS AND SCOPE OF THE WORK.**	No	1

DEVELOPMENT OF DISTRIBUTION INFRASTRUCTURE AT AHMEDABAD DISTRICT of GUJARAT UNDER REVAMPED REFORMS-BASED AND RESULTS-LINKED, DISTRIBUTION SECTOR SCHEME

Bill of Quantity

Bidder's Name & Address:

Installation / Erection Quantity :

A (IV)	**Erection, testing and Commissioning of Maintenance free, Ready capsule, Pipe-in-cage (PiC) type earthing and connections to the**		
Service No.	**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**
1.00	**Installation, testing and commissioning of Maintenance free, Ready capsule, Pipe-in-cage (PiC) type Earthing with 3 Mtr Electrode as per technical specification,**	No	2553.00
2.00	**Installation of 25 X 3 mm GI Strip having hot dip- galvanized-zinc coating of 80-100 microns without any joints or welding. Both the end of the GI strip should be connected with GI nut bolts and required fabrication work for giving separate earthing connections to (1) Neutral of the transformer (2) MS structures of the transformer center (3) Lightening Arrestor (Approximately 30 meter GI strip per transformer centre -as per requirement and instruction of Engineer in-charge) (3 earth Pits required for three separate earthings) as per technical specification, approved drawings and scope of work.**	Mtr	25530.00
3.00	**Installation of uPVC standard make Pipe of 1.25" diameter for covering GI strip with UV protected Cable Ties of 550 X 7.6 mm size to bind with pole face(Approximately 25 meter uPVC pipe for GI strip covering per transformer centre -as per requirement and instruction of Engineer in-charge) as per technical specification, approved drawings and scope of work.**	Mtr	20424.00

DEVELOPMENT OF DISTRIBUTION INFRASTRUCTURE AT AHMEDABAD DISTRICT of GUJARAT UNDER REVAMPED REFORMS-BASED AND RESULTS-LINKED, DISTRIBUTION SECTOR SCHEME

Bill of Quantity

Bidder's Name & Address:

Installation / Erection Quantity :

A (V)	Interlinking of 11kV Feeder (Reliability)		
Service No.	**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**
1.00	**Excavation of pole pit (of depth 1/6th of pole length) in normal soil as per scope of work, approved drawings and specifications:**		
1.01	10 m / 275 kgs PSC Poles - (PSC Pole as per state practice)	No	20
2.00	**Erection of following types of poles for 11 KV overhead line by providing and installing danger plate, anti-climbing devices (barbed wire), earthing material (coil and 8SWG GI wire), red oxide & aluminium paint, pole numbering including cement concrete foundation or refilling by bolders using cement concreting foundation 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) or/and 200 mm average size bolders mixed with excavated earth etc as per scope of work, approved drawings and specifications:**		
2.02	10 m / 275 Kgs PSC Poles with Cement concreting 0.5 cmt	No	20
3.00	**Erection, testing & commissioning of pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp, etc made of MS Channels, MS angle, MS flats of given sizes for over head structures and MS nuts, bolts & washers including painting by red oxide & aluminium paint as per technical specification, approved drawings and scope of work.**	MT	
4.00	**Earthing arrangement as per technical specificatons, approved drawings and scope of work.**		
4.01	Erecting earth pit of minimum bore dia. 150 mm size approved make safe Earthing Electrode consisting Pipe in pipe Technology as per IS 3043-1987 made of corrosion free G.I. Pipes having Outer pipe dia of 50 mm having 80-200 Micron galvanising connections, terminal dia of 12 mm with constant ohmic value surrounded by highly conductive compound with high charge dissipation with civil works ofearthing chamber. For Electrical installation covering Transformer neutrals,HT & LT switchgears for independent earthing in normal soil, Length of Pipe 3 mtrs.Backfilling compound 2 bagsof 25 Kg each	No	20
4.02	Installation & commissioning of earthing conductor 38 x 3 G.I. strip for pole mounted transformer and upto FSP,RMU as well as connection to be made to the earth pit. Rates inclusive of hot dipped hardwares.	Mtr	160
5.00	**Excavation of stay pit in following type of soils, as per scope of work, approved drawings and specifications:**		
5.01	Normal soil	No	20
6.00	**Erection of complete stay set with GI stay wire (7x3.15 mm dia), binding of stay wire, by providing Guy stay insulator (2 Nos.) and 0.2 cmt concreting 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) as per technical specifications, approved drawings and scope of works.**	Set	20
7.00	**Erection, testing and commissioning of 11 kV insulator including their hardware fittings as per technical specification, approved drawings and scope of work.**		
7.01	11 kV Pin insulator with GI pin	Set	0
7.02	11 kV Disc insulator with strain hardware	Set	0
8.00	**Paying out, tensioning, binding of conductor and tightening of stays and stringing, testing and commissioning of ACSR Conductor of following sizes including jointing sleeves, helical formed fittings, jumpering and by providing & erecting PG Clamps etc as required as per approved drawings, scope of work and technical specifications**		
8.01	6/4.72 mm+7/1.57 mm (100 mm² Al. Area) - Dog	kM	0
9.00	**Erection, Testing and Commissioning of 11 kV AB Switch along with Support Insulators, Base Channel, down Pipe, Arcing Horns etc. complete as per technical specifications, scope of works and approved drawings**	Set	20
10.00	**Cables:**		
10.01	Installation,Testing & commissioning of 11 kV,(E),XLPE insulated Aluminium Conductor, Armoured cable as per enclosed specification 3 core 185 sq. mm. as perenclosed specification including rates for approval of local Authorities for laying of cable.(Make as approved by UGVCL) Laying of 11 KV (E) XLPE insulated aluminium armoured cable in ground up to 1200 mm deep, 500 mm wide cable trench providing sand cushioning before and after laying cable and covering with half round Hume pipe and refilling the trench.(rate shall include cost of excavation of trench) as per technical specification, approved drawings and scope of work.	Mtr	4560
	Providing of HDPE (DWC) ducts confirming to IS:4984 having dia OD/ID 120/90.mm, 6kg/cm2, 11.63 kg/6 RMT at a minimum depth of 1200mm below the road surface by pushthrough method by drilling the road with HDD machine without breaking the road surface for laying of cable for internal road crossing for enclosing HT/LT XLPE insulated aluminum armoured cable up to 240/185 sqmm through the duct as per the instructions of EIC as per technical specification, approved drawings and scope of work.	Mtr	335
11.00	**Indoor application: HT push on/heat shrink type end termination preferably for at switchgear end boxes, transformer(PAD/Pole mounted) for 11 kV XLPE Aluminium Conductor Armoured cable as specified with connection of leads including cutting,stripping of cable, insulations,providing compression type terminals,crimping of lugs with suitable crimping tool, as per technical specification, approved drawings and scope of work.**		
11.01	3Cx185 mm 2 11 KV XLPE	No	220
12.00	**Outdoor application: HT push on/heat shrink type end termination preferably for at switchgear end boxes, transformer(PAD/Pole mounted) for 11 kV XLPE Aluminium Conductor Armoured cable as specified with connection of leads including cutting,stripping of cable, insulations,providing compression type terminals,crimping of lugs with suitable crimping tool, as per technical specification, approved drawings and scope of work.**		
12.01	3Cx185 mm 2 11 KV XLPE	No	220
13.00	**Straight Joint: HT push on/heat shrink type straight joint preferably for 11 kV XLPE Aluminium Conductor Armoured cable as specified with connection of leads including cutting,stripping of cable, insulations,providing compression type terminals,crimping of lugs with suitable crimping tool.as per technical specification, approved drawings and scope of work.**		
13.01	3Cx185 mm 2 11 KV XLPE	No	6
14.00	**Earthing arrangement as per technical specificatons, approved drawings and scope of work.**		
14.01	Erection of maintaince free earthing sysytem comprising of 17.2 mm dia 3 mtr Long Earthing Electrode of low carbon steel electrode with 250 micrns copper coating + carbon based conductive concrete back fill safe compound(resisitivity of less than 0.10 ohm mtr) & GI clamp.Supply, Earcting and Install pre cast RCC Earth pit Chamber (300*300 MM),Making 100 mm Dia Bore, 3 Mtr Long, Making of Earth pit chamber in normal Soil.	No	364
14.02	Installation & commissioning of earthing conductor 38 x 3 G.I. strip for pole mounted transformer and upto FSP,RMU as well as connection to be made to the earth pit. Rates inclusive of hot dipped hardwares.	Mtr	2912
15.00	**Cable Laying above ground in air for termination of cable on pole with necessary accessories and wooden clamp as per Engineer Incharge**	Mtr	880
16.00	**Fixing of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the ground**	Mtr	660
17.00	**Cable Route Marker: Erecting RCC cable Route marker as per drawing duly marked with "DANGER" Mark, "UGVCL POWER CABLE" and Arrow of route of cable.**	No	91
18.00	**RMU : Installation, Testing & Commissioning of SF6 gas insulated, 630Amp both sides extensible, SCADA compatible Ring Mains Units (RMU) including civil work i.e. plinth as per technical specification, approved drawings and scope of work.**		
18.01	2 Isolator (2-Way)	No	0
18.02	1 Circuit Breaker 1 Isolator (2-Way)	No	0
18.03	3 Isolator (3-Way)	No	0
18.04	1 Circuit Breaker 2 Isolator (3-Way)	No	68
18.05	2 Circuit Breaker 1 Isolator (3-Way)	No	0
18.06	1 Circuit Breaker 3 Isolator (4-Way)	No	4
18.07	4 Isolator (4-Way)	No	0
18.08	2 Circuit Breaker 2 Isolator (4-Way)	No	0
18.09	1 Circuit Breaker 4 Isolator (5-Way)	No	0
18.10	1 Circuit Breaker 5 Isolator (6-Way)	No	0

DEVELOPMENT OF DISTRIBUTION INFRASTRUCTURE AT AHMEDABAD DISTRICT of GUJARAT UNDER REVAMPED REFORMS-BASED AND RESULTS-LINKED, DISTRIBUTION SECTOR SCHEME

Bill of Quantity

Bidder's Name & Address:

Installation / Erection Quantity :

A (VI)	Overhead to Underground Electrification Network		
Service No.	**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**
1.00	**RMU : Installation, Testing & Commissioning of SF6 gas insulated, 630Amp both sides extensible, SCADA compatible Ring Mains Units (RMU) including civil work i.e. plinth as per technical specification, approved drawings and scope of work.**		
1.01	2 Isolator (2-Way)	No	0.00
1.02	1 Circuit Breaker 1 Isolator (2-Way)	No	18.00
1.03	3 Isolator (3-Way)	No	0.00
1.04	1 Circuit Breaker 2 Isolator (3-Way)	No	956.00
1.05	2 Circuit Breaker 1 Isolator (3-Way)	No	0.00
1.06	1 Circuit Breaker 3 Isolator (4-Way)	No	95.00
1.07	4 Islator (4-Way)	No	0.00
1.08	2 Circuit Breaker 2 Isolator (4-Way)	No	0.00
1.09	1 Circuit Breaker 4 Isolator (5-Way)	No	9.00
1.10	1 Circuit Breaker 5 Isolator (6-Way)	No	0.00
2.00	**Transformer: Installation,Testing & Commissioning of 11/0.433 KV, Outdoor Transformers with HV/LV cable end boxes and CTs commissioned at LV end boxes for the following ratings [Transformer shall be suitable for pole mounting upto 315 kVA and Plinth mounting for 500 kVA (including plinth structure)] as per standard technical specifications.**		
2.01	100 kVA, Alunium Wound CRGO / Amorphous Core	No	625.00
2.02	200 kVA, Alunium Wound CRGO / Amorphous Core	No	221.00
2.03	315 kVA, Copper Wound CRGO / Amorphous Core	No	23.00
2.04	500 kVA, Copper Wound CRGO / Amorphous Core	No	81.00
3.00	**Cables:**		
3.01	Installation,Testing & commissioning of 11 kV,(E),XLPE insulated Aluminium Conductor, Armoured cable as per enclosed specification 3 core 240 sq. mm. as perenclosed specification including rates for approval of local Authorities for laying of cable.(Make as approved by UGVCL) Laying of 11 KV (E) XLPE insulated aluminium armoured cable in ground up to 1200 mm deep, 500 mm wide cable trench provinding sand cushioning before and after laying cable and covering with half round Hume pipe and refilling the trench.(rate shall include cost of excavation of trench) as per technical specification, approved drawings and scope of work.	Mtr	312720.00
3.02	Installation,Testing & commissioning of 11 kV,(E),XLPE insulated Aluminium Conductor, Armoured cable as per enclosed specification 3 core 185 sq. mm. as perenclosed specification including rates for approval of local Authorities for laying of cable.(Make as approved by UGVCL) Laying of 11 KV (E) XLPE insulated aluminium armoured cable in ground up to 1200 mm deep, 500 mm wide cable trench provinding sand cushioning before and after laying cable and covering with half round Hume pipe and refilling the trench.(rate shall include cost of excavation of trench) as per technical specification, approved drawings and scope of work.	Mtr	
3.03	Installation,Testing & commissioning of 11 kV,(E),XLPE insulated Aluminium Conductor, Armoured cable as per enclosed specification 3 core 70 sq. mm. for TC termination (RMU to TC) as per technical specification, approved drawings and scope of work.	Mtr	20000.00
3.04	Laying of HDPE ducts confirming to IS:4984 having dia OD 110 mm, 6kg/cm2, 11.63 kg/6 RMT at a minimum depth of 1200mm below the road surface by pushthrough method by drilling the road with HDD machine without breaking the road surface for laying of cable for internal road crossing for enclosing HT/LT XLPE insulated aluminum armoured cable up to 240/185 sqmm through the duct as per the instructions of EIC as per technical specification, approved drawings and scope of work.	Mtr	125060.00
4.00	**Indoor application: HT push on/heat shrink type end termination preferably for at switchgear end boxes, transformer(PAD/Pole mounted) for 11 kV XLPE Aluminium Conductor Armoured cable as specified with connection of leads including cutting,stripping of cable, insulations,providing compression type terminals,crimping of lugs with suitable crimping tool, as per technical specification, approved drawings and scope of work.**		
4.01	3Cx 240 mm 2 11 KV XLPE	No	3329.00
4.02	3Cx185 mm 2 11 KV XLPE	No	0.00
4.03	3Cx 70 mm 2 11 KV XLPE	No	1900.00
5.00	**Outdoor application: HT push on/heat shrink type end termination preferably for at switchgear end boxes, transformer(PAD/Pole mounted) for 11 kV XLPE Aluminium Conductor Armoured cable as specified with connection of leads including cutting,stripping of cable, insulations,providing compression type terminals,crimping of lugs with suitable crimping tool, as per technical specification, approved drawings and scope of work.**		
5.01	3Cx 240 mm 2 11 KV XLPE	No	0.00
5.02	3Cx185 mm 2 11 KV XLPE	No	0.00
5.03	3Cx 70 mm 2 11 KV XLPE	No	64.00
6.00	**Straight Joint: HT push on/heat shrink type straight joint preferably for 11 kV XLPE Aluminium Conductor Armoured cable as specified with connection of leads including cutting,stripping of cable, insulations,providing compression type terminals,crimping of lugs with suitable crimping tool.as per technical specification, approved drawings and scope of work.**		
6.01	3Cx 240 mm 2 11 KV XLPE	No	227.31
6.02	3Cx185 mm 2 11 KV XLPE	No	0.00
8.00	**Erecting XLPE(IS:7098) (I)-88 ISI marked multistrand Aluminium conductor armoured cable for 1.1 kV to be laid on pole with HDPE pipe with clamping or in ground as wlell as existing cable trench/pipe at road crossing of 1C x 300 Sq MM, as per technical specification, approved drawings and scope of work.**	Mtr	55800.00
9.00	**Cable termination on FSP / MSP, LT Distribution Transformer Box of pole mounted transformer of LT cable grade as specified below including cutting,stripping of cable,insulations,providing compression type terminals,suitable cable glands,crimping lugs with necessary connections.**		
9.01	1 core 300 Sq mm (Indoor)	No	15174.00
9.02	1 core 300 Sq mm (Out door - at LT Pole)	No	0.00
10.00	**CABLE TERMINAL FERRUALS: The PVC cable terminal ferruals for identification of phase sequence and feeders/ PSS / FSP name of HT/LT cables shall be provided at every termination of all cables stating details as under. HT cable/: feeder name/Phase (R/Y/B) LT cable : TC/ FSP name/ Phase (R/Y/B/N)**	No	16973.00
11.00	**Earthing arrangement as per technical specificatons, approved drawings and scope of work.**		
11.01	Erection of maintaince free earthing sysytem comprising of 17.2 mm dia 3 mtr Long Earthing Electrode of low carbon steel electrode with 250 micrns copper coating + carbon based conductive concrete back fill safe compound(resisitivity of less than 0.10 ohm mtr) & GI clamp.Supply, Earcting and Install pre cast RCC Earth pit Chamber (300*300 MM),Making 100 mm Dia Bore, 3 Mtr Long, Making of Earth pit chamber in normal Soil.	No	6976.00
11.02	Installation & commissioning of earthing conductor 38 x 3 G.I. strip for pole mounted transformer and upto FSP,RMU as well as connection to be made to the earth pit. Rates inclusive of hot dipped hardwares.	Mtr	55808.00
12.00	**Erection of DP structure as per enclosed drawings(PSC poles 10 metres long)including supply of poles, 10 Kgf/cm2 100 mm dia heavy duty GI pipe for protection of cable, hot dipped structural sections for mounting Transformer/RMU with box channel & chain pulley block and required clamps for fitting cables,structures,100mm dia GI pipe etc with all hardwares, suitable RMU/Transformer centre and its accessories such as clamps,hardwares,pipe etc with necessary muffing with PCC for commissioning of 11kV/433 volts Distribution Transformers of following capacity as per approved drawings by Engineer in charge as per Technical Specification**	No	869.00

DEVELOPMENT OF DISTRIBUTION INFRASTRUCTURE AT AHMEDABAD DISTRICT of GUJARAT UNDER REVAMPED REFORMS-BASED AND RESULTS-LINKED, DISTRIBUTION SECTOR SCHEME

Bill of Quantity

Bidder's Name & Address:

Installation / Erection Quantity :

A (VI)	Overhead to Underground Electrification Network		
Service No.	**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**
13.00	**Cable Laying above ground in air for termination of cable on pole with necessary accessories and wooden clamp as per Engineer Incharge**	Mtr	20916.00
14.00	**Fixing of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the ground**	Mtr	2850.00
15.00	**Stay Set (Galvanised) with 50x8 mm stay clamp, stay insulator (2 Nos.), anchor plate (200x200x6), nut bolts, 2 Nos turn-buckles, 1.8 m long, 16 mm diameter solid GS stay rod & 7/3.15 mm dia GI stranded wire complete as per technical specification, approved drawings and scope of work.**	Set	1738.00
16.00	**Erecting 120x100x40 cms. Fuse section pillar fabricated from 4 mm Thermosetting Plastic (moulded in a single piece) i.e Glass Reinforced Polyester sheet Moulding Compound (SMC) with cable clamps to be burried in ground to have appropriate erection on look unifrom unit erected with cement concrete foundation and 45 cms high brick masonry internal supported on both side with intrnal and outer side locking arrangement with lock and keys in duplicate .Incoming switchgear SFU of 800 Amp TPN and outgoing HRC SMC fuse base and knife type links 32 Amp to 630 Amp capacity fuse base fitted on 630 Amp current capacity copper Busbar with RYB colour coding and insulated strip with all internal connections and entry for incomming 1 core 300 sq mm 4 nos and outgoing 5/6 nos. 31/2 core cables of suitable sizes. (As per Technical specification of FSP)**	No	1460.00
17.00	**Cable Route Marker: Erecting RCC cable Route marker as per drawing duly marked with "DANGER" Mark, "UGVCL POWER CABLE" and Arrow of route of cable.**	No	6254.00
18.00	**PRE BONDING TAPE: For laying on trench after laying cable on trench to provid indication cable route below land surface in under ground trench to protect cable for mechnical injuries.**	RMT	187660.00
19.00	**Fixing chain link fencing to RMU as per Specification and drawing(approx. total running length of each fencing 10.8 meters)**	RMT	11642.40
20.00	**DISMENTALLING**		
20.01	Dismentalling of pole mounted transformer,stacking the same after transporting to UGVCL store without any damage as and where condition.		
a	10 KVA	No	8
b	16 KVA	No	5
c	25 kVA	No	82
d	63 kVA	No	110
e	100 kVA	No	218
f	200 kVA	No	135
g	500 KVA	No	39
20.02	Dismentallling PSC Pole 8 Mtr with cross arm,insulators,hardwares etc.and return it to UGVCL store.While dismentalling utmost care shall be taken so that the material so that the same can be reused by UGVCL.	No	1529
20.03	Dismentallling PSC 10 Mtr/Rail/RSJ pole with cross arm,insulators,hardwares etc.and return it to UGVCL store.While dismentalling utmost care shall be taken so that the material so that the same can be reused by UGVCL.	No	2717
20.03	Dismentalling of ACSR/Earth wire conductor & line material & after making coil and stacking the same at UGVCL store.Conductor length	Per Cond./kM	506.28

DEVELOPMENT OF DISTRIBUTION INFRASTRUCTURE AT AHMEDABAD District of GUJARAT UNDER REVAMPED REFORMS-BASED AND RESULTS-LINKED, DISTRIBUTION SECTOR SCHEME

Bill of Quantity

Bidder's Name & Address:

Installation / Erection Quantity :

A (VII)	**Conversion of Existing LT Line to LT Aerial Bunch Cable**		
Service No.	**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**
1.00	**Excavation of pole pit (of depth 1/6th of pole length) in normal soil as per scope of work, approved drawings and specifications:**		
1.01	8 m / 200 kgs PSC Poles - (PSC Pole as per state practice)	No	139
2.00	**Erection of following types of poles for LT overhead line by providing and installing danger plate, anti-climbing devices (barbed wire), earthing material (coil and 8SWG GI wire), red oxide & aluminium paint, pole numbering including cement concrete foundation or refilling by bolders using cement concreting foundation 1 part cement, 3 part sand, 6 part 40 mm size stone aggregate chips (1:3:6) or/and 200 mm average size bolders mixed with excavated earth etc as per scope of work, approved drawings and specifications:**		
2.01	8 m / 200 Kgs PSC Poles	No	139
3.00	**Excavation of stay pit in following type of soils, as per scope of work, approved drawings and specifications:**		
3.01	Normal soil	No	
4.00	**Erection of galvanised Stay Set with 50x8mm stay clamp, stay guy insulator, nut bolts, 2 Nos turn buckle's, 1.8 m long, 16 mm diameter solid GS Stay rod & 7/3.15 mm Dia GI stranded wire etc as required by providing 0.2 cum cement concrete as per approved drawings, technical specification and scope of work.**	No	
5.00	**Earthing arrangement as per technical specificatons, approved drawings and scope of work.**		
5.01	Erecting earth pit of minimum bore dia. 150 mm size approved make safe Earthing Electrode consisting Pipe in pipe Technology as per IS 3043-1987 made of corrosion free G.I. Pipes having Outer pipe dia of 50 mm having 80-200 Micron galvanising connections, terminal dia of 12 mm with constant ohmic value surrounded by highly conductive compound with high charge dissipation with civil works ofearthing chamber. For Electrical installation covering Transformer neutrals,HT & LT switchgears for independent earthing in normal soil, Length of Pipe 3 mtrs.Backfilling compound 2 bagsof 25 Kg each	No	139.00
5.02	Installation & commissioning of earthing conductor 38 x 3 G.I. strip for pole mounted transformer and upto FSP,RMU as well as connection to be made to the earth pit. Rates inclusive of hot dipped hardwares.	Mtr	1112.00
6.00	**Erection, testing and Commissioning of LT line with following arrangements using areal bunched XLPE cable including tension clamps for dead end, suspension clamps, clamps for neutral, piercing connectors type-I & type-II, 16 mm dia MS nuts & bolts, pole clamps, etc as required as per technical specification, approved drawings and scope of work:**		
6.01	AERIAL BUNCHED XLPE CABLE 3 X 50 SQ.MM+1x35 SQ. MM.+1x25 SQ. MM.	kM	115.16
6.02	AERIAL BUNCHED XLPE CABLE 3 X 50 SQ.MM+1x35 SQ. MM.+1x25 SQ. MM.(35 SQMM) -1 PH	kM	104.51