



FAISALABAD INDUSTRIAL ESTATE
DEVELOPMENT & MANAGEMENT COMPANY
(FIEDMC)



INVITATION TO BID
Insurance Coverages
Sub-Station at M-3 Industrial City
and
Sub-Station at Value Addition City

Faisalabad Industrial Estate Development and Management Company (FIEDMC) intends to insure its two sub-stations located at M-3 Industrial City near Sahianwala Interchange M-3 Motorway and Value Addition City near Khurrianwala Chowk, Faisalabad-Lahore Expressway Faisalabad and hereby solicits bids from Insurance Companies having at-least A rating from PACRA/JCR. Scope of coverage shall be as stated in the Bidding Documents, available at PPRA Punjab and FIEDMC websites.

Interested insurance firms may send their bids/proposals, in duplicate, based on the documents, which can be downloaded from FIEDMC and PPRA Punjab websites, and the bids/proposals should reach the office of the undersigned at or before 1100 hours, on 16/05/2016. The bid should be properly sealed. Any bid/proposal received after the deadline for submission of bid/proposal shall be returned unopened. Bids/Proposals will be opened at 1130 hours on the same day, in the presence of bidder's (consultant's) representatives who choose to attend at the same address.

Punjab Procurement Rules 2014 shall apply.

Chief Executive Officer

FAISALABAD INDUSTRIAL ESTATE DEVELOPMENT & MANAGEMENT COMPANY
1st Floor, FCCI Complex, East Canal Road, Canal Park, Faisalabad,
Tel: 041-9230231-4, Fax: 041-9230235, e-mail: fiedmc@fiedmc.com.pk

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INVITATION TO BID
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Sub-Station at M-3 Industrial City
and
Sub-Station at Value Addition City

Qualification Criteria

- A rating from PACRA/JCR
- Experience of at least 10 years
- Proof of re-insurance
- List of at least 10 major clients

The Insurance Company should furnish in a separate envelope the above said information.

The Bid shall be in a sealed envelope containing the following:

1. Qualification Criteria (separately sealed)
2. Financial Offer (separately sealed) together with the signed-stamped Bidding Documents

INVITATION TO BID

Engineering Consultants' Services (Electrical) towards Installation of an additional transformer of capacity 40MVA as per well-established practices and standards of NTDC/FESCO (WAPDA) at Sub-Station No. 01 at M-3 Industrial City, Faisalabad

Scope of Coverage

- Fire
- Riot
- Burglary/Theft
- Malicious Damages
- Terrorism
- Atmospheric Disturbance
- Natural Damages
- Explosion
- Earthquake
- Aircraft Damages
- Impact Damages
- Electricity failure

Coverage Required for the following:

132kV/11kV Sub-Station at Value Addition City, Khurrianwala, Faisalabad as per the attached details

132kV/11kV Sub-Station at M-3 Industrial City, Faisalabad as per the attached details

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132kV Grid Station at Value Addition City, Khurrianwala, Faisalabad

Item No	Description	UNIT	QTY	TOTAL AMOUNT
A	132 KV EQUIPMENT			
A.1	132/11.5 KV 20/26 MVA Power transformer 50 Hz 10% impedance vector group Dyn 11, OLTC with Au: panl and transformer bushing having extend creepage distance	Each	1	29,300,000
A.2	145 KV, 1600 A 31.5 kA three pole circuit breaker having extend creepage distance with steel suporting structure	Each	3	6,210,000
A.3	145 KV, 1600 A 20KA three pole Disconnecter without earthing switch having extend creepage distance with steel suporting structure	Each	4	3,102,800
A.4	145 KV, 1600 A 20KA three pole Disconnecter without earthing switch having extend creepage distance. Terminal connector fo 600mm sp. Steel suporting structure	Each	2	1,605,000
A.5	145 kv, 20KA sigle phase current transformer ratio 1600- 800- 400/5.5-5 A with extended creepage distance 4 cores having 15 VA 30VA and 60VA Burden (for protection completed with steel supportig structure and terminal connectors for 60mm sq. Aluminum Conductor	Each	6	2,949,000
A.6	145 kv, 20KA sigle phase current transformer ratio 200-100/5.5- 5 A with extended creepage distance 3 cores having 15 VA 30VA and 60VA Burden (for protection completed with steel supportig structure and terminal connectors for 60mm sq. Aluminum Conductor	Each	3	1,531,500
A.7	120 KV surge arrester with surge counter extended creepage distance and steel supporting structure	Each	3	571,500

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A.8	132 KV Potential Tranformer (132/√3/0.11/√ 3 Kv) single and terminal connector for 60 mm sq. Aliminum Conductor with steel supporting structure	Each	3	1,380,000
A.9	11KV surge arrester with surge counter extended creepage distance and line terminal with insulating leads and protective cap and amounting bracket etc.	Each	3	35,100
A.10	11 KV al .pipe 63mm 4m	Each	3	46,500
A.11	11 KV post insulater with clamps.	Each	3	15,000
A.12	11/0.415 kv three phase pad mounted transformer (100Kva)	Each	1	875,000
A.13	132 kv single tension string assembly for 600 mm ² al conductor with disc insulators	Each	6	141,000
A.14	132 KV steel Gantries			-
A 14.1	Beam 11.4 m	Each	4	640,000
A 14.2	Column 10+3.1m	Each	6	1,596,000
A 14.3	Earth Mast 13.1m	Each	1	198,000
A 15	132 kv substation hardware and connector	Lot	1	850,000
A16	132 kv post insulater with calmps with steel	No.	3	195,000
	Total of A			51,241,400
				-
B	132 KV control Protection metering and monitoring system			-
B1	Line control panel CP-30 P.T rrangment (110VDC, 5AMP)	Each	2	738,000
B2	Line relay panel RP-3 (110DC, 5AMP)	Each	2	2,031,000
B3	Transformer control panel CP-50 (110VDC, 5AMP)	Each	1	316,000
B4	Line relay panel RP-4 (110DC, 5AMP)	Each	1	985,000
B5	110 VDC, 150 A H, Lead Acid enclosed type station batteries with wooden racks.	Set	1	175,000
B6	Automatic Contant Voltage type sigle phase battery charger 110 VDC 25A type A	Each	1	275,000
B7	AC/DC Auxiliary services panel (110VDC, 220VAC 415VAC)	Each	1	359,000

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B8	11 KV Metalcaid vacuum stype swichgear incoming panel 25 KA breaking capacity with 2 Nos. 11 kV Ct sels ratio 800-1600/5/-5A (one of them is of single core having 15 VA burden 5 P 10 class of accurancy for defrential protection while other have 2 cores of 15VA and 10 VA burden with 5 p 10 and 0.5 class of accrcacy and 11 KV P.T (11/v3/0.11/v3	Each	1	1,180,400
B9	11 KV Metalcaid vacuum stype swichgear Outgoing panel 25 KA breaking capacity with 2 Nos. 11 kV Ct sels ratio 400-200/5/-5A fr having 2 cores of 15VA and 10 VA burden with 5 p 10 and 0.5 class	Each	6	4,290,000
B9.1	11 Kv bank lot	Lot	1	2,645,000
B10	Arc- monitoring system			-
B10.1	Arc- monitoring unit	Set	2	1,174,000
B10.2	Current sensing unit	Set	1	305,500
	Total of B			14,473,900
C	Substation General Equipments			-
C1.1	Aluminum standard condactor 600mm2	Lot	1	205,000
C1.2	4mm 11 KV steel structure	Each	1	60,000
C1.3	11 Kv, 1000 MCM Aluminum conductor single core	Meter	450	648,000
C1.4	Outdoor termination Kits for 11 kv single core -1000 MCM power cable with all accessories	No	9	130,500
C1.5	Indoor termination Kits for 11 kv single core -1000 MCM power cable with all accessories	No	9	103,500
C1.6	11 KV 4/0 AWG 3, cores XLPE power cable	Meter	50	99,500
C1.7	Indoor termination kits for 4/0 AWG 3 core power cable	No	1	11,800
C1.8	Outdoor termination kits for 4/0 AWG 3 core power cable	No	1	13,250
C1.9	Earth wire 7/0.116 (9mm dia)	Lot	1	22,500
C1.10	Earth wire tension assembly complete with accessories	Lot	1	110,000
C2	Control Cable			-
C2.1	4x2.5mm ²	Lot	1	178,000
C2.2	8x2.5mm ³	Lot	1	177,000

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C2.3	16x2.5mm ⁴	Lot	1	335,000
C2.4	4x6mm ⁵	Lot	1	241,000
C3	Substation Grounding system for 132 KV s/ yard			-
C3.1	95mm ² copper conductor	Lot	1	775,000
C3.2	Earthing rod 16mm dia 3m long	Lot	1	230,000
C3.3	moulds with holding clamps			-
C3.3.1	Type A	Lot	1	20,000
C3.3.2	Type B	Lot	1	20,000
C3.3.3	Type C	Lot	1	20,000
C3.4	Cartidges			-
C3.4.1	Type A	Lot	1	48,000
C3.4.2	Type B	Lot	1	127,000
C3.4.3	Type C	Lot	1	70,000
C3.5	Grounding connector as per related switch yard earthing plan	Lot	1	60,000
C4	Earthing Platform	No	6	72,000
C5	Switch yard lighting system 415/240 volts AC and emergency lighting system 220 V and 110 V DC & power sockets including cabling etc as specified	Lot	1	575,000
C6	Testing and commissioning of the Grid station	L/S	-	570,000
C7	Dehydration/ Vacuum of oil of power transformer	L/S	-	200,000
	TOTAL OF C			5,122,050
D	Telecommunication			-
D1	Plc communication system			-
D1.1	132 Kv wave trape 800 Amp	No	2	624,000
D1.2	170 Kv coupling capacitor 500 PF with extended creepage distance with carrier facilities with steel supporting structure	No	2	2,510,000
D1.3	Line matching unit (LMU, P.E)	No	2	942,000

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D1.4	Analogue PLC set 40 W programmable with 2/4 wire E & M subscriber interface and MDF cable	No	2	3,680,000
D1.5	Hinged frame cubical for PLC set	No	2	734,400
D1.6	Highly frequency carrier cable, 75 Ohm	Lot	1	22,000
D3	48 V DC power supply			-
D3.1	Battery Bank 48 V 100 Ah	No	1	200,000
D3.2	Battery charges 20 Amp 48 V	No	1	50,000
D3.3	DC cable 2x65mm ²	lot	1	35,000
D3.4	DC cable 25mm ²	Lot	1	35,000
D3.5	Earth cable 35mm ²	Lot	1	43,000
D3.6	Multipair Telephone Cable	Lot	1	5,000
D3.7	Telephone Set	No	1	13,000
	Total of D			8,893,400

	Grand Total= A+B+C+D			79,730,750
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**Grid Station at M-3 Industrial City,
Faisalabad**

Sr No	Description	UNIT	QTY	TOTAL AMOUNT (PKR)
				DDP AT SITE
A	Transformers			
A.1	132 kv/11.5 kv, 20/60 MVA 3- phase power transformer with bushings having extended creepage distance complete with local control panels and all other equipment complete as specified.	Each	2	87,870,048

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A.2	Current transformer of each power transformer residual connection to ground for REF and natural overcurrent protection as specified.	Lot	2	37,762
A.3	12 Kv Single phase surge arrester substation class having extended creepage distance with steel supporting structure complete with mounting arrangement as specified	Each	6	114,564
	Total A			88,022,374
B	145 Kv Equipment			-
B.1	Circuit breaker three pole 145 Kv 2000A, 40KA, having extended creepage distance with steel supporting structure complete as specified.	Each	4	10,233,648
B.2	Circuit breaker three pole 145 Kv 2000A, 40KA, with steel supporting structure complete as specified.	Each	1	2,558,412
B.3	Disconnectores Three Pole, 145 Kv, 2000A, motor operated having extended creepage distance with steel supporting structure complete as specified.	Each	14	9,503,536
B.4	Disconnectores Three Pole, 145 Kv, 2000A, motor operated having extended creepage distance with steel supporting structure complete as specified.	Each	2	1,357,648
B.5	Disconnectores Three Pole, 145 Kv, 2000A, (with earthing switch) having extended creepage distance with steel supporting structure complete as specified.	Each	2	1,535,646
B.6	Current transformer 145 kv single pole 4 core, 1600:800:400/1A ratio, 40 kv complete with steel supporting structure complete with mounting arrangement as specified	Each	6	3,496,416
B.7	Current transformer 145 kv single pole 4 core, 1600:800:800/1A ratio, 40 kv complete with steel supporting structure and accessories as specified.	Each	3	1,569,126
B.8	Current transformer 145 kv single pole 4 core, 1600:800:800/1A ratio, 40 kv complete with steel supporting structure and accessories as specified.	Each	6	4,427,628
B.9	Coupling Capacitor voltage transformer 145 Kv, single pole 2 core rated ratio of 132V/30.11V/3 kv having extend creepage steel supporting structure and accessories as specified.	Each	6	3,209,886

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B.10	Inductive Voltage transformer 145 kv single pole 2 core reted ratio of 132 V30.11V3 kv complete with steel supporting structure all other accessories and with extended creepage distance as specified.	Each	6	3,138,252
B.11	120 Kv surge arrester with surge counter and steel supporting structure as specified (for transformer and line bays)	Each	12	2,645,196
	Total B			43,675,394
				-
C	High Voltage Bus Work			-
C.1	Steel structure fo 132 Kv overhead conductor as specified and as detailed in Bid - Drawings.			-
C.2	132 Kv Steel gantries			-
C.2.1	i) Beam 12 m D conductor	Each	6	1,300,638
	ii) Column 13.8+3.1M	Each	8	3,577,456
C.2.2	low level Ganries	Each		-
	i) Beam 12 m D conductor	Each	4	834,060
	ii) Column 13.8+3.1M	Each	8	2,769,360
C.3	132 Kv Substion connectors and hardware	Lot	1	1,363,254
C.4	Aluminium tbular Conductor			-
C.4.1	80x10 mm aluminum tubular conductor	Lot	1	89,305
C.4.2	Harsdware and accessories for 80x10mm aluminium tubular conductor complete as specified.	Lot	1	37,691
C.5	Overhead Flexible Conductors:	Lot		-
C.5.1	Coreopsis 1590 kCM all aluminium stranded conductor	Lot	1	1,636,752
C.5.2	Hardware and conductor accessories for Coreopsis 1590 kCM all aluminium stranded conductor complete as specified.	Lot	1	606,359
C.6	Overhead shield wire:	Lot		-

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C.6.1	Extra high strength 9.52 mm diameter galvanized steel wire as specified.	Lot	1	28,734
	Erection	Lot		-
C.6.2	Hardware and accessories for shield wire complete as specified	Lot	1	46,560
C.7	post Insulators:	Lot		-
C.7.1	Insulator stacks 145 Kv 650 Kv BIL, complete with bus support clamps and steel support structure as specified and if required.	Lot	1	654,135
	erection	Lot		-
C.8		Lot		-
C.8.1	145 Kv double insulator string dead end assemblies for 1590 kCM coreopsis 2 Conductor bundle complete with hardware as specified.	Lot	1	719,762
	erection	Lot		-
C.8.2	145 Kv suspension insulator jumper assembly for 1590 kCM ,coreopsis 2 Conductor bundle complete with hardware as specified.	Lot	1	76,269
	erection	Lot		-
C.9	Miscellaneous devices materials accessories panels etc for complete and functional system as required and as specified.	Lot	1	530,510
C.10	Any other item (equipment or works) whether specified or not but necessary for the complete of the specified scope of work.	Lot		-
	Total C			14,270,845
D	132KV Control Protection and metering system			-
D.1	Line control panel CP-32	Each	2	829,116
D.2	Transformer control panel CP-51	Each	2	777,840
D.3	Bus couple control panel CP-40	Each	1	406,710
D.4	Line relay panel RP3 (including auto reley)	Each	2	1,919,082
D.5	Transformer relay panel RP4	Each	2	2,046,750
D.6	Bus Couple relay panel RP1	Each	1	673,853

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D.7	Low impedance bus bar protection panel (with integrated breaker failuer protection)	Lot	1	1,064,211
D.8	Energy mater panel(s)	Lot	1	379,817
D.9	REF protection scheme complete with all accessories as specified	Lot	1	-
D.10	Nutral over current protection scheme complete with all accessories as specified	Lot	1	-
D.11	All other auxiliary ralays miscellaneous ralays and accessories required for proper opertaion of protection system.	Lot	1	-
	Total D			8,097,379
E	TELECOM EQUIPMENT			-
E.1	Line trape 145 Kv ,0315mh 2000 amp with stand	NO	8	3,227,296
E.2	Coupling capacitor > 5900 pF with supporting structure	NO	4	5,631,868
E.3	LMU (Line matching Unit) -Coupling Filter with Earthing switch	NO	4	1,128,016
E.4	HF PLC cable	Each	4	770,668
E.5	PLC (trans Receiver) min 40 Watt single channel equipment complete with speech & Teleprotection signaling & with power supply.	SET	4	9,827,536
E.6	Erection material such as cables connectors jumpers harness, mounting frame fuses relays buts and bolts for a complete and functoinal system	Lot	3	70,770
E.7	Set of 48 V DC batteries and battery charges			-
	a. Lead acid battery , 48V (150 Ah)	NO	1	327,736
	b. Automatic static battery charger 48V, 100A complete as specified.	NO	2	6,512,400
	c. 48V DC auxillary services panel with 20 outlets	NO	1	99,814
E.8	Private Automatic Exchange (PAX) with 9 extentionins & 2 trunks for speech communication (increase in capacity of PAX at end Station if needed)	NO	1	3,246,411
E.9	Telephone sets	NO	9	131,373
E.10	PLC long line extention complete	NO	-	-
E.11	Installation, site testing & commissioning of PLC system		1	2,660,527

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	Total E			33,634,415
F	<u>SUBSTATION GENERAL EQUIPMENT</u>			-
F.1	Al-conductor and steel wire			-
	i) All-Aluminium conductor 600mm ² (Hawthorn)		Deleted	-
	ii) Galvaanized steel wire 51mm ²			-
	iii) Tension assembly for galvanized steel wire			-
F.2	a) Control and small power cables with all accessories	LOT	1	3,663,191
	b)15KV-XLPE power cables along with terminations			-
	i)Single Core 10000MCM	Meter	500	688,500
	ii)Three core 120mm ²	Meter	500	1,300,000
	iii) Single core 500 MCM	Meter	650	584,350
	c)132KV-XLPE power cable with all accessories including terionations & connector etc.	LOT	Deleted	-
	d) Cable trays, racks, supports, cable conduits etc	LOT	1	-
F.3	Substation Grounding System for 132KV outdoor equipment and control building			-
	i)185mm ² copper conductor lot	LOT	1	2,388,422
	ii)95mm ² copper conductor	LOT	1	320,549
	iii)Earthing rod 16 mm dia 3 meter long	LOT	1	47,579
	iv)Moulds with holding Clamps, grounding connectors and cartridges etc.	LOT	1	328,442
	v)Any other material =/equipment required for earthing purpose	LOT	1	125,045
F.4	Control house building lighting protection system	LOT	1	-
F.5	Switchyard outdoor lighting (including control house building peripheral lighting) system 220V AC and emergency lighting system, power sockets including cabling etc. as specified.	LOT	1	654,490
F.6	11KV metacled switchgear:			-

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	11,000 volt AC three-phase metaclad switchgear complete with bus bars in the form of a switchboard comprising of following individual panels as specified:			-
	i) Incoming panel 12KV, 2500A,25KA complete with protection and metering as specified	Each	2	2,346,088
	ii) Outgoing panel 12KV,630A, 25kA complete with protection and metering as specified	Each	15	11,688,885
	iii)Bus coupler panel 12 KV, 2500A, 25KA Completed as specified	Each	1	1,451,202
F.7	AC System			-
	a) Station auxiliary transformer ,	Each	1	790,318
	11/0.415KV, 200KV			-
	b) 415/240V AC auxiliary services panels as specified	Lot	1	709,314
F.8	DC system for protection, control and station service equipment.			-
	a) Lead acid battery bank, 110V,150AH, Complete as specified	Each	2	777,406
	b) Automatic static battery charger, 110V,25A,Complete as specified	Each	3	1,260,504
	c) 110V DC , auxiliary services panels as	Lot	1	-
F.9	Distribution boards complete with two incoming main breakers and one tie each of 160 A (adjustable type) complete for protection control, indication and signaling equipment as specified and as shown on the drawings.			-
	a)110V system (total 40 outgoing breakers)	Each	Deleted	-
F.10	LAP TOP computer (core 2 Duo) compatible with fault and event recorder of the numerical relays	Each	1	124,379
F.11	Personal Computer (pentiumIV, core 2 Duo)	Each	2	151,828
F.12	Digital station clock	No.	1	14,278
F.13	Paging system	Lot	1	248,493
F.14	Fire fighting system			-
	a) Mobile fire extinguisher for switchyard area, 50 kg bottle of powder type	Each	4	78,920
	b) Fire extinguisher CO2 type in 5 kg cylinder for control building (wall mounted)	Each	8	51,336

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F.15	30KVA diesel generating set complete with ATS/AMF panel, sound Proof canopy, diesel storage tank and all accessories as specified	Each	1	753,816
F.16	MAINTENANCE TOOLS:			-
	a) Clip on meter with provision for measuring power factor frequency and phase angle	Each	1	59,614
	b) Service Engineer 's Tool kit	Each	1	12,771
	c) Extension cable 50m, 3x15mm ²	Each	1	4,142
	d)SF6 refilling device with provision for checking the setting of pressure switches	Each	1	345,602
	e)Sets of single -end torque wrenches to fit every type of nut and bolt head,used for the circuit breakers (Bidder to specify details & unit Prices)	Lot	1	4,142
	f) Sets of screw drivers,pilers and iother normal tools (Bidder to specify details & unit prices).	Lot	1	2,909
	g)Digitals standard multi-range Clip-onj ammeter/voltmeter suitable for AC/DC circuits ampere range0-1/5/30/300A, voltage range 0/5/300/750V,	Each	1	31,261
	h)Digitals type standard multi-range ,multi-meter with DC and AC current, voltage and ohm scales ,selectable AC/DC current ranges of 2/20/200 mA and 2/10A and selectable AC/DC voltage range of 0.2/2/20/200/100V. Also suitable for measuring capacitance frequency, temperature , Fluke or approved equivalent	Each	1	41,739
	i)DC ground fault detector for detecting , tracking and locating multiple faults in live floating or resistance grounded DC auxiliary power supply systems without resorting to disconnection or sectionalizing and with out affecting the sensitive protection and control equipment; lightweight and portable, battery operated with built in charger , direct reading resistance range 0-100k--, with facility for capacitance measurement,complete with test leads calibration instruments, tool-kit, spare parts and all necessary accessories ; MULTI-AMO model BGL or approved equivalent	Each	1	714,183
	Total F			31,763,698
G	ELECTRICAL WORKS FOR CONTROL HOUSE BUILDING			-

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	Design, supply , installation ,testing & commisioning of all electrical, fire alarm telephone & computer cabling indoor & outdoor lighting etc complete. All equipment & services shall conform ro the IEEE regulation for building			-
G.1	600/1000v copper expe cable connection including MCCBs from station Transformer to main Ac distribution board and all connecting cables to sub main distribution board an outside lighting & services.	Lot	1	523,592
G.2	Main , sub main, power & lighting distribution boards with incoming MCCBs and outgiong MCBs of suitable approved rating to feed power distribution circuit	Lot	1	490,867
G.3	Power & ligting cooper, XLPE or PVC cables installation as approved in suitable conduits for lights fans, exhast fan, power and light plugs for the entire control house building & outdoor yard.	Lot	1	305,428
G.4	Energy saver lamp, light fittings for indoor use and outdoor type weather proof fittings with long life high power lamp, HPSV metal halide ertc. The number of lights used shall be adequate to achieve illumination levles as specified and in accordance with approved international standards.	Lot	1	272,704
G.5	56" ceilling fans and exhaust fans of appropriate sizes in all rooms , power & light plugs/ receptacles, weather proof receptacles for our door use.	Lot	1	54,541
G.6	Supply and erection fo CAT6 computer cables and internet cable from outside of builiding P.V.C pipe 1" dia laid in floor, slab including all necessary accessories for completion fo the work as per specifcaiton & instructiion of the engineer. Cable shall be laid from outsie of the buildings to servers (P.A room) and office/ control room.	Lot	1	27,270
G.7	upply and erection connecting , testing & commissioning of smoke detectors located in all zones. Fire retardant cable single core in 3/4" dia iron pipe recessed from smoke detector to MCS as shown on drawing (in zone) the work of pipe shall be carried as per specification an instructions of th Engineer which should include all accessories required for completion.	Lot	1	196,347

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G.8	upply , installation/ connecting and commissioning of 6 loop fire alarm control panel with four/ two wire system in zone as shown on drawing and shall operate alarming in zone with visual and bell inidcation location on the panel of each equipment.The system shall also have sounder fault zone fault and power supply fault indication and shall be complete in all respects including software.	Lot	1	54,541
				1,925,290
H.1	General			-
	a. cleaning and grubbing of the complete site area for bushes, vegetation trees,roots and weeds etc as per Drawings and Specifications and as directed by the Engineer including dismantling of old civil works (if any) disposal of debris away from site to any load	Lot	1	482,651
	b. Filling, leveling and compaction of the borrow fill material in layers of 150mm thickness (max)95% modified Protector Density to raise the site area as per drawings and specifications	Cu.m	27000	7,182,000
H.2	132KV switchyard Equipment Foundations :			-
	Providing reinforced cement concrete works in equipment and gantry foundations, having 28 days , minimum cylinder strength of 210kg/cm ² and grouting in block outs (if any) and steel reinforcement inclusive of excavation, removal of surplus earth from site area dewatering (if any), steel reinforcement, installation of stubs and anchor bolts, bitumen coating on concrete surface ,capping and grouting understructure sole, including backfilling etc.as per drawings and specifications.			-
	a.132/11.5KV Power Transformer Foundation including 90 ibs steel rails fish plates ,grating ,gravel, & oil resistant paint.	Each	2	2,281,846
	b. Three poles 132KV circuit breaker foundation	Each	5	549,840
	c. Three pole 132KV disconnecter	Each	18	692,802
	d. Single pole 132 KV current transformer foundation	Each	15	453,615
	e. Single pole 132KV CCVT/CVT/voltage transformer foundation	Each	4	120,964

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	f. Single pole 132KV CCVT+line trap foundation	Each	2	87,974
	g. inductive voltage transformer foundation	Each	6	181,446
	h. Single pole 132 KV Surge Arrester foundation	Each	12	395,892
	i. Single pole 132 KV post insulator foundation	Each	9	519,597
	j.132KV High level gantry tower foundation	Each	8	3,079,120
	k.132KV low level gantry tower foundation	Each	8	2,749,208
	l.11/0.4KV station auxiliary transformer foundation	Each	1	89,349
	m.Single pole 12KV Surge Arrester foundation	Each	6	197,946
H.3	Providing RCC cable trenches type 1,2 and 3 inclusive of precast RCC trench covers ,all type of crossings,slope and marshalling kiosk foundations, civil works for installation of tie channels embedded in walls etc,complete as per Drawings and Specification. Expansion joints shall be paid separately.			-
	Cable trench Type-1	Lim	124	2,982,944
	Cable trench Type-2	Lim	78	1,018,602
	Cable trench Type-3	Lim	168	1,385,664
H.4	Providing expansion joints in following types of cable trenches ,complete in all respects as per drawings and specification			-
	Cable trench Type-1	Each	4	24,744
	Cable trench Type-2	Each	3	6,186
	Cable trench Type-3	Each	2	2,750
H.5	Construction of Transformer way 4.5m wide complete	Lim	190	3,787,080
H.6	Construction of switchyard surface & cable trenches water drainage system including pipes with manholes, its connection with cable trenches, road crossing and its disposal system complete in all respects as per drawings and specification.	Lot	1	481,112

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H.7	Complete civil works for oil drainage & separation system including oil separation pit and disposal of rainwater from the pit complete for 132/ 11 Kv power transformers as per drawings and specification and instruction of the Engineer.	Lot	1	384,890
H.8	Supply and placing of rive run gravel blanket 40 to 50 mm size including side retaining wall in switchyard area as specified and as directed by the Enigeer.	Cu.m	1650	3,516,150
H.9	Civil Works for control house building			-
	Construction of Control house Building Comprising structural and architectural works fitting HVAC works water supply arrangements and sewerage system complete in all respects as per Drawings & specification @ 100%	Lot	1	15,807,966
H.10	Supply and installation of RCC conduit /pipe 150mm dia for carrying 11 KV cables from 11 kV switchgear structures including culverts under the road complete in all respects as per specification and Drawings.	Meter	100	75,600
H.11	Connstruction of Open R.C.C vehicle parking area near building including 3m wide R,C,C path from approach road to the building and drainage system complete in all respects as per specification and Drawings.	Sq.m	175	637,525
H.12	Providing fencing around switchyard area complete in all respects as per Drawings specification.	Lim	450	4,453,650
H.12-a	Supply and Construction of boundary wall around the Grid Station area.	Lim		-
H.13	Providng main gate in the switchyard complete ub akk respects as per Drawings & specification	Each	2	343,652
H.14	Construction of guard cabin on switch yard entrance road complete in all respects as approved by the Engineer.	Each	1	54,984
	Total H			54,027,749

Full Name: _____

Signature: _____

Title: _____

Signature

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