DEVELOPMENT OF DISTRIBUTION INFRASTRUCTURE AT GANDHINAGAR CORPORATION CLUSTER 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)	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 Substation**		
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 200 KVA (11/0.4 kV) Aluminium wound DTR (Replacing 100 KVA old DTR),	No	10

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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	**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.**	RMT	635.00
	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.		
	viii.Painting the inside, outside of Cable trench wall including precast cover with two coats of water proofing cement paint.		
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	4.00

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

Bill of Quantity

Bidder's Name & Address:

Installation / Erection Quantity :

A	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	1.00
1.02	1 Circuit Breaker 1 Isolator (2-Way)	No	5.00
1.03	3 Isolator (3-Way)	No	0.00
1.04	1 Circuit Breaker 2 Isolator (3-Way)	No	354.00
1.05	2 Circuit Breaker 1 Isolator (3-Way)	No	0.00
1.06	1 Circuit Breaker 3 Isolator (4-Way)	No	130.00
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	14.00
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	222.00
2.02	200 kVA, Alunium Wound CRGO / Amorphous Core	No	161.00
2.03	315 kVA, Copper Wound CRGO / Amorphous Core	No	68.00
2.04	500 kVA, Copper Wound CRGO / Amorphous Core	No	38.00
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	159330.00
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	400.00
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	9780.00
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	64500.00
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	1644.00
4.02	3Cx185 mm 2 11 KV XLPE	No	2.00
4.03	3Cx 70 mm 2 11 KV XLPE	No	978.00
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	0.00
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	159.33
6.02	3Cx185 mm 2 11 KV XLPE	No	2.00
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	29340.00
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	7978.00
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	9824.00
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	3780.00
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	30240.00
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	451.00
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	10496.00
14.00	**Fixing of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the ground**	Mtr	1467.00

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Bill of Quantity

Bidder's Name & Address:

Installation / Erection Quantity :

A	**Overhead to Underground Electrification Network**		
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	902.00
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	900.00
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	3186.60
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	95230.00
19.00	**Fixing chain link fencing to RMU as per Specification and drawing(approx. total running length of each fencing 10.8 meters)**	RMT	5410.80
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	25 kVA	No	129
b	63 kVA	No	127
c	100 kVA	No	118
d	200 kVA	No	65
e	500 KVA	No	8
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	581
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	1355
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	97.00