

**BoQ**

**DEVELOPMENT OF DISTRIBUTION INFRASTRUCTURE AT MEHSANA District of GUJARAT UNDER REVAMPED REFORMS-BASED AND RESULTS-LINKED, DISTRIBUTION SECTOR SCHEME**  
**Bill of Quantity**

Bidder's Name & Address:

Installation / Erection Quantity :

A (I)	<b>Augmentation, Renovation and Modernisation of existing Distribution Transformer</b>		
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)	<b>Augmentation &amp; Renovation of 11/0.4 kV Distribution Transformer Substation</b>		
1.00	<b>Erection, testing &amp; 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:</b>		
1.01	New 100 KVA (11/0.4 kV) Aluminium wound DTR (Replacing 63 KVA old DTR),	No	130
1.02	New 200 KVA (11/0.4 kV) Aluminium wound DTR (Replacing 100 KVA old DTR),	No	75

**DEVELOPMENT OF DISTRIBUTION INFRASTRUCTURE AT MEHSANA District of GUJARAT UNDER REVAMPED REFORMS-BASED AND RESULTS-LINKED, DISTRIBUTION SECTOR  
SCHEME  
Bill of Quantity**

Bidder's Name &amp; Address:

Installation / Erection Quantity :

<b>A (II)</b>	<b>Crossing Removal (Safety)</b>		
<b>Service No.</b>	<b>Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)</b>	<b>Unit</b>	<b>Quantity</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>1.00</b>	<b>Cables:</b>		
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 per enclosed 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	6722.00
1.02	Laying of HDPE ducts conforming to IS:4984 having dia OD 120mm, 6kg/cm <sup>2</sup> , 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	9048.00
<b>2.00</b>	<b>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.</b>		
2.01	3Cx185 mm <sup>2</sup> 11 KV XLPE	No	0.00
<b>3.00</b>	<b>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.</b>		
3.01	3Cx185 mm <sup>2</sup> 11 KV XLPE	No	368.00
<b>4.00</b>	<b>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.</b>		
4.01	3Cx185 mm <sup>2</sup> 11 KV XLPE	No	10.00
<b>5.00</b>	<b>Earthing arrangement as per technical specifications, approved drawings and scope of work.</b>		
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 of earthing chamber. For Electrical installation covering Transformer neutrals,HT & LT switchgears for independent earthing in normal soil, Length of Pipe 3 mtrs.Backfilling compound 2 bags of 25 Kg each	No	252.00
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 hardware.	Mtr	2476.00
<b>6.00</b>	<b>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 Poles as per approved drawings by Engineer in charge as per Technical Specification</b>	No	36.00
<b>7.00</b>	<b>Cable Laying above ground in air for termination of cable on pole with necessary accessories and wooden clamp as per Engineer Incharge</b>	Mtr	524.00
<b>8.00</b>	<b>Fixing of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the ground</b>	Mtr	1042.00
<b>9.00</b>	<b>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 &amp; 7/3.15 mm dia GI stranded wire complete as per technical specification, approved drawings and scope of work.</b>	Set	378.00
<b>10.00</b>	<b>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.</b>	No	325.00
<b>11.00</b>	<b>DISMANTLING</b>		
11.01	Dismantalling PSC Pole 8 Mtr with cross arm,insulators,hardwares etc.and return it to UGVCL store.While dismantalling utmost care shall be taken so that the material so that the same can be reused by UGVCL.	No	98.00
11.02	Dismantalling PSC 10 Mtr/Rail/RSJ pole with cross arm,insulators,hardwares etc.and return it to UGVCL store.While dismantalling utmost care shall be taken so that the material so that the same can be reused by UGVCL.	No	0.00
11.03	Dismantalling of ACSR/Earth wire conductor & line material & after making coil and stacking the same at UGVCL store.Conductor length	Per Cond./KM	23.28

**BoQ**

**DEVELOPMENT OF DISTRIBUTION INFRASTRUCTURE AT MEHSANA District of GUJARAT UNDER REVAMPED REFORMS-BASED AND RESULTS-LINKED, DISTRIBUTION SECTOR SCHEME**  
**Bill of Quantity**

Bidder's Name & Address:

Installation / Erection Quantity :

<b>A (III) New Feeder / Feeder Bifurcation</b>			
<b>Service No.</b>	<b>Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)</b>	<b>Unit</b>	<b>Quantity</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>1.00</b>	<b>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 &amp; 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:</b>		
1.01	10 m / 275 kgs PSC Poles - (PSC Pole as per state practice)	No	
1.02	8 m / 200 kgs PSC Poles - (PSC Pole as per state practice)	No	40
<b>2.00</b>	<b>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 &amp; 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:</b>		
2.01	10 m / 275 Kgs PSC Poles with Cement concreting 0.5 cmt	No	164
2.02	8 m / 200 Kgs PSC Poles with Cement concreting 0.5 cmt	No	357
<b>3.00</b>	<b>Erection, testing &amp; 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 &amp; washers including painting by red oxide &amp; aluminium paint as per technical specification, approved drawings and scope of work.</b>	MT	11.19
<b>4.00</b>	<b>Earthing arrangement as per technical specificatons, approved drawings and scope of work.</b>		
4.01	Supplying & erecting earth pit of minimum depth of 6 feet with 300x300x9 mm CI Earthing Plate, 1.5 meter 20 mm dia rigid PVC Pipe and earthing bolt with 15 kg salt and 15 kg coal.	No	561
4.02	Installation & commissioning of earthing conductor 38 x 3 G.I. strip for pole, 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	5610
<b>5.00</b>	<b>Excavation of stay pit in following type of soils, as per scope of work, approved drawings and specifications:</b>		
5.01	Normal soil	No	345
<b>6.00</b>	<b>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.</b>	Set	345
<b>7.00</b>	<b>Erection, testing and commissioning of 11 kv insulator including their hardware fittings as per technical specification, approved drawings and scope of work.</b>		
7.01	11 kv Pin insulator with GI pin	Set	1218
7.02	11 kv Disc insulator with strain hardware	Set	603
<b>8.00</b>	<b>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 &amp; erecting PG Clamps etc as required as per approved drawings, scope of work and technical specifications</b>		
8.01	6/4.72 mm+7/1.57 mm (100 mm <sup>2</sup> Al. Area) - Dog	kM	11.10
8.02	AL.Alloy Conductor 55mm <sup>2</sup> Size	kM	49.50
<b>9.00</b>	<b>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</b>	Set	40
<b>10.00</b>	<b>Cables:</b>		
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 per enclosed 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	8558
10.02	Laying of HDPE ducts conforming to IS:4984 having dia OD 120mm, 6kg/cm <sup>2</sup> , 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	6920
<b>11.00</b>	<b>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.</b>		
11.01	3Cx185 mm 2 11 KV XLPE	No	0
<b>12.00</b>	<b>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.</b>		
12.01	3Cx185 mm 2 11 KV XLPE	No	148
<b>13.00</b>	<b>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.</b>		
13.01	3Cx185 mm 2 11 KV XLPE	No	21
<b>14.00</b>	<b>Earthing arrangement as per technical specificatons, approved drawings and scope of work.</b>		

<b>A (III) New Feeder / Feeder Bifurcation</b>			
<b>Service No.</b>	<b>Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)</b>	<b>Unit</b>	<b>Quantity</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
14.01	Erection of maintainance free earthing ssystem 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	148
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 hardware.	Mtr	1480
15.00	<b>Cable Laying above ground in air for termination of cable on pole with necessary accessories and wooden clamp as per Engineer Incharge</b>	Mtr	174
16.00	<b>Fixing of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the ground</b>	Mtr	444
17.00	<b>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.</b>	No	763
18.00	<b>ERECTION, TESTING &amp; 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.</b>	No.	3

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

**Bill of Quantity**

Bidder's Name & Address:

Installation / Erection Quantity :

<b>A (IV)</b>	<b>Erection, testing and Commissioning of Maintenance free, Ready capsule, Pipe-in-cage (PiC) type earthing and connections to the various parts of transformer center using GI Strip and GI Nut Bolts:</b>		
<b>Service No.</b>	<b>Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)</b>	<b>Unit</b>	<b>Quantity</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>1.00</b>	<b>Installation, testing and commissioning of Maintenance free, Ready capsule, Pipe-in-cage (PiC) type Earthing with 3 Mtr Electrode as per technical specification, approved drawings and scope of work.</b>	No	4218.00
<b>2.00</b>	<b>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.</b>	Mtr	42180.00
<b>3.00</b>	<b>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.</b>	Mtr	33744.00

BoO

**DEVELOPMENT OF DISTRIBUTION INFRASTRUCTURE AT MEHSANA 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	<b>Excavation of pole pit (of depth 1/6th of pole length) in normal soil as per scope of work, approved drawings and specifications:</b>		
1.01	10 m / 275 kgs PSC Poles - (PSC Pole as per state practice)	No	38
2.00	<b>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 &amp; 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:</b>		
2.02	10 m / 275 Kgs PSC Poles with Cement concreting 0.5 cmt	No	38
3.00	<b>Erection, testing &amp; 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 &amp; washers including painting by red oxide &amp; aluminium paint as per technical specification. approved drawings and scope of work.</b>	MT	2.12
4.00	<b>Earthing arrangement as per technical specificatons, approved drawings and scope of work.</b>		
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 of earthing chamber. For Electrical installation covering Transformer neutrals, HT & LT switchgears for independent earthing in normal soil, Length of Pipe 3 mtrs. Backfilling compound 2 bags of 25 Kg each	No	36
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 hardware.	Mtr	360
5.00	<b>Excavation of stay pit in following type of soils, as per scope of work, approved drawings and specifications:</b>		
5.01	Normal soil	No	36
6.00	<b>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.</b>	Set	36
7.00	<b>Erection, testing and commissioning of 11 kV insulator including their hardware fittings as per technical specification, approved drawings and scope of work.</b>		
7.01	11 kV Pin insulator with GI pin	Set	
7.02	11 kV Disc insulator with strain hardware	Set	54
8.00	<b>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 &amp; erecting PG Clamps etc as required as per approved drawings, scope of work and technical specifications</b>		
8.01	6/4.72 mm+7/1.57 mm (100 mm <sup>2</sup> Al. Area) - Doq	KM	0.10
9.00	<b>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</b>	Set	14
10.00	<b>Cables:</b>		
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 per enclosed 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	6575
10.02	Laying of HDPE ducts conforming to IS:4984 having dia OD 120mm, 6kg/cm <sup>2</sup> , 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 aluminium 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	2368
11.00	<b>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.</b>		
11.01	3Cx185 mm 2 11 KV XLPE	No	150
12.00	<b>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.</b>		
12.01	3Cx185 mm 2 11 KV XLPE	No	175
13.00	<b>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.</b>		
13.01	3Cx185 mm 2 11 KV XLPE	No	20
14.00	<b>Earthing arrangement as per technical specificatons, approved drawings and scope of work.</b>		
14.01	Erection of maintenance free earthing system comprising of 17.2 mm dia 3 mtr Long Earthing Electrode of low carbon steel electrode with 250 microns copper coating + carbon based conductive concrete back fill safe compound (resistivity of less than 0.10 ohm mtr) & GI clamp. Supply, Earthing 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	253
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 hardware.	Mtr	2466
15.00	<b>Cable Laying above ground in air for termination of cable on pole with necessary accessories and wooden clamp as per Engineer Incharge</b>	Mtr	816
16.00	<b>Fixing of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the ground</b>	Mtr	390
17.00	<b>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.</b>	No	146

<b>A (V)</b>	<b>Interlinking of 11kV Feeder (Reliability)</b>		
<b>Service No.</b>	<b>Description of Related Services (excludes inland transportation and other services required in India to convey the goods to their final destination)</b>	<b>Unit</b>	<b>Quantity</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>18.00</b>	<b>RMU : Installation, Testing &amp; 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.</b>		
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	7
18.04	1 Circuit Breaker 2 Isolator (3-Way)	No	55
18.05	2 Circuit Breaker 1 Isolator (3-Way)	No	0
18.06	1 Circuit Breaker 3 Isolator (4-Way)	No	1
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
18.1	1 Circuit Breaker 5 Isolator (6-Way)	No	0
<b>19.00</b>	<b>DISMENTALLING</b>		0
19.01	Dismantalling PSC Pole 8 Mtr with cross arm,insulators,hardwares etc.and return it to UGVCL store.While dismantalling utmost care shall be taken so that the material so that the same can be reused by UGVCL.	No	86
19.02	Dismantalling PSC 10 Mtr/Rail/RSJ pole with cross arm,insulators,hardwares etc.and return it to UGVCL store.While dismantalling utmost care shall be taken so that the material so that the same can be reused by UGVCL.	No	0
19.03	Dismantalling of ACSR/Earth wire conductor & line material & after making coil and stacking the same at UGVCL store.Conductor length	Per Cond./KM	0

**BoQ**

**DEVELOPMENT OF DISTRIBUTION INFRASTRUCTURE AT MEHSANA 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)	<b>Conversion of existing overhead electrical distribution network in to Underground Cable Network</b>		
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
<b>1.00</b>	<b>RMU : Installation, Testing &amp; 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.</b>		
1.01	2 Isolator (2-Way)	No	53.00
1.02	1 Circuit Breaker 1 Isolator (2-Way)	No	0.00
1.03	3 Isolator (3-Way)	No	79.00
1.04	1 Circuit Breaker 2 Isolator (3-Way)	No	656.00
1.05	2 Circuit Breaker 1 Isolator (3-Way)	No	0.00
1.06	1 Circuit Breaker 3 Isolator (4-Way)	No	223.00
1.07	4 Isolator (4-Way)	No	83.00
1.08	2 Circuit Breaker 2 Isolator (4-Way)	No	25.00
1.09	1 Circuit Breaker 4 Isolator (5-Way)	No	0.00
1.10	1 Circuit Breaker 5 Isolator (6-Way)	No	0.00
<b>2.00</b>	<b>Transformer: Installation, Testing &amp; 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.</b>		
2.01	100 kVA, Aluminium Wound CRGO / Amorphous Core	No	494.00
2.02	200 kVA, Aluminium Wound CRGO / Amorphous Core	No	248.00
2.03	315 kVA, Copper Wound CRGO / Amorphous Core	No	54.00
2.04	500 kVA, Copper Wound CRGO / Amorphous Core	No	19.00
<b>3.00</b>	<b>Cables:</b>		
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 per enclosed 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	3900.00
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 per enclosed 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	52400.00
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	24000.00
3.04	Laying of HDPE ducts conforming to IS:4984 having dia OD 120mm, 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 aluminium 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	206300.00
<b>4.00</b>	<b>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.</b>		
4.01	3Cx 240 mm 2 11 KV XLPE	No	170.00
4.02	3Cx185 mm 2 11 KV XLPE	No	2676.00
4.03	3Cx 70 mm 2 11 KV XLPE	No	2134.00
<b>5.00</b>	<b>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.</b>		
5.01	3Cx 240 mm 2 11 KV XLPE	No	10.00
5.02	3Cx185 mm 2 11 KV XLPE	No	77.00
5.03	3Cx 70 mm 2 11 KV XLPE	No	178.00
<b>6.00</b>	<b>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.</b>		
6.01	3Cx 240 mm 2 11 KV XLPE	No	40.00
6.02	3Cx185 mm 2 11 KV XLPE	No	844.00
<b>8.00</b>	<b>Erecting XLPE(IS:7098) (I)-88 ISI marked multistrand Aluminium conductor armoured cable for 1.1 kV to be laid on pole with HDPE (DWC) pipe with clamping or in ground as well as existing cable trench/pipe at road crossing of 1C x 300 Sq MM, as per technical specification, approved drawings and scope of work.</b>	Mtr	113500.00
<b>9.00</b>	<b>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.</b>		
9.01	1 core 300 Sq mm (Indoor)	No	15074.00
9.02	1 core 300 Sq mm (Out door - at LT Pole)	No	16736.00
<b>10.00</b>	<b>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)</b>	No	20054.00
<b>11.00</b>	<b>Earthing arrangement as per technical specifications, approved drawings and scope of work.</b>		
11.01	Erection of maintenance free earthing system comprising of 17.2 mm dia 3 mtr Long Earthing Electrode of low carbon steel electrode with 250 microns copper coating + carbon based conductive concrete back fill safe compound(resistivity 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	6332.00
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	63320.00
<b>12.00</b>	<b>Erection of DP structure as per enclosed drawings(PSC poles 10 metres long )including supply of poles, 10 Kg/cm2 100 mm dia heavy duty GI pipe for protection of cable, hot dipped structural sections for mounting Transformer/RMU with box channel &amp; 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</b>	No	967.00
<b>13.00</b>	<b>Cable Laying above ground in air for termination of cable on pole with necessary accessories and wooden clamp as per Engineer Incharge</b>	Mtr	2120.00
<b>14.00</b>	<b>Fixing of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the ground</b>	Mtr	2120.00

