

# **TENDER SPECIFICATION**

**NO: BHE/PW/PUR/KHZI-ELE/1119**

**FOR HANDLING AT SITE STORES/STORAGE YARD, TRANSPORTATION TO SITE OF WORK, COMPLETE ERECTION, CHECKING OF CALIBRATION, TESTING, COMMISSIONING AND HANDING OVER OF CABLING, TRANSFORMERS, DAVR, , BUS DUCTS, SWITCHGEAR, LIGHTING PACKAGE, AND ASSOCIATED EQUIPMENTS FOR ELECTRICAL PACKAGE FOR 1x72 MW CPP REVAMP KRIBHCO PROJECT.**

**AT**

**KRIBHCO (KRISHAK BHARATI COOPERATIVE LIMITED) PROJECT  
HAZIRA, DIST. SURAT, STATE- GUJARAT**

## **VOLUME :II – PRICE BID**

**BOOK NO.**



**BHARAT HEAVY ELECTRICALS LIMITED**

**(A GOVERNMENT OF INDIA UNDERTAKING)**

**POWER SECTOR - WESTERN REGION**

**SHREEMOHINI COMPLEX**

**345, KINGSWAY - NAGPUR 440 001**

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**AT  
KRIBHCO (KRISHAK BHARATI COOPERATIVE LIMITED) PROJECT  
HAZIRA, DIST. SURAT, STATE- GUJARAT**

EARNEST MONEY DEPOSIT: Please see Notice Inviting Tender.

LAST DATE FOR: Please see Notice Inviting Tender.

TENDER SUBMISSION:

THESE TENDER SPECIFICATION DOCUMENTS CONTAINING **VOLUME-I-Tech Bid**, **VOLUME- II-Price Bid** AND **VOLIME-IBCD Rev-01 Rev-01** ARE ISSUED TO:

M/s. ....

PLEASE NOTE:

THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

For Bharat Heavy Electricals Limited

AGM (Purchase)

Place: Nagpur

Date:

**RATE SCHEDULE**

**NAME OF WORK:** Handling at Storage Yard/ Stores, Transportation to Site, Calibration, Erection, Testing, Commissioning, Final Painting and Handing over of Electrical Works of KRIBHCO HAZIRA and their Auxiliaries etc.

Sl. No.	Description of items	UOM	Quantity	Unit Rates in Figures (In Rs)	Unit Rates in Words (In Rs)	Total Amounts (In Rs)	APPLICABLE for Terms of Payment
<b>SECTION-E1A: CABLE TRAYS AND ACCESSORIES</b>							<b>I.1</b>
E1A.1	LADDER TYPE 750 MM (W)x 120 (H) mm	Mtrs.	2,500				
E1A.2	LADDER TYPE 600 MM (W)x 120 (H) mm	Mtrs.	3,813				
E1A.3	LADDER TYPE 300 MM (W)x 120 (H) mm	Mtrs.	1,475				
E1A.4	LADDER TYPE 150 MM (W) x 120 (H) mm	Mtrs.	150				
E1A.5	PERFORATED TYPE 600 MM (W)x 120 (H) mm	Mtrs.	1,250				
E1A.6	PERFORATED TYPE 50 MM (W)x 120 (H) mm	Mtrs.	500				
<b>SECTION-E2A : LT POWER CABLES</b>							<b>I.2</b>
E2A.1	3.5 C X 300 SQ MM ALUMINIUM	Mtrs.	10,000				
E2A.2	3.5C X 185 SQ MM ALUMINIUM	Mtrs.	4,000				
E2A.3	3C X 185 SQ MM ALUMINIUM	Mtrs.	4,000				
E2A.4	3.5C X 35 SQ MM ALUMINIUM	Mtrs.	5,000				
E2A.5	3.5C X 95 SQ MM ALUMINIUM	Mtrs.	3,250				
E2A.6	3C X 240 SQ MM ALUMINIUM	Mtrs.	1,500				
E2A.7	3C X 120 SQ MM ALUMINIUM	Mtrs.	3,000				
E2A.8	3C X 95 SQ MM ALUMINIUM	Mtrs.	5,500				
E2A.9	3C X 70 SQ MM ALUMINIUM	Mtrs.	2,500				
E2A.10	3C X 35 SQ MM ALUMINIUM	Mtrs.	8,000				

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E2A.11	3C X 50 SQ MM ALUMINIUM	Mtrs.	4,500				
E2A.12	3C X 25 SQ MM ALUMINIUM	Mtrs.	3,000				
E2A.13	1C X 120 SQ MM ALUMINIUM	Mtrs.	1,000				
E2A.14	1C X 240 SQ MM ALUMINIUM	Mtrs.	3,000				
E2A.15	1C X 630 SQ MM ALUMINIUM	Mtrs.	12,000				
E2A.16	2Cx 6 SQ MM COPPER	Mtrs.	2,500				
E2A.17	1C X 150 SQ MM COPPER	Mtrs.	1,500				
E2A.18	1C X 35 SQ MM COPPER	Mtrs.	2,000				
E2A.19	1C X 6 SQ MM COPPER	Mtrs.	1,500				
E2A.20	3C X 16 SQ MM COPPER	Mtrs.	500				
E2A.21	3C X 10 SQ MM COPPER	Mtrs.	17,000				
E2A.22	3C X 6 SQ MM COPPER	Mtrs.	3,500				
E2A.23	3C X 4 SQ MM COPPER	Mtrs.	24,500				
E2A.24	3C X 16 SQ MM COPPER	Mtrs.	4,500				
E2A.25	3C X 2.5 SQ MM COPPER	Mtrs.	54,000				
E2A.26	3C X 4 SQ MM COPPER	Mtrs.	18,000				
E2A.27	4C X 4 SQ MM COPPER	Mtrs.	5,000				

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E2A.28	4C X 10 SQ MM COPPER	Mtrs.	6,000				
E2A.29	4C X 16 SQ MM COPPER	Mtrs.	30,000				
E2A.30	5C X 2.5 SQ MM COPPER	Mtrs.	2,000				
E2A.31	10C X 2.5 SQ MM COPPER	Mtrs.	1,500				
<b>E2B</b>	<b>HT POWER CABLES</b>						<b>1.2</b>
E2B.1	1C X 630 SQ MM ALUMINIUM(11KV)	Mtrs.	14,500				
E2B.2	3C X 300 SQ MM ALUMINIUM(11 KV)	Mtrs.	2,000				
<b>SECTION-E2C : LT CONTROL CABLES,copper (Generally Unarmoured/Armoured, Screened/Unscreened)</b>							<b>12</b>
E2C.1	3C X 2.5 SQ MM	Mtrs.	30,000				
E2C.2	5C X 2.5 SQ MM	Mtrs.	10,000				
E2C.3	16C X 2.5 SQ MM	Mtrs.	15,000				
E2C.4	19C X 2.5 SQ MM	Mtrs.	11,000				
E2C.5	24C X 2.5 SQ MM	Mtrs.	7,000				
E2C.6	10C X 2.5 SQ MM	Mtrs.	36,750				
E2C.7	12C X 2.5 SQ MM	Mtrs.	17,500				
E2C.8	2C X 2.5 SQ MM	Mtrs.	1,000				
E2C.9	7C X 2.5 SQ MM	Mtrs.	17,000				

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E2C.10	4C X 2.5 SQ MM	Mtrs.	250				
E2C.11	10Triad X 0.5 SQ MM	Mtrs.	1,000				
<b>SECTION-E3 : JUCTION BOXES AND PUSH BUTTON</b>							<b>1.3</b>
E3.1	Start/ Stop PB station (stop PB with pad locking), Approx.Dimension is 180x285x125 mm.	Nos.	50				
E3.2	Start/ Stop PB station with Ammeter (stop PB with pad locking), Approx. Dimension 180x285x125 mm.	Nos.	50				
E3.3	Emergency Stop PB for Transformer, Approx. Dimension is 395x265x125 mm.	Nos.	15				
<b>SECTION-E4 : STRUCTURAL STEEL</b>							<b>1.4</b>
E.4.1	Structural Steel fabrication & installation ( MS angle, Channel, Plate etc)	MT	64				
<b>SECTION-E5 A:SWITCHGEARS / MCC /PCC</b>							<b>1.5</b>
E5A.1	11 kV Station Switchgear Board. Each Board shall have 28panels and supplied in 14 loose shipping sections. Approx.Overall dimension of board 22960(L)x2692(H)x820(W) mm, Approx. Dimension of Each panel is 1500Kg..	Set	1				
E5A.2	11 kV Existing Station Switchgear Board . New Board to incorporate in Existing Board shall have 2 panels and supplied in loose shipping sections. Approx.Overall dimension of New Board 1640(L)X2692(H)X820(W)mm, Each shipping section weight is approximately 3.00 MT.	Set	1				
E5A.3	<b>415 Volt</b> BOP MCC , Single / Double Front, Approx Over all dimensions is 8460x1250x2450 mm, Each Board consist of 9 Panels,Approx weight 600 <b>Kg/Panel.</b> , Panels shall be supplied in loose shipping section.	set	1				
E5A.4	<b>415 Volt</b> HRSG MCC Single / Double Front, Approx Over all dimensions 8000(W)x900(D)x2400(h) mm, Approx weight 3000 Kg./ MCC, Panels shall be supplied in loose shipping section.	set	1				
E5A.5	<b>415 Volt</b> GT MCC Single / Double Front, Approx Over all dimensions 15350x(944/1250)x2430mm, Approx weight 15MT, Panels shall be supplied in loose shipping section.	set	1				

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E5A.6	<b>415 Volt AC/ VENT MCC-1</b> , Single / Double Front, Approx Over all dimensions 8460(L)x1250(D)x2450(H) mm,Each board consist of 9 panels, ApproxWeight 600 Kg. / panels, Panels shall be supplied in loose shipping section.	set	1				
E5A.7	<b>415 Volt</b> , ASB , Single / Double Front, Approx Over all dimensions 10260(L)x1000(D)x2450(H) mm, Each Board consist of 11 Panels,Approx Weight 400 Kg. / Panels, Panels shall be supplied in loose shipping section.	set	1				
E5A.8	<b>415 Volt AC</b> , MLDB , Single / Double Front, Approx Over all dimensions <b>5760(L)x1000(D)x2450(H) mm</b> ,Each Board Consist of 6 Panels, Approx Weight 400 Kg. / Panels, Panels shall be supplied in loose shipping section.	set	1				
E5A.9	<b>415 Volt AC</b> , ELDB ,Single / Double Front, Approx Over all dimensions 3960(L)x1000(D)x2450(H) mm,Each Board consist of 4 Panels, Approx Weight 400 Kg. / Panels, Panels shall be supplied in loose shipping section.	set	1				
E5A.10	<b>110 Volt DC ELDB</b> ,Single / Double Front, Approx Over all dimensions 1920(L)x1000(D)x2450(H) mm, Each board consist of 2 panels, Approx Weight 400 Kg. / MCC, Panels shall be supplied in loose shipping section.	set	1				
E5A.11	<b>110 Volt UPS DB</b> ,Single / Double Front, Approx Over all Dimensions 8340(L)x1000(D)x2450(H) mm, Each Board Consist of 9 Panels, Approx Weight <b>400</b> Kg. / Panels, Panels shall be supplied in loose shipping section.	set	1				
E5A.12	<b>110 Volt DCDB</b> ,Single / Double Front, Approx Over all dimensions 6540(L)x1000(D)x2450(H) mm, Each Board consist of 7 Panels, Approx Weight 400 Kg. / Panels, Panels shall be supplied in loose shipping section.		1				
E5A.13	415 V PCC-1 Overall approx. dimension is 1280(L)x1800(D)x2450(H)mm,approx. weight is 600Kg/panel. Each Board consist of 13 Panels.Panels should be supplied in loose shipping section.	set	1				
E5A.14	415 V PMCC-2 Overall approx. dimension is 12800(L)x1800(D)x2450(H) mm,Each board consist of 13panels/board,weight is approximately 600Kg/Panels.	set	1				
<b>SECTION-E5B: PANELS</b>							<b>15</b>
<b>E5B.1</b>	Generator ,Generator Transformer , - Control ,protection,relay,Synchronising & Metering panels for GTG .Approx dimension of each panel 1000x1000x2295(H),approx weight 600kg each panel	set	1				
<b>E5B.2</b>	<b>125 Volt GT DCDB-1</b> ,2 Single / Double Front, Approx Over all dimensions <b>3260 X 9500 mm</b> , Approx Weight 1500 Kg. / MCC, Panels shall be supplied in loose shipping section.	No	2				

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<b>E5B.3</b>	SCAP PANELS Single / Double Front, Approx Over all dimensions 2300(H)x1200(W)x1000(D) mm, Approx Weight 4200 Kg. / MCC, Panels shall be supplied in loose shipping section.	Set	1				
<b>E5B.5</b>	125 Volt Battery Charger ,Single / Double Front, Approx Over all dimensions 11250 X 900 mm, Approx Weight 6500 Kg. / MCC, Panels shall be supplied in loose shipping section.	set	1				
<b>E5B.6</b>	125 Volt Battery Charger ,Single / Double Front, Approx Over all dimensions 2400 X 800X2000 mm, Approx Weight 1000 Kg. / MCC, Panels shall be supplied in loose shipping section.		1				
<b>E5B.7</b>	Chiller LT Panel (Approx. Dimension 2100(H)x1200(W)x500(D) mm)	No	1				
<b>E5B.8</b>	Chiller HT Panel(Approx.Dimension 3000x2350 mm,Wt-3MT)	No	1				
<b>E5B.9</b>	Generator Circuit Breaker(Approx. Dimension 2500(H)x5000(W)x2500(D) mm,weight 4Tons)	No.	1				
<b>E5B.10</b>	Static Frequency converter container(Approx. Dimension 3500(H)x10000(W)x2500(D) mm),weight 15Tons(Approx)	No	1				
<b>SECTION-E5C : DIGITAL AUTOMATIC VOLTAGE REGULATOR FOR BRUSHLESS EXCITAION SYSTEM</b>							<b>1.5</b>
<b>E.5C.1</b>	Transportation from store / storage yard to erection site , Erection, Assembly, Testing & Commissioning of Digital Excitation Equipments / System , System consist of GTG DAVR panels & accessories as per tender specification.	Set	1				
<b>E5D</b>	<b>ILLUMINATION PACKAGE (LIGHTING SYSTEM) ,type of fixture/lamp/accessories</b>						<b>1.5</b>
<b>E5D.1</b>	Bulk Head Luminaire for 110V DC,1X10 W CFL lamp.	Nos.	110				
<b>E5D.2</b>	Recess Mounted Downlight Luminaire suitable for 1X18MW CFL lamp suitable for false ceiling mounting and to use with 110V DC.	Nos.	45				
<b>E5D.3</b>	Industrial type general purpose luminaire suitable for 2x36W Fluorescent lamps-Surface Mounted(CGL Cat ref no. ISE1424EB/RSE or equivalent)	Nos.	300				
<b>E5D.4</b>	Decorative mirror optics luminaire with aluminium reflector and P5 paralite vacuum metalised louvers suitable for 2x36W CFL lamps-Recess mounted(CGL Cat Ref No. CRFQ11236EB or equivalent	Nos.	330				

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E5D.5	Corrosion proof luminaire suitable for 2x36W Fluorescent lamps-Surface mounted(CGL Cat Ref No. IDJ1124HSB or equivalent).	Nos.	30				
E5D.6	Non- integral High bay Luminaire suitable for 400W HPMV lamp(CGL Cat Ref No. IHB1140/P or equivalent).	Nos.	20				
E5D.7	Non- integral High bay Luminaire suitable for 400W HPSV lamp(CGL Cat Ref No. SHB1140/P or equivalent).	Nos.	35				
E5D.8	Non-integral well glass luminaire suitable for 150W HPSV lamp in complete with Eyebolt and bracket for suspension/ceiling/pole mounting.(CGL cat Ref No. SWV1215 or equivalent)	Nos.	250				
E5D.9	Non-integral well glass luminaire suitable for 125W HPMV lamp in complete with Eyebolt and bracket for suspension/ceiling/pole mounting.(CGL cat Ref No. IWV1212/BC or equivalent)	Nos.	25				
E5D.10	Flame proof Non-integral 125W HPMV well glass luminaire suitable for hazardous area gas group IIA & IIB zone 1&2 in complete with eyebolt and bracket for suspension/ceiling/pole mounting.	Nos.	75				
E5D.11	Street light luminaire suitable for 125W HPMV lamp (CGL Cat Ref No. MSC1312IH/BC or equivalent)	Nos.	60				
E5D.12	Street light luminaire suitable for 150W HPSV lamp (CGL Cat Ref No. SSG1315IH or equivalent)	Nos.	75				
E5D.13	Non-integral flood light luminaire suitable for 2x400W HPSV lamp(CGL Cat Ref No. FHD1524 or Equivalent)	Nos.	6				
E5D.14	10W CFL Lamps for Sr.No.E5D.1	Nos.	130				
E5D.15	18W CFL lamps for Sr.No.E5D.2	Nos.	55				
E5D.16	36W Fluorescent Lamps Sr.No. E5D.3 and E5D.5	Nos.	730				
E5D.17	36W CFL Lamp Sr.No. E5D.4	Nos.	730				
E5D.18	400W HPMV tubular Lamp Sr.no.E5D.6	Nos.	25				

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E5D.19	400W HPSV tubular lamp Sr.No. E5D.7 and E5D.13	Nos.	60				
E5D.20	150W HPSV tubular lamp for Sr.No.E5D.8 and Sr.No. E5D.12	Nos.	400				
E5D.21	125W HPMV lamp for Sr.No. E5D.9,E5D.10 and E5d.11	Nos.	200				
E5D.22	9.5 mtrs street lighting pole(410SP-38)	Nos.	30				
E5D.23	11 mtrs flood light pole	Nos.	5				
E5D.24	4.75 mtrs pole	Nos.	40				
E5D.25	2 Mtr Pole	Nos.	150				
E5D.26	Metsec Channel 3 mtrs Length	Nos.	200				
E5D.27	1200mm Long 120Deg Bend 50NB Pipe with 2 nos suitable clamp with base.	Nos.	50				
E5D.28	1200mm Long 150Deg Bend 50NB Pipe with 2 nos suitable clamp with base.	Nos.	80				
E5D.29	3000mm Long 20mmdia GI conduit	Nos.	600				
E5D.30	3000mm Long 25mmdia GI conduit	Nos.	3,000				
E5D.31	3000mm Long 50mmdia GI conduit	Nos.	180				
E5D.32	25mm GI Conduit Bend	Nos.	5,000				

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E5D.33	25mm GI inspection Bend	Nos.	1,000				
E5D.34	25mm GI Conduit Couplers	Nos.	5,000				
E5D.35	3000mm Long 25mm dia.PVC Conduits	Nos.	600				
E5D.36	3000mm Long 50mm dia PVC Conduits	Nos.	100				
E5D.37	25mm Flexible PVC conduit.	Nos.	500				
E5D.38	25mm PVC conduit bend	Nos	500				
E5D.39	25mm Flexible PVC Conduit couplers	Mtrs.	500				
E5D.40	PVC Flexible Connector Suitable for 25mm PVC flexible Conduit	Nos.	1,000				
E5D.41	Spring Loaded ball and sockets for 19mm dia GI down conduit .	Nos.	400				
E5D.42	6mm x 35mm Long Anchor Bolt with nut and washer.	Nos.	3,500				
E5D.43	6mm x 35mm Long Hook Type Anchor Bolt with nut ,bolt and washer.	Nos.	3,500				
E5D.44	12.5mm dia X 40mm long Anchor Bolt Straight With Nut & washer-Bolt type	Nos.	350				
E5D.45	12.5mm dia X 40mm long Anchor Bolt Straight With Nut & washer-Hook type	Nos.	70				
E5D.46	Saddle with Saddle Bar Suitable for 25mm Dia Conduit with hardware.	Nos.	18,000				

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E5D.47	19mm Cable Clamps suitable for 3C x 2.5sqmm cu.armoured cable with base and hardware	Nos.	1,400				
E5D.49	Double compression nickle plated brass cable glands 3/4 inch for safe area.	Nos.	70				
E5D.50	Double compression nickle plated brass cable glands for hazardous area group IIA & IIB zone 1&2 suitable for 4C x 16 sqmm Copper armoured cable.	Nos.	14				
E5D.51	Double compression nickle plated brass cable glands 3/4" for hazardous area group IIA & IIB zone 1&2 .	Nos.	35				
E5D.52	Checks Nuts Suitable for 20mm GI Conduit	Nos.	4,000				
E5D.53	Galvanized Steel Chain	Mtrs.	2,500				
E5D.54	S Hook	Nos.	1,400				
E5D.55	U Hook	Nos.	70				
E5D.56	Rubbber Gromett(19mm)	Nos.	1,750				
E5D.57	Rubbber Gromett(25mm)	Nos.	700				
E5D.58	FSB-2 Flush Mounted Switchboards Consisting of 2 no. 15 Amp Piano Type Switch & 15A Receptacle with Switch.(Modular type)	Nos.	30				
E5D.59	FSB-3 Flush mounted Switchboards consisting of 3 no. 15 Amp paino type switch & 15A receptacle with switch modular type	Nos.	25				
E5D.60	FSB-5 Flush Mounted Switchboards Consisting of 5 no. 15 Amp Paino Type Switch & 15A Receptacle with Switch modular type	Nos.	10				
E5D.61	Domestic Type 5/15A receptacle with switch(flush mounted modular)	Nos.	6				

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E5D.62	Industrial Metal Clad Type 15A receptacle with switch	Nos.	50				
E5D.63	Industrial Metal Clad Type 5/15A socket with switch and plug for Hazardous Area Group IIA & IIB Zone 1 & 2	Nos.	5				
E5D.64	63A Welding TPN Receptacles(Safe area)	Nos.	20				
E5D.65	63A welding TPN Receptacles(Flameproof area)	Nos.	2				
E5D.66	240V to 24V Supply Module With Hand Lamp and 15mtrs Cable	Nos.	5				
E5D.67	6 ways AC/DC indoor,out door lighting panel(Dimension 800x800x200 mm)	Nos.	27				
E5D.68	12 ways AC indoor,out door lighting panel(Dimension 1000x700x250 mm)	Nos.	10				
E5D.69	18 ways AC indoor,out door lighting panel(Dimension 1200x700x250 mm)	Nos.	10				
E5D.70	Flameproof 6way AC/DC Indoor lighting panel suitable for hazardous area group IIA & IIB,zone 1 & 2(Approx.Dimension 800x800x200 mm)	Nos.	2				
E5D.71	Flameproof 12way AC Indoor lighting panel suitable for hazardous area group IIA & IIB,zone 1 & 2(Dimension 1000x700x250 mm)	Nos.	1				
E5D.72	4 way 200x150x150 mm rectangular cast Al JB suitable for hazardous area group IIA & IIB zone 1 & 2 with two 1" and two 3/4" cable entries along with glands and TB suitable for 4nos 35sqmm Al cable & 4nos 2.5sqmm Cu cable.	Nos.	5				
E5D.73	4 way 200x150x150mm rectangular sheet steel JB with two 1" and two 3/4" cable entries along with glands and TB suitable for 4nos 35sqmm Al cable & 4nos 2.5sqmm Cu cable.	Nos.	70				
E5D.74	4-way JB 150x100x100 along with 2-pin terminal block suitable for 4.0sqmm cable entry	Nos.	200				
E5D.75	4-way conduit branching JB for 25mm GI conduit	Nos.	500				

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Sl. No.	Description of items	UOM	Quantity	Unit Rates in Figures (In Rs)	Unit Rates in Words (In Rs)	Total Amounts (In Rs)	APPLICABLE for Terms of Payment
E5D.76	4-way conduit branching JB for 25mm PVC conduit	Nos.	500				
E5D.77	Concealed conduit laying for indoor cable for PA and Telephone cable	Mtrs.	500				
E5D.78	Rawl Plug with 1.5" deep screw	Nos.	700				
<b>E5E</b>	<b>Flexible Wires(PVC Insulated, Single Core Copper Conductor Flexible Wires)</b>						<b>1.5</b>
E5E.1	2.5 sq mm ,Red, Yellow, Blue, Black, Green colour Flexible wire	Mtrs.	52,000				
E5E.2	4.0 sq mm ,Red, Yellow, Blue, Black, Green, colour Flexible wire	Mtrs.	7,800				
<b>SECTION-E 6 : EARTHING/LIGHTNING PROTECTION STRIPS</b>							<b>1.6</b>
E6.1	8SWG GI wire , solid,	Mtrs.	2000				
E6.2	16SWG GI wire , solid,	Mtrs.	2000				
E6.3	3/8" Dia GI fine wire rope	Mtrs.	2500				
E6.4	5/8" Dia GI fine wire rope	Mtrs.	2500				
E6.5	65 mm dia Pipe Electrodes, 3M long GI,Treated Earth Pit for machine neutral earthing,untreated earth pit for machine body and lighting protection.	Nos.	90				
E6.6	75 x 10 mm GI Strips,	Mtrs.	8000				
E6.8	50 x 6 mm GI Strips,	Mtrs.	3250				
E6.10	35 x 6 mm GI Strips,	Mtrs.	3000				
E6.12	25X4 mm GI Strips	Mtrs.	100				
E6.13	8SWG GI wire , solid,	Mtrs.	550				

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Sl. No.	Description of items	UOM	Quantity	Unit Rates in Figures (In Rs)	Unit Rates in Words (In Rs)	Total Amounts (In Rs)	APPLICABLE for Terms of Payment
E6.16	copper pipe Electrodes with Copper Strips (For electronics equipment earthing)	No	40				
E6.17	Vertical Air Termination Rods for Lighting Protection.	No	20				
E6.18	NGR Power Transformers,500A/10 sec,Approx. Dimension 1410x1210x1840 mm,Approx. Weight 600 Kg	No	1				
<b>SECTION -E7A: LT BUS DUCTS</b>							<b>1.7</b>
E7A.1	415 Volt,3200A,50Hz LT Bus Duct.Approx.length of each set of bus duct -15 Meter(approx.),Dimension 5000x1200x800,Weight 100 Kg/Mtrs approx.Loose items like silicagel Breather pipe,GI Channel Supports and associated accessories.	Sets	4				
<b>SECTION -E7B: HT BUS DUCTS (IPBD)</b>							<b>17</b>
E7B.1	Isolated Phase Bus Duct ( 11KV) for interconnection of Generator, Generator Transformers, UAT along with all accessories & auxiliaries as described in the Tender Specification.	Sets	1				
<b>SECTION- E8 :OIL FILLED TRANSFORMERS(GT,ST,)</b>							<b>18</b>
E8.1	Transportation from stores/ storage yard to erection site, assembly, testing & commissioning of <b>2.5 MVA, 11/0.415 KV, LT Auxiliary Transformer-</b> including all accessories,NGR, piping, cabling etc ( Approx weight 6.5MT Kg per Transformer,Dimension 2800(L)x2100(D)x2650(H)mm)	No	4				
E8.2	Transportation from stores/ storage yard to erection site , assembly, testing & commissioning of <b>Lighting T/F, 150 KVA , 3 phase 415 volts / 433 volts</b> , 3 PH, ONAN,, including all accessories,(Approx Dimension of 1500x1900x1500 mm,Approx weight 900 Kg per Transformer,	No	2				
E8.3	Transportation from stores/ storage yard to erection site , assembly, testing & commissioning of <b>Emergency Lighting T/F, 75 KVA , 3 phase 415 volts / 433 volts</b> , 3 PH,including all accessories,Approx Dimension 1350x1800x1200 mm,Approx weight 750 Kg per Transformer.	No	2				
E8.4	3-phase 95 MVA, 11/66 KV, ONAN/ONAF, Cooled GTG <b>Generator Transformer</b> including all accessories, piping, cabling etc(Apprx dim. 9000X6800X6750 &Weight 123 MT). as described in Tender Specification.	No	1				

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E8.5	Transportation from stores/ storage yard to erection site, assembly, testing & commissioning of 50 MVA, 3 phase 11 KV /11KV,ONAN/ ONAF Unit Auxillary Transformer, Oil filled, including all accessories,NGR, piping, cabling etc(Apprx dim. 11700x6400x6900 &WEIGHT-123 MT)	No	1				
<b>SECTION-E 9 : ONLY TESTING &amp; COMMISSIONING</b>							<b>19</b>
E9.1	Testing and commissioning of 6.6 &11KV HT motors including dryout.	No	4				
E9.2	Testing and commissioning of 415 V LT motors including dry out.	No	40				
E9.3	Generator system testing	Set	1				
E9.4	Electrically (LT) Operated Valves, Dampers and Gates with Actuators, Limit Switches etc. (Regulating & ON/OFF Type).	No	50				
E10	Other Items						l.10
E10.1	RUBBER MAT (11 KV)of approx 2.5mm thick.	Nos.	28				
E10.2	RUBBER MAT (3.3 KV)of approx 2mm thick.	Nos.	7				
E10.3	MCT FRAME,(Approx size 905x523 mm)	Nos.	11				
E10.4	MCT BLOCKs	Nos.	275				
E10.5	Fire proof material required for sealing of cable through conduit/trenches.	SQ.MTERS	300				
E10.6	Fire Break coating for HT/LT Power cables.	SQ.MTERS	400				
E10.7	Trefoil clamps for single core cables-25mm wide 8SWG aluminium strips	Nos.	1800				
E10.8	GI conduit(100 or 150MM dia),PVC conduit(200&100MMdia),Approx. Standard length of PVC and GI conduit is 3mtrs.	Nos.	1800				
E10.9	Hume pipe(200 NB)-Approx. standard length is 2.5mtrs.	Nos.	300				
E10.10	6mm chequered plate	SQ.MTERS	300				

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<b>E10A</b>	<b>CABLE DUCTS AND ACCESSORIES PACKAGE</b>						<b>I.10</b>
E10A.1	800 mm width X 300 mm Straight Run Duct with accessories including Joining Plate-CAT 1(Unit Length is 2.5mtrs).	Nos.	150				
E10A.2	800 mm width X 300 mm Height Ducts Equal Tee( type A) with accessories including Joining Plate-CAT 1	Nos.	5				
E10A.3	800mm width X 300 mm Height Ducts equal tee(Type-B) with accessories including Joining Plate-CAT 1	Nos.	5				
E10A.4	800mm width X 300mm Height Ducts Elbow(Horizontal plane) type A with accessories including Joining Plate-CAT 1	Nos.	5				
E10A.5	800mm width X 300mm Height Ducts Elbow(Vertical Plane)(TYPE A)with accessories including Joining Plate-CAT 1	Nos.	5				
E10A.6	800m width x 300mm hight duct elbow (Horizontal plane)-(Type B) with accessories including Joining Plate-CAT 1	Nos.	5				
E10A.7	800mwidth x 300mm hight duct elbow (Vertical plane)-(Type B) with accessories including Joining Plate-CAT 1	Nos.	5				
E10A.8	End cover800 widthX300 mm Height cable Ducts.	Nos.	10				
E10A.9	800mm width to 400mm width,200mm Height Ducts Reducer 'M' path straight type A with accessories including Joining Plate-CAT 1	Nos.	10				
E10A.10	400mm width x 200 mm hight Straight run ducts with accessories including Joining Plate-CAT 1(Unit Length is 2.5mtrs).	Nos.	100				
E10A.11	400mm width x 200 mm Height Duct Elbow horizontal Plane type A with accessories including Joining Plate-CAT 1	Nos.	5				
E10A.12	400mm widthx200 mm Height Duct Elbow Vertical Plane type A with accessories including Joining Plate-CAT 1	Nos.	5				
E10A.13	400mm width x 200 mm Height Duct Elbow Horizontal Plane type B with accessories including Joining Plate-CAT 1	Nos.	5				
E10A.14	400mm width x 200 mm Height Duct Elbow Vertical Plane type B with accessories including Joining Plate-CAT 1	Nos.	5				
E10A.15	End cover 400mm width x 200mm Height Cable Ducts	Nos.	5				
<b>E10B</b>	<b>HT TERMINATION KIT (XLPE INSULATED, HEAT SHRINKABLE COPPER / ALUMINIUM CABLE)</b>						<b>I10</b>
E10B.1	11KV, 1C X 630 SQ MM ,Cu. Cable	Nos.	150				

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Sl. No.	Description of items	UOM	Quantity	Unit Rates in Figures (In Rs)	Unit Rates in Words (In Rs)	Total Amounts (In Rs)	APPLICABLE for Terms of Payment
E10B.2	11 KV, 3C X 300 SQ MM , Al. Cable	Nos.	22				
<b>E10C</b>	<b>Erection and Commissioning(Supervision) of Turnkey Package</b>						<b>110</b>
E10C.1	Public Addressing System	Set	1				
E10C.2	Telephone System	Set	1				
<b>Grand Total in figures (In Rs)</b>							
<b>Grand Total in Words Rs.....</b>							