Ex-works supply of materials

A (I)	Augmentation, Renovation and Modernisation of existing Distribution Transformer		
Line Item	Description	Unit	Qty
A (I)	Augmentation & Renovation of 11/0.4 kV Distribution Transformer Substation		
1.00	Augmentation of Distribution Transformer Substation (ASSUMING 25 YEARS OF LIFE AND 10 YEARS IN SERVICE) using New Distribution Transformer (three star) as per technical specifications, approved drawings and scope of the work. Replaced material to be deposited in Employer's store:		
1.01	New 100 KVA (11/0.4 kV) Aluminium wound DTR (Replacing 63 KVA old DTR),	No	149
1.02	New 200 KVA (11/0.4 kV) Aluminium wound DTR (Replacing 100 KVA old DTR),	No	3

Ex-works supply of materials

Line Description of Goods Unit Que	(II)	ame & Address: Crossing Removal (Safety)		
No. Cables: Supply of 11 kV,(E),MPE insulated Aluminium Conductor, Armoured cable as per enclosed specification 3 core 185 sq. mm. as perendosed specification including rates for approval of local Authorities for laying of cable, (Make as approved by UCVC1) Laying of 11 kV (E) XLPE insulated aluminium amoured 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 our for them wide cable trench provinding sand cushioning before and after laying cable and covering with half our for Hume pipe and refilling the trench', rate shall include cost of exavation of trench's as per technical specification, approved drawings and scose of words. Secretary of the control of the cont				
Log Cables: Supply 01 IV.(E).XIPE insulated Aluminium Conductor, Armoured cable as per enclosed specification 3 core 185 sq. mm. as perendosed specification including rates for approval of local Authorities for laying of cable, (Make as approved by USCVC). Laying of 11 KV (E) XIPE insulated aluminium amounced 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. Proving of HDPE (DVK) ducts confirming to 15:4984 having dia OD/ID 120/90.mm, (sig/cm2, 11.63 kg/6 RMT at a minimum depth of 1200mm below the road surface by pushthrough method by dilling the road with HDD machine without breaking the road surface for laying of cable for internal road crossing for enclosing HTM. TAPE insulated alumination and control of the control of the province of cable in the control of the cont		Description of Goods	Unit	Quantity
Supply of 11 W./E.X.V.EF insulated Aluminium Conductor, Armoured cable as per enclosed specification of Journal prates for approved to local Aluminium for Insulation of Insulation (Make as approved by UCVC). Laying of 11 KV (E) XLPE insulated aluminium armoured cable in ground up to 1200 mm deep, 500 mm wide cable twench 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 dealwines and score of york. Proving of HIDPE (DINC) ducts confirming to 15-4984 having dia OD/ID 120/90,mm, Reg/cm2, 11.63 kg/6 RMT at minimum depth of 1200mm below the road surface by pushthrough method by chilling the road with HDD machine without breaking the cable on 10-49/1185 or produce the control of the cable of 10-49/1185 or produce the control of the cable of 10-49/1185 or produce the control of the cable of 10-49/1185 or produce the control of the cable of 10-49/1185 or produce the control of the cable of 10-49/1185 or produce the control of the cable of 10-49/1185 or produce the control of the cable of 10-49/1185 or produce the control of the cable of 10-49/1185 or produce the control of the cable of 10-49/1185 or produce the cable of 10-49/1185 or pro		Cables		
minimum depth of 1200mm below the road surface to playing of cable for internal road crossing for enclosing HT/TL XIPE insulated aluminum amoured cable up to 240/185 symm through the duct as per the instructions of EIC as per technical specification, approved drawings and sooge of work. Pre-fabricated steel Items Ilke V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, straing lates, quarding channels, back clamp, transformer mounting structure et made of MS Channels (100x50x6mm), MS angle (65x65x6mm), MS flats (65x8mm) of given sizes for over head structures as per technical specification, approved drawings and scope of work. 3.00 MS Nuts, Bolts with Washers as per technical specification, approved drawings and scope of work. Indoor application: HT push on/heat shrink type end termination preferably for at switchgear end boxes, transformer (PAD/Pole mounted) for 11 kV XIPE 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 XIPE Outdoor application: HT push on/heat shrink type end termination preferably for at switchgear end boxes, transformer (PAD/Pole mounted) for 11 kV XIPE 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 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 3cx185 mm 2 11 kV XIPE Straight Joint: HT push on/heat shrink type straight joint preferably for 11 kV XIPE Aluminium Conductor Armoured cable, insulations, providing compression type terminals, crimping of lugs with suitable crimping tool, as per technical specification, approved drawings a	1.01	Supply 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	15948
bracings, strain plate, guarding channels, back clamp, transformer mounting structure etc made of MS structures as per technical specification, approved drawings and scope of work. 3.00 MS Nuts, Bolts with Washers as per technical specification, approved drawings and scope of work. MT 0.17 Indoor application: If I 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 3Cx185 mm 2.11 kV XLPE 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 3Cx185 mm 2.11 kV XLPE Straight Joint: HT push on/heat shrink type straight joint preferably for 11 kV XLPE Aluminium Conductor Armoured cable as specification 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 3Cx185 mm 2.11 kV XLPE 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. 5.01 3Cx185 mm 2.11 kV XLPE 1.02 1 3Cx185 mm 2.11 kV XLPE 1.03 1 3Cx185	1.02	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	Mtr	2754
4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00	2.00	bracings, strain plate, guarding channels, back clamp, transformer mounting structure etc made of MS Channels (100x50x6mm), MS angle (65x65x6mm), MS flats (65x8mm) of given sizes for over head	МТ	4.6035
4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00	3.00	MS Nuts. Bolts with Washers as per technical specification, approved drawings and scope of work.	MT	0.171864
30x185 mm 2 11 KV XLPE	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		01171001
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 3Cx185 mm 21 kV XLPE 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 3Cx185 mm 21 kV XLPE 7.00 Earthing arrangement as per technical specificatons, approved drawings and scope of work. Supplying & erecting earth pit of minimum bore dia. 150 mm size approved make safe Earthing Electrode consisting Pipe in pipe Technology as per 15 3043-1997 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. Folectrical installation covering Transformer neutrals,HT & LT switchgears for independent earthing in normal soil, Length of Pipe 3 mtrs.Backfillina compound 2 bassel 75 Ka each 7.02 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. 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 specification, scope of Work. 8.00 Insulators, Base Channel down Pipe, Arcing Horns etc. complete as per technica	4.01		No	0
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. 6.0.1 3Cx185 mm 2 11 KV XLPE 7.00 Earthing arrangement as per technical specificatons, approved drawings and scope of work. Supplying & erecting earth pit of minimum bore dia. 150 mm size approved make safe Earthing Electrode consisting Pipe in pipe Technology as per 1S 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 baasof 25 ko each 7.02 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. 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 technical specification, approved drawings and scope of work. 9.00 fitting for 110 mm GI / HDPE pipe above ground with pole (with cost of nuts & bolts) Cable Laying above ground in air for termination of cable on pole withas per Engineer In Charge 10.00 Provinding of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the ground Stay Set (Galvanised) wi	5.00	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.		
6.00 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 3Cx185 mm 2 11 KV XLPE 7.00 Earthing arrangement as per technical specificatons, approved drawings and scope of work. Supplying & 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 bassof 25 Kg each 7.02 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. 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 specification, scope of work. 8.00 Insulators, Base Channel down Pipe, Arcing Horns etc. complete as per technical specification, scope of work. 9.00 fitting for 110 mm GI / HDPE pipe above ground with pole (with cost of nuts & bolts) Cable Laying above ground in air for termination of cable on pole withas per Engineer In Charge 10.00 Provinding of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the ground Stay Set (Galvanised) with 50x8 mm stay clamp, stay insulator (2 Nos.), anchor plate (200x200x6), nut bolts, 2 Nos			No	558
Total Supplying & 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 baassof 25 Kg each Total 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. Providing 11kV Double Pole Structure with AB Switch 12kV, 6000A, 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 technical specification, approved drawings and scope of work. Supply and installation of clamps made from 50*6 mm GI Flat (Min. wieght of flat 1.6 KG per Set) for fitting for 110 mm GI / HDPE pipe above ground with pole (with cost of nuts & bolts) Cable Laying above ground in air for termination of cable on pole withas per Engineer In Charge Provinding of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the ground 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 Set 5 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	5.00	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		
Supplying & 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 baasof 25 kg each 7.02 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. 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 technical specification, approved drawings and scope of work. Supply and installation of clamps made from 50*6 mm GI Flat (Min. wieght of flat 1.6 kG per Set) for fitting for 110 mm GI / HDPE pipe above ground with pole (with cost of nuts & bolts) Cable Laying above ground in air for termination of cable on pole withas per Engineer In Charge 10.00 Provinding of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the ground in air for termination of cable on pole withas per Engineer In Charge 11.00 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. 12.00 Insulator and hardware as per technical specificat			No	0
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. Backfillina compound 2 bagsof 25 Kg each 7.02 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. 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 technical specification, approved drawings and scope of work. Supply and installation of clamps made from 50*6 mm GI Flat (Min. wieght of flat 1.6 kG per Set) for fitting for 110 mm GI / HDPE pipe above ground with pole (with cost of nuts & bolts) Cable Laying above ground in air for termination of cable on pole withas per Engineer In Charge 10.00 Provinding of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the ground 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. 12.00 Insulator and hardware as per technical specification, approved drawings and scope of work. 12.01 11 KV Polymer (Composite) Disc insulator 45 KN along with suitable hardware fittings Set 11 2.02 11 KV Polymer (Composite) Pin Insulators h				
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. 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 technical specification, approved drawings and scope of work. Supply and installation of clamps made from 50*6 mm GI Flat (Min. wieght of flat 1.6 kG per Set) for fitting for 110 mm GI / HDPE pipe above ground with pole (with cost of nuts & bolts) Cable Laying above qround in air for termination of cable on pole withas per Engineer In Charge 10.00 Provinding of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the ground 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. 12.00 Insulator and hardware as per technical specification, approved drawings and scope of work. 11 kV Polymer (Composite) Disc insulators having GI PIN set 13.00 Cable Route Marker: Providing RCC cable Route marker as per drawing duly marked with "DANGER"	7.01	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	No	558
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 technical specification, approved drawings and scope of work. Supply and installation of clamps made from 50*6 mm GI Flat (Min. wieght of flat 1.6 kG per Set) for fitting for 110 mm GI / HDPE pipe above ground with pole (with cost of nuts & bolts) Cable Laying above ground in air for termination of cable on pole withas per Engineer In Charge Provinding of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the ground 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. 12.00 Insulator and hardware as per technical specification, approved drawings and scope of work. 12.01 If KV Polymer (Composite) Disc insulator 45 KN along with suitable hardware fittings 12.02 If KV Polymer (Composite) Pin Insulators having GI PIN Cable Route Marker: Providing RCC cable Route marker as per drawing duly marked with "DANGER"	7.02	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	8928
9.00 fitting for 110 mm GI / HDPE pipe above ground with pole (with cost of nuts & bolts) Cable Laying above ground in air for termination of cable on pole withas per Engineer In Charge 10.00 Provinding of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the ground 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. 12.00 Insulator and hardware as per technical specification, approved drawings and scope of work. 12.01 11 KV Polymer (Composite) Disc insulator 45 KN along with suitable hardware fittings set 12.02 11 KV Polymer (Composite) Pin Insulators having GI PIN Cable Route Marker: Providing RCC cable Route marker as per drawing duly marked with "DANGER"	8.00	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 technical specification, approved drawings and	No	0
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. 12.00 Insulator and hardware as per technical specification, approved drawings and scope of work. 12.01 11 KV Polymer (Composite) Disc insulator 45 KN along with suitable hardware fittings set 12.02 11 KV Polymer (Composite) Pin Insulators having GI PIN set Cable Route Marker: Providing RCC cable Route marker as per drawing duly marked with "DANGER"	9.00	fitting for 110 mm GI / HDPE pipe above ground with pole (with cost of nuts & bolts) Cable Laying above ground in air for termination of cable on pole withas per Engineer In Charge	Set	558
11.00 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. 12.00 Insulator and hardware as per technical specification, approved drawings and scope of work. 12.01 11 KV Polymer (Composite) Disc insulator 45 KN along with suitable hardware fittings set 12.02 11 KV Polymer (Composite) Pin Insulators having GI PIN set 13.00 Cable Route Marker: Providing RCC cable Route marker as per drawing duly marked with "DANGER"	U.UU I		Mtr	1674
12.01 11 KV Polymer (Composite) Disc insulator 45 KN along with suitable hardware fittings set 10.02 11 KV Polymer (Composite) Pin Insulators having GI PIN set 13.00 Cable Route Marker: Providing RCC cable Route marker as per drawing duly marked with "DANGER"	1.00	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	558
12.02 11 KV Polymer (Composite) Pin Insulators having GI PIN set Cable Route Marker: Providing RCC cable Route marker as per drawing duly marked with "DANGER" No. 4				1671
Cable Route Marker: Providing RCC cable Route marker as per drawing duly marked with "DANGER"				1674 0
TO TO THE TOTAL THE TOTAL TO THE TOTAL TO	3 00			460

Ex-works supply of materials

A (III)	New Feeder / Feeder Bifurcation		
Line Item	Description of Goods	Unit	Quantity
No. 1.00	Support for 11 KV overhead line as per technical specification, approved drawings and scope of work		
		NI-	27
1.01 1.02	10 m / 270 kgs PSC Poles - (PSC Pole as per state practice)	No No	37 179
1.02	8 m / 200 kgs PSC Poles - (PSC Pole as per state practice)	INO	1/9
2.00	Pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp, transformer mounting structure etc made of MS Channels (100x50x6mm), MS angle (65x65x6mm), MS flats (65x8mm) of given sizes for over head structures as per technical specification, approved drawings and scope of work.	МТ	4.188
3.00	MS Nuts, Bolts with Washers as per technical specification, approved drawings and scope of work.	MT	0.356
4.00	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	70
5.00	Insulator and hardware as per technical specification, approved drawings and scope of work.		
5.00	11 KV Polymer (Composite) Disc insulator 45 KN along with suitable hardware fittings	set	197
5.02	11 KV Polymer (Composite) Pin Insulators having GI PIN	set	589
6.00 6.01	Earthing arrangement as per technical specificatons, approved drawings and scope of work. Supplying & 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	226
6.02	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	1912
7.00	ACSR Conductors of following sizes with Jointing sleeves, binding materials, PG clamps, bi-metallic clamp, hardware etc for overhead line and jumpers as required as per technical specification, approved drawings and scope of work		
7.01	6/4.72 mm+7/1.57 mm (100 mm ² Al. Area) - Dog	km	2.28
7.02	AL.Alloy Conductor 55mm ² Size	km	26.11
8.00	12kV, 600A, 25kA for 3sec, 3-ph, 3 Pin type, Horizontal/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	Set	10
9.00	Cables:		
9.01	Supply 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	595
9.02	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	80
10.00	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.		
10.01	3Cx185 mm 2 11 KV XLPE	No	7
11.00	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.		

aight Joint: HT push on/heat shrink type straight joint preferably for 11 kV XLPE Aluminium nductor Armoured cable as specified with connection of leads including cutting, stripping of cable, ulations, providing compression type terminals, crimping of lugs with suitable crimping tool.as per chnical specification, approved drawings and scope of work. (185 mm 2 11 KV XLPE **Tthing arrangement as per technical specifications, approved drawings and scope of work. **Delying of maintaince free earthing sysytem comprising of 17.2 mm dia 3 mtr Long Earthing Electrode of low bon steel electrode with 250 micrns copper coating + carbon based conductive concrete back fill safe inpound(resisitivity of less than 0.10 ohm mtr) & GI clamp. Supply, Earcting and Install pre cast RCC Earth pit immer (300*300 MM), Making 100 mm Dia Bore, 3 Mtr Long, Making of Earth pit chamber in normal Soil.	No No	0
ct185 mm 2 11 KV XLPE Tthing arrangement as per technical specificatons, approved drawings and scope of work. Toplying of maintaince free earthing sysytem comprising of 17.2 mm dia 3 mtr Long Earthing Electrode of low bon steel electrode with 250 micrns copper coating + carbon based conductive concrete back fill safe appound(resisitivity of less than 0.10 ohm mtr) & GI clamp. Supply, Earcting and Install pre cast RCC Earth pit amber (300*300 MM), Making 100 mm Dia Bore, 3 Mtr Long, Making of Earth pit chamber in normal Soil.		0
thing arrangement as per technical specificatons, approved drawings and scope of work. plying of maintaince free earthing sysytem comprising of 17.2 mm dia 3 mtr Long Earthing Electrode of low bon steel electrode with 250 micrns copper coating + carbon based conductive concrete back fill safe appound(resisitivity of less than 0.10 ohm mtr) & GI clamp.Supply, Earcting and Install pre cast RCC Earth pit amber (300*300 MM),Making 100 mm Dia Bore, 3 Mtr Long, Making of Earth pit chamber in normal Soil.		0
oplying of maintaince free earthing sysytem comprising of 17.2 mm dia 3 mtr Long Earthing Electrode of low bon steel electrode with 250 micrns copper coating + carbon based conductive concrete back fill safe appound(resisitivity of less than 0.10 ohm mtr) & GI clamp.Supply, Earcting and Install pre cast RCC Earth pit amber (300*300 MM),Making 100 mm Dia Bore, 3 Mtr Long, Making of Earth pit chamber in normal Soil.	No	
bon steel electrode with 250 micrns copper coating + carbon based conductive concrete back fill safe npound(resisitivity of less than 0.10 ohm mtr) & GI clamp.Supply, Earcting and Install pre cast RCC Earth pit (300*300 MM),Making 100 mm Dia Bore, 3 Mtr Long, Making of Earth pit chamber in normal Soil.	No	
telletics 0 conscients of a third and at 20 2 CT at it founds are also as a few and at ECD DMIL		
tallation & commissioning of earthing conductor 38 x 3 G.I. strip for pole mounted transformer and upto FSP,RMU well as connection to be made to the earth pit. Rates inclusive of hot dipped hardwares.	Mtr	
pply and installation of clamps made from 50*6 mm GI Flat (Min. wieght of flat 1.6 kG per Set) for ing for 110 mm GI / HDPE pipe above ground with pole (with cost of nuts & bolts) Cable Laying ove ground in air for termination of cable on pole withas per Engineer In Charge	Set	5
ovinding of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the bund	Mtr	15
ble Route Marker: Providing RCC cable Route marker as per drawing duly marked with "DANGER" rk, "UGVCL POWER CABLE" and Arrow of route of cable.	No	3
kV 3 C x 70 Sq. MM. + 1 X 70 Sq. MM. bare messenger Aerial Bunched Cable (to be erected on 10Mtr	kM	0.525
p ii b	ply and installation of clamps made from 50*6 mm GI Flat (Min. wieght of flat 1.6 kG per Set) for ing for 110 mm GI / HDPE pipe above ground with pole (with cost of nuts & bolts) Cable Laying ove ground in air for termination of cable on pole withas per Engineer In Charge vinding of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the und ble Route Marker: Providing RCC cable Route marker as per drawing duly marked with "DANGER" ck, "UGVCL POWER CABLE" and Arrow of route of cable.	vell as connection to be made to the earth pit. Rates inclusive of hot dipped hardwares. vell as connection to be made to the earth pit. Rates inclusive of hot dipped hardwares. vell as connection to be made to the earth pit. Rates inclusive of hot dipped hardwares. vell as connection to be made to the earth pit. Rates inclusive of hot dipped hardwares. vell as connection to be made to the earth pit. Rates inclusive of hot dipped hardwares. Set very ground in air for termination of cable on pole with cost of nuts & bolts) Cable Laying Set very ground in air for termination of cable on pole withas per Engineer In Charge vinding of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the und very ground in air for termination of cable above the protection for the cable above the und ole Route Marker: Providing RCC cable Route marker as per drawing duly marked with "DANGER" No No No V 3 C x 70 Sq. MM. + 1 X 70 Sq. MM. bare messenger Aerial Bunched Cable (to be erected on 10Mtr

Ex-works supply of materials

A (IV)	Maintenance free, Ready capsule, Pipe-in-cage (PiC) type earthing and connections to various parts of transformer center using GI Strip and GI Nut Bolts		
Line Item No.	Description of Goods	Unit	Quantity
1.00	Supply 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.	No	489.00
2.00	Supply 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	4890.00
3.00	Supply 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	4075.00

Ex-works supply of materials

A (V)	Interlinking of 11kV Feeder (Reliability)		
Line Item	Description of Goods	Unit	Quantity
No.	Support for 11 KV overhead line as per technical specification, approved drawings and scope of work		Quantity
1.00	Support for 11 kV overhead line as per technical specification, approved drawings and scope of work		
1.01	10 m / 270 kgs PSC Poles - (PSC Pole as per state practice)	No	0
2.00	Pre-fabricated steel items like V cross arm, top clamp, DC cross arm, bracket, clamps, cross bracings, bracings, strain plate, guarding channels, back clamp, transformer mounting structure etc made of MS Channels (100x50x6mm), MS angle (65x65x6mm), MS flats (65x8mm) of given sizes for over head structures as per technical specification, approved drawings and scope of work.	МТ	0
3.00	MS Nuts, Bolts with Washers as per technical specification, approved drawings and scope of work.	MT	0
4.00	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	42
5.00	Insulator and hardware as per technical specification, approved drawings and scope of work.		
5.01	11 KV Polymer (Composite) Disc insulator 45 KN along with suitable hardware fittings	set	0
5.02	11 KV Polymer (Composite) Pin Insulators having GI PIN	set	0
6.00	Earthing averagement as not technical enecifications, approved drawings and scene of work		
6.01	Earthing arrangement as per technical specificatons, approved drawings and scope of work. Supplying & 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	84
6.02	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	420
7.00	ACSR Conductors of following sizes with Jointing sleeves, binding materials, PG clamps, bi-metallic clamp, hardware etc for overhead line and jumpers as required as per technical specification, approved drawings and scope of work	lus	0
7.01	6/4.72 mm+7/1.57 mm (100 mm ² Al. Area) - Dog	km	0
8.00	12kV, 600A, 25kA for 3sec, 3-ph, 3 Pin type, Horizontal/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	Set	0
9.00	Cables:		
9.01	Supply 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,	Mtr	3400
10.00	approved drawings and scope of work. 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.		
10.01	3Cx185 mm 2 11 KV XLPE	No	42
11.00	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.		
11.01	3Cx185 mm 2 11 KV XLPE	No	42
	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,		
12.00	insulations,providing compression type terminals,crimping of lugs with suitable crimping tool.as per technical specification, approved drawings and scope of work. 3Cx185 mm 2 11 KV XLPE	No	3

	fitting for 110 mm GI / HDPE pipe above ground with pole (with cost of nuts & bolts) Cable Laying above ground in air for termination of cable on pole withas per Engineer In Charge Provinding of 100 mm Dia heavy duty GI pipe with clamping for the protection for the cable above the		
15.00	ground	Mtr	126
16.00	Cable Route Marker: Providing RCC cable Route marker as per drawing duly marked with "DANGER" Mark, "UGVCL POWER CABLE" and Arrow of route of cable.	No	120
17.00	RMU: Supply of SF6 gas insulated, 630Amp both sides extensible, SCADA compatible Ring Mains Units (RMU) as per technical specification, approved drawings and scope of work.		
17.01	2 Isolator (2-Way)	No	
17.02	1 Circuit Breaker 1 Isolator (2-Way)	No	
17.03	3 Isolator (3-Way)	No	3
17.04	1 Circuit Breaker 2 Isolator (3-Way)	No	18
17.05	2 Circuit Breaker 1 Isolator (3-Way)	No	
17.06	1 Circuit Breaker 3 Isolator (4-Way)	No	
17.07	4 Isolator (4-Way)	No	
17.08	2 Circuit Breaker 2 Isolator (4-Way)	No	
17.09	1 Circuit Breaker 4 Isolator (5-Way)	No	
17.10	1 Circuit Breaker 5 Isolator (6-Way)	No	
18.00	Provinding chain link fencing to RMU as per Specification and drawing(approx. total running length of each fencing 10.8 meters)	RMT	0