



Save Energy for Benefit of Self and Nation

# Uttar Gujarat Vij Company Limited

CIN - U40102GJ2003SGC042906

(A subsidiary of Gujarat Urja Vikas Nigam Limited)

**TENDER NOTICE No:-UGVCL/TECH-PROJECT/26-27/ROBUST-GWFCM/HT-UG/FT/05**

SCHEDULE-B		
Shilaj		
Turnkey Based Contract for Conversion of Existing HT and / or LT Line Network in to Underground Cable Network with Associated Activities under UGVCL of Gujarat State		
Sr. No.	Particulars of Item	Grand Total in Rs.
<b>A</b>	<b>TOTAL SUPPLY AMOUNT OF SCHEDULE-B: CONVERSION OF EXISTING OVERHEAD ELECTRICAL NETWORK IN TO UNDERGROUND CABLE NETWORK ITEMS (WITHOUT GST &amp; CESS)</b>	₹ 54,87,50,752.8000
<b>B</b>	<b>TOTAL INSTALLATION, TESTING &amp; COMMISSIONING AMOUNT OF SCHEDULE-B: CONVERSION OF EXISTING OVERHEAD ELECTRICAL NETWORK IN TO UNDERGROUND CABLE NETWORK ITEMS (WITHOUT GST &amp; CESS)</b>	₹ 10,31,93,239.5500
<b>C</b>	<b>TOTAL SUPPLY &amp; INSTALLATION, TESTING &amp; COMMISSIONING AMOUNT OF SCHEDULE-B: CONVERSION OF EXISTING OVERHEAD ELECTRICAL NETWORK IN TO UNDERGROUND CABLE NETWORK ITEMS (WITHOUT GST &amp; CESS)</b>	₹ 65,19,43,992.3500
1	BIDDER'S OFFER ( + / - ) IN %	0.0000%
2	BIDDER'S OFFER ( + / - ) IN RUPEES	₹ 0.0000
<b>D</b>	<b>OFFERED SUPPLY &amp; INSTALLATION AMOUNT OF SCHEDULE-B: CONVERSION OF EXISTING OVERHEAD ELECTRICAL NETWORK IN TO UNDERGROUND CABLE NETWORK ITEMS (WITHOUT GST &amp; CESS)</b>	<b>₹ 65,19,43,992.3500</b>
3	Welfare cess @ 1% ON "D"	₹ 65,19,439.9235
<b>E</b>	<b>TOTAL AMOUNT (WITH WELFARE CESS)</b>	<b>₹ 65,84,63,432.2735</b>
4	GST @ 18% ON "E"	₹ 11,85,23,417.8092
<b>F</b>	<b>GRAND TOTAL (WITH GST &amp; WELFARE CESS)</b>	<b>₹ 77,69,86,850.0827</b>

Date

Signature of Bidder

Stamp

Note: Four Digits are considered as per N-Procurement format.

Shilaj		Turnkey Based Contract for Conversion of Existing HT and / or LT Line Network in to Underground Cable Network with Associated Activities under UGVCL of Gujarat State											
Sr. No.	Particulars of Item	Unit	Quantity	Supply Ex. Works Price in Rs.	3% Contingencies	2% Storage Charges	2% Transportation Charges	Total Supply Unit Rate in Rs. [Excluding Taxes]	Total Supply Price in Rs. [Excluding Taxes]	Quantity	ETC Unit Rate in Rs. [Excluding Taxes]	Total ETC Price in Rs. [Excluding Taxes]	Total Supply + ETC Price in Rs. [Excluding Taxes]
ESTIMATED COST CALCULATION FOR HT UNDERGROUND													
A-1	RMU : Supply of SF6 gas insulated, 630Amp Extensible, SCADA compatible Ring Mains Units (RMU)		137						104562910.00	137		5142897.75	109705807.75
1.0	2 Isolator (2-Way) SCADA Compatible	No.	0	4,88,385.60	14,651.57	9,768.00	9,768.00	5,22,574.00	0.00	0	4,425.00	0.00	0.00
2.0	1 Circuit Breaker 1 Isolator (2-Way) SCADA Compatible	No.	0	5,07,636.00	15,229.08	10,153.00	10,153.00	5,43,172.00	0.00	0	4,425.00	0.00	0.00
3.0	3 Isolator (3-Way) SCADA Compatible	No.	24	5,50,620.00	16,518.60	11,013.00	11,013.00	5,89,165.00	1,41,39,960.00	24	4,425.00	106200.00	14246160.00
4.0	1 Circuit Breaker 2 Isolator (3-Way) SCADA Compatible	No.	0	5,78,970.00	17,369.10	11,580.00	11,580.00	6,19,500.00	0.00	0	4,425.00	0.00	0.00
5.0	2 Circuit Breaker 1 Isolator (3-Way) SCADA Compatible	No.	0	6,06,255.60	18,187.67	12,126.00	12,126.00	6,48,696.00	0.00	0	4,425.00	0.00	0.00
6.0	1 Circuit Breaker 3 Isolator (4-Way) SCADA Compatible	No.	48	7,47,010.80	22,410.33	14,941.00	14,941.00	7,99,304.00	3,83,66,592.00	48	4,425.00	212400.00	38578992.00
7.0	4 Isolator (4-Way) SCADA Compatible	No.	64	7,42,572.00	22,277.16	14,852.00	14,852.00	7,94,554.00	5,08,51,456.00	64	4,425.00	283200.00	51134656.00
8.0	2 Circuit Breaker 2 Isolator (4-Way) SCADA Compatible	No.	0	7,70,172.00	23,105.16	15,404.00	15,404.00	8,24,086.00	0.00	0	4,425.00	0.00	0.00
9.0	1 Circuit Breaker 4 Isolator (5-Way) SCADA Compatible	No.	0	7,87,685.25	23,630.56	15,754.00	15,754.00	8,42,824.00	0.00	0	4,425.00	0.00	0.00
10.0	2 Circuit Breaker 3 Isolator (5-Way) SCADA Compatible	No.	1	11,26,075.60	33,782.27	22,522.00	22,522.00	12,04,902.00	12,04,902.00	1	4,425.00	4425.00	1209327.00
11.0	3 Circuit Breaker 2 Isolator (5-Way) SCADA Compatible	No.	0	11,26,075.60	33,782.27	22,522.00	22,522.00	12,04,902.00	0.00	0	4,425.00	0.00	0.00
12.0	1 Isolator [Extension of Ext. RMU]	No.	0	3,06,309.80	9,189.30	6,127.00	6,127.00	3,27,754.00	0.00	0	4,425.00	0.00	0.00
13.0	1 Breaker [Extension of Ext. RMU]	No.	0	3,82,916.25	11,487.49	7,659.00	7,659.00	4,09,722.00	0.00	0	4,425.00	0.00	0.00
14.0	RMU Plinth (up to 3-Way): 2.50X2.00X0.55 Meter above Ground	No.		-	-	-	-	-		24	30,344.25	728262.00	728262.00
15.0	RMU Plinth (Above 3-Way): 3.00X2.00X0.55 Meter above Ground	No.		-	-	-	-	-		113	33,702.75	3808410.75	3808410.75
16.0	Extension of existing Plinth: Construction of RMU Plinth (Extension of One Way)	No.		-	-	-	-	-		0	8,840.00	0.00	0.00
A-2	RMU : Supply of SF6 gas insulated, 630Amp Extensible, NON-SCADA Ring Mains Units (RMU)		156						82143258.00	156		5427361.50	87570619.50
1.0	2 Isolator (2-Way) NON-SCADA	No.	0	3,03,600.00	9,108.00	6,072.00	6,072.00	3,24,852.00	0.00	0	4,425.00	0.00	0.00
2.0	1 Circuit Breaker 1 Isolator (2-Way) NON-SCADA	No.	0	3,31,200.00	9,936.00	6,624.00	6,624.00	3,54,384.00	0.00	0	4,425.00	0.00	0.00
3.0	3 Isolator (3-Way) NON-SCADA	No.	0	4,55,400.00	13,662.00	9,108.00	9,108.00	4,87,278.00	0.00	0	4,425.00	0.00	0.00
4.0	1 Circuit Breaker 2 Isolator (3-Way) NON-SCADA	No.	110	4,83,000.00	14,490.00	9,660.00	9,660.00	5,16,810.00	5,68,49,100.00	110	4,425.00	486750.00	57335850.00
5.0	2 Circuit Breaker 1 Isolator (3-Way) NON-SCADA	No.	45	5,10,600.00	15,318.00	10,212.00	10,212.00	5,46,342.00	2,45,85,390.00	45	4,425.00	199125.00	24784515.00
6.0	1 Circuit Breaker 3 Isolator (4-Way) NON-SCADA	No.	0	6,34,800.00	19,044.00	12,696.00	12,696.00	6,79,236.00	0.00	0	4,425.00	0.00	0.00
7.0	4 Isolator (4-Way) NON-SCADA	No.	0	6,07,200.00	18,216.00	12,144.00	12,144.00	6,49,704.00	0.00	0	4,425.00	0.00	0.00
8.0	2 Circuit Breaker 2 Isolator (4-Way) NON-SCADA	No.	1	6,62,400.00	19,872.00	13,248.00	13,248.00	7,08,768.00	7,08,768.00	1	4,425.00	4425.00	713193.00
9.0	1 Circuit Breaker 4 Isolator (5-Way) NON-SCADA	No.	0	7,86,600.00	23,598.00	15,732.00	15,732.00	8,41,662.00	0.00	0	4,425.00	0.00	0.00
10.0	2 Circuit Breaker 3 Isolator (5-Way) NON-SCADA	No.	0	9,38,400.00	28,152.00	18,768.00	18,768.00	10,04,088.00	0.00	0	4,425.00	0.00	0.00
11.0	3 Circuit Breaker 2 Isolator (5-Way) NON-SCADA	No.	0	9,38,400.00	28,152.00	18,768.00	18,768.00	10,04,088.00	0.00	0	4,425.00	0.00	0.00
12.0	1 Isolator [Extension of Ext. RMU]	No.	0	2,85,364.80	8,560.95	5,708.00	5,708.00	3,05,342.00	0.00	0	4,425.00	0.00	0.00
13.0	1 Breaker [Extension of Ext. RMU]	No.	0	3,56,741.50	10,702.25	7,135.00	7,135.00	3,81,714.00	0.00	0	4,425.00	0.00	0.00
14.0	RMU Plinth (up to 3-Way): 2.50X2.00X0.55 Meter above Ground	No.		-	-	-	-	-		155	30,344.25	4703358.75	4703358.75
15.0	RMU Plinth (Above 3-Way): 3.00X2.00X0.55 Meter above Ground	No.		-	-	-	-	-		1	33,702.75	33702.75	33702.75
16.0	Extension of existing Plinth: Construction of RMU Plinth (Extension of One Way)	No.		-	-	-	-	-		0	8,840.00	0.00	0.00

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A-3	11 kV/433 V Distribution Transformer		46						19959752.00	92		2769348.30	22729100.30
1.0	11 kV/433 V, 100 kVA Aluminium winding (CT 250/5 Amp) Outdoor Transformers with HV/LV cable end Boxes	No.	28	2,20,112.35	6,603.38	4,403.00	4,403.00	2,35,522.00	65,94,616.00	28	4,425.00	123900.00	6718516.00
2.0	11 kV/433 V, 200 kVA Aluminium winding (CT 400/5 Amp) Outdoor Transformers with HV/LV cable end Boxes	No.	12	4,16,852.75	12,505.59	8,338.00	8,338.00	4,46,035.00	53,52,420.00	12	4,425.00	53100.00	5405520.00
3.0	11 kV/433 V, 315 kVA Copper winding (CT 600/5 Amp) Outdoor Transformers with HV/LV cable end Boxes	No.	4	11,83,486.25	35,504.59	23,670.00	23,670.00	12,66,331.00	50,65,324.00	4	4,425.00	17700.00	5083024.00
4.0	11 kV/433 V, 500 kVA Copper winding (CT 1000/5 Amp) Outdoor Transformers with HV/LV cable end Boxes	No.	1	13,12,594.40	39,377.84	26,252.00	26,252.00	14,04,477.00	14,04,477.00	1	4,425.00	4425.00	1408902.00
5.0	11 kV/433 V, 630 kVA Copper winding (CT 1000/5 Amp) Outdoor Transformers with HV/LV cable end Boxes	No.	1	14,41,975.00	43,259.25	28,840.00	28,840.00	15,42,915.00	15,42,915.00	1	4,425.00	4425.00	1547340.00
9.0	DTR Plinth up to 500 kVA	No.		-	-	-	-	-		45	55,292.05	2488142.25	2488142.25
10.0	630 kVA DTR Plinth: 3.15X2.90X0.75 Meter above Ground	No.		-	-	-	-	-		1	77,656.05	77656.05	77656.05
A-8	11kV 3C XLPE Aluminum Conductor Flame Retardant Low Smoke (FRLS) Cable		122720.000						217944160.00	0.000		11064900.00	229009060.00
2.0	11KV(E), 3 Core, 300 mm²	Meter	480.000	2,329.00	69.87	47.00	47.00	2,493.00	11,96,640.00	0.000	-		1196640.00
3.0	11KV(E), 3 Core, 240 mm²	Meter	119840.000	1,674.35	50.24	34.00	34.00	1,793.00	21,48,73,120.00	0.000	-		214873120.00
8.0	11KV(E), 3 Core, 70 mm²	Meter	2400.000	728.25	21.85	15.00	15.00	781.00	18,74,400.00	0.000	-		1874400.00
11.0	<b>Normal Laying:</b> Laying of various size Single Circuit of 11kV XLPE insulated Aluminium armoured cable in Cable trench up to the minimum depth of 1200 mm is to be dug with width of 300 mm in any type of soil. Spreading of sand at the bottom of the trench up to 100mm before lying of power cable in the centre of the trench. Spreading of another layer of 100mm sand above laid cable. Utmost care should be taken while loading / unloading and unwinding the cable drums. Covering the cable with RCC half round hume pipe 30mm thick, 150mm inner dia.before refilling pre-bonding tap/warning tap should provide below 700 mm from the ground level and back filling the same to make ground level as per original., Back feeling the trench so as to make ground level as per original. Laid cable up to cable box of Plinth Mounted RMU / Transformer shall be part of Normal Laying. <b>[The rates are excluding supply of cable].</b>	Meter		-	-	-	-	-		32,480.000	335.00	10880800.00	10880800.00
12.0	<b>Normal Laying:</b> Laying of various size Double Circuit of 11kV XLPE insulated Aluminium armoured cable in Cable trench up to the minimum depth of 1200 mm is to be dug with width of 500 mm in any type of soil. Spreading of sand at the bottom of the trench up to 100mm before lying of power cable in the centre of the trench. Spreading of another layer of 100mm sand above laid cable. Utmost care should be taken while loading / unloading and unwinding the cable drums. Covering the cable with RCC half round hume pipe 30mm thick, 150mm inner dia.before refilling pre-bonding tap/warning tap should provide below 700 mm from the ground level and back filling the same to make ground level as per original., Back feeling the trench so as to make ground level as per original. Laid cable up to cable box of Plinth Mounted RMU / Transformer shall be part of Normal Laying. <b>[The rates are excluding supply of Cable].</b>	Meter		-	-	-	-	-		100.000	468.00	46800.00	46800.00
13.0	Laying of various sizes of 11 KV XLPE insulated Aluminium armoured cable in cable tray/ trench over/below the ground level <b>[The rates are excluding cable tray, only labour charges].</b>	Meter		-	-	-	-	-		0.000	150.00	0.00	0.00
14.0	Laying of various size of 11 KV XLPE insulated Aluminium armoured cable above ground in air for termination of cable on Pole with Clamps made from G.I. Flat 50X6 MM for and with 2.7 Meter G I Pipe of 100MM Size as per site condition and instruction of engineer in charge <b>[The rates are including cost of clamp and G I Pipe].</b>	Meter		-	-	-	-	-		0.000	680.00	0.00	0.00
15.0	Laying of various size of 11 KV XLPE insulated Aluminium armoured cable above ground in air for termination of cable on Pole with Clamps made from G.I. Flat 50X6 MM for and with 2.7 Meter G I Pipe of 160MM Size as per site condition and instruction of engineer in charge <b>[The rates are including cost of clamp and G I Pipe].</b>	Meter		-	-	-	-	-		100.000	950.00	95000.00	95000.00
16.0	Laying of various size of 11 KV XLPE insulated Aluminium armoured cable above ground in air for termination of cable on Pole as per site condition and instruction of engineer in charge <b>[The rates are excluding cost of clamp and pipe].</b>	Meter		-	-	-	-	-		100.000	38.00	3800.00	3800.00
17.0	Laying of various size of 11kV XLPE insulated Aluminium armoured cable underground through already laid HDPE Pipe (by HDD method). <b>[The rates are excluding supply and laying of HDPE Pipe through HDD Method].</b>	Meter		-	-	-	-	-		100.000	150.00	15000.00	15000.00
18.0	Laying of various size Single Circuit of 11kV XLPE insulated Aluminium armoured cable in Cable trench up to the minimum depth of 1200 mm is to be dug with width of 300 mm in any type of soil. Spreading of sand at the bottom of the trench up to 100mm before lying of HDPE Pipe in the centre of the trench. Utmost care should be taken while loading / unloading and unwinding the cable drums. The cable shall be laid through <b>particular size of HDPE Pipe.</b> before refilling pre-bonding tap/warning tap should provide below 700 mm from the ground level and back filling the same to make ground level as per original. Back feeling the trench so as to make ground level as per original. Laid cable up to cable box of Plinth Mounted RMU / Transformer shall be part of Normal Laying. <b>[The rates are excluding supply of HDPE Pipe].</b>	Meter		-	-	-	-	-		100.000	235.00	23500.00	23500.00
19.0	Laying of various size Double Circuit of 11kV XLPE insulated Aluminium armoured cable in Cable trench up to the minimum depth of 1200 mm is to be dug with width of 300 mm in any type of soil. Spreading of sand at the bottom of the trench up to 100mm before lying of HDPE Pipe in the centre of the trench. Utmost care should be taken while loading / unloading and unwinding the cable drums. The cable shall be laid through <b>particular size of HDPE Pipe.</b> before refilling pre-bonding tap/warning tap should provide below 700 mm from the ground level and back filling the same to make ground level as per original. Back feeling the trench so as to make ground level as per original. Laid cable up to cable box of Plinth Mounted RMU / Transformer shall be part of Normal Laying. <b>[The rates are excluding supply of HDPE Pipe].</b>	Meter		-	-	-	-	-		0.000	368.00	0.00	0.00

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A-9	Push Through: Providing and Laying of HDPE Pipe conforming to IS 4984:1955 (Amendment no. 2) for HT UG Cable [Rates are excluding laying of cable]		87360.000						49183680.00	87360.000		58968000.00	108151680.00
4.0	OD 110 mm, minimum thickness as per IS 4982 and amendment thereof	Meter	87360.000	525.00	15.75	11.00	11.00	563.00	4,91,83,680.00	87,360.000	675.00	58968000.00	108151680.00
A-10	Proving and Fixing HT push on/heat shrink type end Indoor termination kit preferably 3m(m-seal) or Raychem make at switchgear end boxes, transformer(PAD/Pole mounted) for 3 core 11 kV XLPE Aluminium Conductor Armoured cable as specified with connection of leads including cutting, stripping of cable, insulations, providing compression type terminal ,crimping of lugs with suitable crimping tool, indoor application.		1123						4716294.00	1123		1403750.00	6120044.00
1.0	3C X 35 / 50 / 70 mm² HT XLPE Cable	No.	623	3,677.00	110.31	74.00	74.00	3,936.00	24,52,128.00	623	1,250.00	778750.00	3230878.00
2.0	3C X 95 / 120 / 150 / 185 mm² HT XLPE Cable	No.	5	3,912.00	117.36	79.00	79.00	4,188.00	20,940.00	5	1,250.00	6250.00	27190.00
3.0	3C X 240 mm² HT XLPE Cable	No.	458	4,211.00	126.33	85.00	85.00	4,508.00	20,64,664.00	458	1,250.00	572500.00	2637164.00
4.0	3C X 300 mm² / 400 mm² HT XLPE Cable	No.	37	4,508.00	135.24	91.00	91.00	4,826.00	1,78,562.00	37	1,250.00	46250.00	224812.00
A-11	Proving and Fixing HT push on/heat shrink type end Outdoor termination kit preferably 3m(m-seal) or Raychem make at switchgear end boxes, transformer(PAD/Pole mounted) for 3 core 11 kV XLPE Aluminium Conductor Armoured cable as specified with connection of leads including cutting, stripping of cable, insulations, providing compression type terminal ,crimping of lugs with suitable crimping tool, Outdoor application.		587						3334877.00	587		733750.00	4068627.00
1.0	3C X 35 / 50 / 70 mm² HT XLPE Cable	No.	23	4,623.00	138.69	93.00	93.00	4,948.00	1,13,804.00	23	1,250.00	28750.00	142554.00
2.0	3C X 95 / 120 / 150 / 185 mm² HT XLPE Cable	No.	5	4,947.00	148.41	99.00	99.00	5,294.00	26,470.00	5	1,250.00	6250.00	32720.00
3.0	3C X 240 mm² HT XLPE Cable	No.	554	5,337.00	160.11	107.00	107.00	5,712.00	31,64,448.00	554	1,250.00	692500.00	3856948.00
4.0	3C X 300 mm² / 400 mm² HT XLPE Cable	No.	5	5,635.00	169.05	113.00	113.00	6,031.00	30,155.00	5	1,250.00	6250.00	36405.00
A-12	Proving and Fixing HT push on/heat shrink type Straight joint preferably 3m(m-seal) or Raychem make for 3 core 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.		256						1866810.00	256		320000.00	2186810.00
1.0	3C X 35 / 50 / 70 mm² HT XLPE Cable	No.	8	6,158.00	184.74	124.00	124.00	6,591.00	52,728.00	8	1,250.00	10000.00	62728.00
2.0	3C X 95 / 120 / 150 / 185 mm² HT XLPE Cable	No.	5	6,614.00	198.42	133.00	133.00	7,079.00	35,395.00	5	1,250.00	6250.00	41645.00
3.0	3C X 240 mm² HT XLPE Cable	No.	242	6,839.00	205.17	137.00	137.00	7,319.00	17,71,198.00	242	1,250.00	302500.00	2073698.00
4.0	3C X 300 mm² / 400 mm² HT XLPE Cable	No.	1	6,999.00	209.97	140.00	140.00	7,489.00	7,489.00	1	1,250.00	1250.00	8739.00

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ESTIMATED COST CALCULATION FOR LT UNDERGROUND													
B-1	1.1kV Aluminum Conductor, XLPE Insulated, PVC Sheathed, Armoured, Screened Flame Retardant Low Smoke (FRLS) Cable		8280.000						10441080.00	0.000		2906100.00	13347180.00
14.0	4C x240 mm <sup>2</sup> Aluminum	Meter	2760.000	1,979.00	59.37	40.00	40.00	2,119.00	58,48,440.00	0.000	335.00	0.00	5848440.00
36.0	1 C x300 mm <sup>2</sup> Aluminum	Meter	5520.000	776.00	23.28	16.00	16.00	832.00	45,92,640.00	0.000	335.00	0.00	4592640.00
42.0	<b>Normal Laying:</b> Laying of various size Single Circuit of 1.1kV XLPE insulated Aluminium armoured cable in Cable trench up to the minimum depth of 900 mm is to be dug with width of 300 mm in any type of soil. Spreading of sand at the bottom of the trench up to 100mm before lying of power cable in the centre of the trench. Spreading of another layer of 100mm sand above laid cable. Utmost care should be taken while loading / unloading and unwinding the cable drums. Covering the cable with RCC half round hume pipe 30mm thick, 150mm inner dia.before refilling pre-bonding tap/warning tap should provide below 700 mm from the ground level and back filling the same to make ground level as per original., Back feeling the trench so as to make ground level as per original. Laid cable up to cable box of Plinth Mounted LTDB / LT Feeder Panel / Service Panel shall be part of Normal Laying.	Meter		-	-	-	-	-		5,520.000	335.00	1849200.00	1849200.00
43.0	Normal Laying: Laying of various size Double Circuit of 1.1kV XLPE insulated Aluminium armoured cable in Cable trench up to the minimum depth of 900 mm is to be dug with width of 500 mm in any type of soil. Spreading of sand at the bottom of the trench up to 100mm before lying of power cable in the centre of the trench. Spreading of another layer of 100mm sand above laid cable. Utmost care should be taken while loading / unloading and unwinding the cable drums. Covering the cable with RCC half round hume pipe 30mm thick, 150mm inner dia.before refilling pre-bonding tap/warning tap should provide below 700 mm from the ground level and back filling the same to make ground level as per original., Back feeling the trench so as to make ground level as per original.Laid cable up to cable box of Plinth Mounted LTDB / LT Feeder Panel / Service Panel shall be part of Normal Laying.	Meter		-	-	-	-	-		100.000	468.00	46800.00	46800.00
44.0	Laying of various sizes of 1.1 KV XLPE insulated Aluminium armoured cable in cable tray/ trench over/below the ground level <b>[The rates are excluding cable tray, only labour charges].</b>	Meter		-	-	-	-	-		0.000	150.00	0.00	0.00
45.0	Laying of various size of 1.1 KV XLPE insulated Aluminium armoured cable above ground in air for termination of cable on Pole with Clamps made from G.I. Flat 50X6 MM for and with 2.7 Meter G I Pipe of 100MM Size as per site condition and instruction of engineer in charge <b>[The rates are including cost of clamp and G I Pipe].</b>	Meter		-	-	-	-	-		1,000.000	680.00	680000.00	680000.00
46.0	Laying of various size of 1.1 KV XLPE insulated Aluminium armoured cable above ground in air for termination of cable on Pole with Clamps made from G.I. Flat 50X6 MM for and with 2.7 Meter G I Pipe of 160MM Size as per site condition and instruction of engineer in charge <b>[The rates are including cost of clamp and G I Pipe].</b>	Meter		-	-	-	-	-		200.000	950.00	190000.00	190000.00
47.0	Laying of various size of 1.1 KV XLPE insulated Aluminium armoured cable above ground in air for termination of cable on Pole as per site condition and instruction of engineer in charge <b>[The rates are excluding cost of clamp and pipe].</b>	Meter		-	-	-	-	-		200.000	38.00	7600.00	7600.00
48.0	Laying of various size of 1.1kV XLPE insulated Aluminium armoured cable underground through already laid HDPE Pipe (by HDD method). <b>[The rates are excluding supply and laying of HDPE Pipe through HDD Method].</b>	Meter		-	-	-	-	-		100.000	150.00	15000.00	15000.00
49.0	Laying of various size Single Circuit of 1.1kV XLPE insulated Aluminium armoured cable in Cable trench up to the minimum depth of 900 mm is to be dug with width of 300 mm in any type of soil. Spreading of sand at the bottom of the trench up to 100mm before lying of power cable in the centre of the trench. Utmost care should be taken while loading / unloading and unwinding the cable drums. The cable shall be laid through <b>particular size of HDPE Pipe</b> . before refilling pre-bonding tap/warning tap should provide below 700 mm from the ground level and back filling the same to make ground level as per original. Back feeling the trench so as to make ground level as per original. Laid cable up to cable box of Plinth Mounted LTDB / LT Feeder Panel / Service Panel shall be part of Normal Laying.	Meter		-	-	-	-	-		500.000	235.00	117500.00	117500.00
50.0	Laying of various size Double Circuit of 1.1kV XLPE insulated Aluminium armoured cable in Cable trench up to the minimum depth of 900 mm is to be dug with width of 300 mm in any type of soil. Spreading of sand at the bottom of the trench up to 100mm before lying of power cable in the centre of the trench. Utmost care should be taken while loading / unloading and unwinding the cable drums. The cable shall be laid through <b>particular size of HDPE Pipe</b> . before refilling pre-bonding tap/warning tap should provide below 700 mm from the ground level and back filling the same to make ground level as per original. Back feeling the trench so as to make ground level as per original. Laid cable up to cable box of Plinth Mounted LTDB / LT Feeder Panel / Service Panel shall be part of Normal Laying.	Meter		-	-	-	-	-		0.000	368.00	0.00	0.00
51.0	Laying of various size Single Circuit of 1.1kV XLPE insulated Aluminium armoured cable in Cable trench up to the minimum depth of 900 mm is to be dug with width of 300 mm in any type of soil. Spreading of sand at the bottom of the trench up to 100mm before lying of power cable in the centre of the trench. Utmost care should be taken while loading / unloading and unwinding the cable drums. The cable shall be laid through <b>particular size of DWC Pipe</b> . before refilling pre-bonding tap/warning tap should provide below 700 mm from the ground level and back filling the same to make ground level as per original. Back feeling the trench so as to make ground level as per original. Laid cable up to cable box of Plinth Mounted LTDB / LT Feeder Panel / Service Panel shall be part of Normal Laying.	Meter		-	-	-	-	-		0.000	235.00	0.00	0.00
52.0	Laying of various size Double Circuit of 1.1kV XLPE insulated Aluminium armoured cable in Cable trench up to the minimum depth of 900 mm is to be dug with width of 300 mm in any type of soil. Spreading of sand at the bottom of the trench up to 100mm before lying of power cable in the centre of the trench. Utmost care should be taken while loading / unloading and unwinding the cable drums. The cable shall be laid through <b>particular size of DWC Pipe</b> . before refilling pre-bonding tap/warning tap should provide below 700 mm from the ground level and back filling the same to make ground level as per original. Back feeling the trench so as to make ground level as per original. Laid cable up to cable box of Plinth Mounted LTDB / LT Feeder Panel / Service Panel shall be part of Normal Laying.	Meter		-	-	-	-	-		0.000	368.00	0.00	0.00

Shilaj		Turnkey Based Contract for Conversion of Existing HT and / or LT Line Network in to Underground Cable Network with Associated Activities under UGVCL of Gujarat State											
Sr. No.	Particulars of Item	Unit	Quantity	Supply Ex. Works Price in Rs.	3% Contingencies	2% Storage Charges	2% Transporation Charges	Total Supply Unit Rate in Rs. [Excluding Taxes]	Total Supply Price in Rs. [Excluding Taxes]	Quantity	ETC Unit Rate in Rs. [Excluding Taxes]	Total ETC Price in Rs. [Excluding Taxes]	Total Supply + ETC Price in Rs. [Excluding Taxes]
B-3	Push Through: Providing and Laying of HDPE Pipe confirming to IS 4984:1955 (Amendment no. 2) through HDD Method - LT UG Cable		2760.000						1553880.00	2760.000		1863000.00	3416880.00
4.0	OD 110 mm, minimum thickness as per IS 4982 and amendment thereof	Meter	2760.000	525.00	15.75	11.00	11.00	563.00	15,53,880.00	2,760.000	675.00	1863000.00	3416880.00
B-5	LT CABLE TERMINATION: Cable termination (Indoor / Outdoor / Straight Joints) on LT Pole, FSP, 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 including supply of suitable cable glands,crimping lugs with necessary connections.		700						933100.00	700		87500.00	1020600.00
14.0	4C x240 mm <sup>2</sup> Aluminum	No.	200	1,245.00	37.35	25.00	25.00	1,333.00	2,66,600.00	200	125.00	25000.00	291600.00
36.0	1 C x 300 mm <sup>2</sup> Aluminum	No.	500	1,245.00	37.35	25.00	25.00	1,333.00	6,66,500.00	500	125.00	62500.00	729000.00
B-7	FSP (FUSE SECTION PILLER)		142						18232114.00	142		1819162.00	20051276.00
1.0	FSP (Fuse Section Piller) 1250 Amp : Supplying and erecting 120x100x40 cms. Fuse section pillar fabricated from 4 mm thick Thermosetting Plastic(moulded in a single piece) i.e. Glass Reinforced Polyester Sheet Moulding Compound (SMC) with cable clamps to be buried in ground to have appropriate erection on look uniform unit erected with cement concrete foundation and 45 cms high brick masonry internal supported on both side with internal and outer side locking arrangement with lock and keys in duplicate. Incoming switchgear SFU of 1250 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 incoming 1 Core 300 Sq.mm 4 Nos. and outgoing 5/6 nos. 3.5 core cables of suitable sizes.( As per Technical specification of FSP)	No.	103	1,26,860.00	3,805.80	2,538.00	2,538.00	1,35,742.00	1,39,81,426.00	103	2,811.00	289533.00	14270959.00
2.0	FSP (Fuse Section Piller) 800 Amp : Supplying and erecting 120x100x40 cms. Fuse section pillar fabricated from 4 mm thick Thermosetting Plastic(moulded in a single piece) i.e. Glass Reinforced Polyester Sheet Moulding Compound (SMC) with cable clamps to be buried in ground to have appropriate erection on look uniform unit erected with cement concrete foundation and 45 cms high brick masonry internal supported on both side with internal 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 incoming 1 Core 300 Sq.mm 4 Nos. and outgoing 5/6 nos. 3.5 core cables of suitable sizes.( As per Technical specification of FSP)	No.	39	1,01,860.00	3,055.80	2,038.00	2,038.00	1,08,992.00	42,50,688.00	39	2,811.00	109629.00	4360317.00
3.0	FSP (Fuse Section Piller) 630 Amp: Supplying and erecting 120x100x40 cms. Fuse section pillar fabricated from 4 mm thick Thermosetting Plastic(moulded in a single piece) i.e. Glass Reinforced Polyester Sheet Moulding Compound (SMC) with cable clamps to be buried in ground to have appropriate erection on look uniform unit erected with cement concrete foundation and 45 cms high brick masonry internal supported on both side with internal and outer side locking arrangement with lock and keys in duplicate. Incoming switchgear SFU of 630 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 incoming 1 Core 300 Sq.mm 4 Nos. and outgoing 5/6 nos. 3.5 core cables of suitable sizes.( As per Technical specification of FSP)	No.	0	81,860.00	2,455.80	1,638.00	1,638.00	87,592.00	0.00	0	2,811.00	0.00	0.00
5.0	Plinth and Foundation of Fuse Section Pillar	No.		-	-	-	-	-		142	10,000.00	1420000.00	1420000.00

Shilaj		Turnkey Based Contract for Conversion of Existing HT and / or LT Line Network in to Underground Cable Network with Associated Activities under UGVCL of Gujarat State											
Sr. No.	Particulars of Item	Unit	Quantity	Supply Ex. Works Price in Rs.	3% Contingencies	2% Storage Charges	2% Transportation Charges	Total Supply Unit Rate in Rs. [Excluding Taxes]	Total Supply Price in Rs. [Excluding Taxes]	Quantity	ETC Unit Rate in Rs. [Excluding Taxes]	Total ETC Price in Rs. [Excluding Taxes]	Total Supply + ETC Price in Rs. [Excluding Taxes]
<b>ESTIMATED COST CALCULATION FOR UNDERGROUND WORK - ASSOCIATED ACTIVITIES</b>													
C-1	<b>EARTHING &amp; EARTHING STRIP</b>		1806						15075120.00	1806		2745120.00	17820240.00
1.0	Carbon Earthing for LSTC: Supplying & erecting of maintaince free earthing sysytem 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) & copper 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.	0	8,378.00	251.34	168.00	168.00	8,966.00	0.00	0	1,000.00	0.00	0.00
2.0	Carbon Earthing for UG Equipment: Supplying & erecting of maintaince free earthing sysytem comprising of 17.2 mm dia 2 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) & copper clamp.,Making 100 mm Dia Bore, 2 Mtr Long, Making of Earth pit chamber in normal Soil.	No.	165	5,500.00	165.00	110.00	110.00	5,885.00	9,71,025.00	165	1,000.00	165000.00	1136025.00
3.0	Carbon Earthing for UG Equipment: Supplying & erecting of maintaince free earthing sysytem 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) & copper clamp.,Making 100 mm Dia Bore, 3 Mtr Long, Making of Earth pit chamber in normal Soil.	No.	1641	6,500.00	195.00	130.00	130.00	6,955.00	1,14,13,155.00	1,641	1,000.00	1641000.00	13054155.00
4.0	Supply installation & commissioning of earthing conductor 40 x 3 G.I. strip for all electrical equipments as well as connection to be made. Rates inclusive of hot dipped hardwares.	Meter	18060.000	138.00	4.14	3.00	3.00	149.00	26,90,940.00	18,060.000	52.00	939120.00	3630060.00
5.0	Supply 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.	Meter	0	91.00	2.73	2.00	2.00	98.00	0.00	0	52.00	0.00	0.00
6.0	Supply installation & commissioning of earthing conductor 25 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.	Meter	0	75.00	2.25	2.00	2.00	82.00	0.00	0	52.00	0.00	0.00
C-2	<b>FENCING</b>												
1.0	FENCING: FRP Fencing for RMU and PSS, post shall be made out of FRP Pultruded hollow section of size 50x50x5mm.. and shall be grouted in the ground with c. c. of ratio 1:3:6., Sub frame provided using hollow FRP section 50x25x5mm or FRP angles 50x50x5 at top and bottom and other accessories for fixing of gates etc. Rails shall be made out of FRP notch bars of 12mm dia, Pickets shall be made of flats of size 35x5mm SMC or FRP as per specifications and	RMT	3457.800	2,860.00	85.80	58.00	58.00	3,062.00	1,05,87,783.60	3,457.800	601.00	2078137.80	12665921.40
2.0	Chain Link Fencing using MS Pipe, MS Angle & GI wire Mesh Chain Link	RMT	3457.800	1,628.80	48.87	33.00	33.00	1,744.00	60,30,403.20	3,457.800	460.00	1590588.00	7620991.20
C-3	<b>WARNING TAP:</b> For laying on trench after laying cable on trech to provide indication cable route below land surface in underground trench to protect cable for mechnical injuries.	Meter	32960.000	14.00	0.42	1.00	1.00	17.00	560320.00	32,960.000	7.00	230720.00	791040.00
C-4	<b>CABLE TERMINAL FERRULS:</b> The PVC Cable terminal ferruls for identification of phase sequence and feeder/PSS/FSP name of HT/LT cables shall be provided at every termination of all cables stating detail as under. HT Cable :Feeder name/Phase(R/Y/B) LT Cable : TC/FSP name/Phase(R/Y/B/N)	No.	0	20.00	0.60	1.00	1.00	23.00	0.00	0	7.00	0.00	0.00
C-5	<b>CABLE TAG:</b> The PVC tag for identification of feeder/PSS/FSP/RMU name of HT/LT cables shall be provided at every 10 MTR HT Feeder: Substation/Feeder LT Feeder : PSS/Transformer/FSP	No.	13100	20.00	0.60	1.00	1.00	23.00	301300.00	13100	7.00	91700.00	393000.00
C-6	Providing and fixing of "Route marker" of CC 1:2:4, 150mm*150mm*750mm Concrete stone embedded in earth atleast 300mm below the GL and 450mm above GL at distance of approximately 100 mtr or as directed by engineer in charge. The route marker must be painted with yellow colour of stone with red colour for embracing on stone –"UGVCL 11 KV Cable" / "UGVCL 1.1KV Cable". ( This includes material, painting & labour charges for excavation& refilling)	No.	4091	300.00	9.00	6.00	6.00	321.00	1313211.00	4091	100.00	409100.00	1722311.00
C-7	Obtaining statutory approval from Electrical Inspector for installation of the system.	Job		-	-	-	-	-		1	125000.00	125000.00	125000.00
C-8	Preparing and supply of complete drawing from road centre level including jointing locations etc. for cable laid routes in six sets. The drawing should be geographical indicating all directions (For Turnkey Projects Only)	Per Kilometer		-	-	-	-	-		122.720	1000.00	122720.00	122720.00
C-9	DTC: Fixing of DTC meter at all Transformers Center in such manner that meter reading may be taken easily without obstruction due to fencing of RMU (excluding Meter/Meter Box/Cable)	No.		-	-	-	-	-		0	1500.00	0.00	0.00
C-10	Supply and installation of clamps made from 50*6 mm GI flat (Min. weight of flat 1.6 Kg per set) for fitting for 110mm GI/HDPE pipe above ground with the pole (with cost of nuts & bolts)	Set	100	100.00	3.00	2.00	2.00	107.00	10700.00	100	30.00	3000.00	13700.00
C-11	Supply and installation of clamps from 50*6 mm GI flat (Min. weight of flat 1.8 Kg per set) for fitting for 160mm GI/HDPE pipe above ground with the pole. (with cost of nuts & bolts)	Set	0	120.00	3.60	3.00	3.00	130.00	0.00	0	30.00	0.00	0.00
C-12	Supply and Fixing of medium grade GI Pipe of Size of 100 mm Diameter (Min 2.5 meter required) Weight 9 to 10 KG/Mtr.	Meter	0	350.00	10.50	7.00	7.00	375.00	0.00	0	200.00	0.00	0.00
C-13	Supply and Fixing of medium grade GI Pipe of Size of 160 mm Diameter (Min 2.5 meter required) Weight 10 to 11 KG/Mtr.	Meter	0	600.00	18.00	12.00	12.00	642.00	0.00	0	200.00	0.00	0.00
C-20	Providing and Fixing of SMC Type Terminal Protector with Dielectric Strength of 11kv/MM, IZOD Impact Strength 56KH/M2 for Transformer HT Bushings and replacement of existing bare conductor jumper with HT Coated conductor for entire transformer structure and fixing of long barrel aluminum lug of suitable size and applying HT ERP Tape	No.	0	1,620.00	48.60	33.00	33.00	1,735.00	0.00	0	200.00	0.00	0.00

Shilaj		Turnkey Based Contract for Conversion of Existing HT and / or LT Line Network in to Underground Cable Network with Associated Activities under UGVCL of Gujarat State											
Sr. No.	Particulars of Item	Unit	Quantity	Supply Ex. Works Price in Rs.	3% Contingencies	2% Storage Charges	2% Transportation Charges	Total Supply Unit Rate in Rs. [Excluding Taxes]	Total Supply Price in Rs. [Excluding Taxes]	Quantity	ETC Unit Rate in Rs. [Excluding Taxes]	Total ETC Price in Rs. [Excluding Taxes]	Total Supply + ETC Price in Rs. [Excluding Taxes]
C-21	Providing and Fixing of SMC Type Terminal Protector with Dielectric Strength of 11kV/MM, IZOD Impact Strength 56KH/M2 for Transformer LT Bushings and replacement of existing bare conductor jumper with LT Coated conductor for entire transformer structure and fixing of long barrel aluminum lug of suitable size and applying LT ERP Tape	No.	0	650.00	19.50	13.00	13.00	696.00	0.00	0	200.00	0.00	0.00
C-22	DISMENTALLING WORK: (dismantled material in usable condition with crediting of fabrication at store and stacking of pole at safe location on road side or crediting to departmental store as per instruction of Engineer-in-Charge)											3291384.20	3291384.20
1.0	Dismantalling of pole mounted transformer	Nos		-	-	-	-	-		56	4,340.00	243040.00	243040.00
2.0	Dismantalling PSC Pole 8 Mtr with Fabrication	Nos		-	-	-	-	-		1,220	562.00	685640.00	685640.00
3.0	Dismantalling PSC 10 Mtr/Rail/RSJ pole with Fabrication	Nos		-	-	-	-	-		1,220	1,233.00	1504260.00	1504260.00
4.0	Dismantalling Double Pole Structure with Fabrication	Nos		-	-	-	-	-		5	2,263.00	11315.00	11315.00
5.0	Dismantalling of ACSR/Earth wire conductor	Per Cond./mtr		-	-	-	-	-		364.200	2,326.00	847129.20	847129.20
GRAND TOTAL WITHOUT 1% WELFARE CESS & 18% GST									548750752.80			103193239.55	651943992.35