HEC INFRA PROJECTS LIMITED
ENGINEERING CONSULTANTS & CONTRACTORS
Sigma-1 Corporates, Corporate House No. 6, Sindhu Bhavan Road, Nr. Mann Party Plot Cross Road,
Bodakdev, Ahmedabad - 380 054. Gujarat, India. Telefax : +91 - 79 - 4008 6771-74.
E-mail : elect@hecproject.com, Web. : www.hecprojects.in, CIN : L45200GJ2005PLC046870

Date: August 14,2023

To,
National Stock Exchange of India Limited
Exchange Plaza,
Plot no. C/1, G Block,
Bandra-Kurla Complex, Bandra (E)
Mumbai - 400 051
Symbol: HECPROJECT
Series: EQ

Dear Sir /Madam,

Sub: Intimation regarding the Work Order

With regard to the above captioned subject matter, we would like to inform that we have received a work order from **HARYANA VIDYUT PRASARAN NIGAM LTD** aggregating to **Rs. 222500000/-(Twenty Two crore twenty five lakhs)** for Supply, erection, Civil, dismantling, testing and commissioning for Construction of 66 kV GIS Substation at Sector 10 Gurugram with 4 No. 25/31.5 MVA, 66/11 KV Power transformer (to be provided by HVPNL) on Turnkey basis to be executed within the period of 15 months.

Recently we have received construction clearance from **HARYANA VIDYUT PRASARAN NIGAM LTD** and the same is under process.

You are requested to take the above on your record.

Thanking You,

FOR, HEC INFRA PROJECTS LIMITED
FOR, HEC INFRA PROJECTS LIMITED
Khushi Bhatt
COMPANY SECRETARY
Company Secretary

M.No.:A51011

Encl: As above

HARYANA VIDYUT PRASARAN NIGAM LTD.

(A Govt. of Haryana undertaking)

Regd. Office : Shakti Bhawan, Sector-6, Panchkula

Corporate Identity Number: U40101HR1997SGC033683

Office of Chief Engineer/PD&C, HVPNL, Panchkula

Website :**www.hvpn.org.in** E-mail : **cepdc@hvpn.org.in**

Tel. No.: **0172-2583724/2583745/2584338,**

To

M/s HEC Infra Projects Limited
Sigma-1, Corporates House No. 6,
Sindhu Bhavan Road, Bodakdev, Ahmedabad

Email:elect@hecprojects.com

P.O No. HDP-39 / PD&C/EPC-D-40 / PD&C / XEN / (WB) **Dated: 08.09.2022**

Sub: **PO for Supply, erection, Civil, dismantling, testing and commissioning for Construction of 66 kV GIS S/Stn Sector-10A Gurugram with 4 No. 25/31.5 MVA, 66/11 KV Power transformer (to be provided by HVPNL) on Turnkey basis against tender enquiry no. EPC-D-40/PD&C (NIT NO. 40/PD&C DATED 10.03.2022).**

This is to notify that your online offer/bid No. HIPL/TENDER/DP/HVPNL/2022 dated 25.04.2022, further clarifications vide letter no. HIPL/TENDER/DP/HVPNL/2022 dated 20.06.2022, negotiation letter dated 27.08.2022 and up to date correspondences exchanged on the subject for construction of 66kV GIS Substation Sector-10A, Gurugram on turnkey basis against tender enquiry no. EPC-D-40/PD&C has been accepted and thus a contract has come into force thereof.

WORK SCHEDULE :-

You shall include in proposal programme for furnishing and erecting the equipment covered under the contract. The programme shall be in the form of master network identifying key phases in various areas of the total work like design, procurement, manufacture and field activities such that the 66 kV GIS substation as covered under scope in clause 1.0 ITB of this volume shall be erected tested and commissioned within **15 months** of signing of contract. The contract agreement will be signed within 30 days of issue of Purchase Order (PO). In case there is delay in signing of contract, the contractual completion period will be counted from the 30th day of issue of Purchase Order (PO), irrespective of the reason of delay in signing of the contract.

PRICES:

The prices are net firm in Indian Rupees only except for prices of supply of Power Transformers, Tower structure , Battery and XLPE Power Cable which shall be variable as per IEEMA formula with base date 30 days prior to opening of tender.

The Price variation as per the latest relevant IEEMA circular will be applicable for various sizes of XLPE Power Cables manufactured in India only. No Price variation will be applicable for XLPE power cables manufactured/supplied from abroad. No price variation will be applicable for control cables being lot item.

PRICE SCHEDULE:

The details of material ordered and their prices are given as follows:-

PRICE SCHEDULE

Sr. No.	Item Description	Quantity	Units	(Supply) Unit Price (including Ex-works price, F&I and all other taxes, duties, levies/cess excluding GST)(INR)	(Supply) Sub-total Price (including Ex-works price, F&I and all other taxes, duties, levies/cess excluding GST)(INR)	(Erection) Unit Price (including Ex-works price, F&I and all other taxes, duties, levies/cess excluding GST)(INR)	(Erection) Sub-total Price (including Ex-works price, F&I and all other taxes, duties, levies/cess excluding GST)(INR)	(Civil) Unit price (including Ex-works price, F&I and all other taxes, duties, levies/cess excluding GST) (INR)	(Civil) Sub-total price (including Ex-works price, F&I and all other taxes, duties, levies/cess excluding GST) (INR)	Total Price Supply , Erection and Civil (INR)	Gross total including GST= Total price x 1.18 (INR) prevailing rate of GST on work contract=18%
1	The 72.5kV SF6 Gas Insulated Switchgear for three phase system shall have double bus bar arrangement with 10 bays (4 No. 25/31.5MVA Transformer, 1 No. bus-coupler and 5 nos. feeder bays. provision shall be kept in GIS hall/GIS for adding future bays and jointing plugs required for connecting GIS of different makes. The SF6 Gas Insulated Switchgear rated for 66kV, 3-phase, 50Hz, 31.5kA fault level shall be of the indoor metal-enclosed type, comprising of following items. **72.5kV, 1250A, single 3 – □ or three 1 –□, SF6 gas insulated, metal enclosed bus bars arrangement, consisting of 1250A single 3 – □ or three 1 –□ SF6 gas insulated switchgears, each Bus Bar comprising of :** **i.** Bus bar enclosures running through the length of the switchgear to interconnect each of the circuit breaker bay modules in double main bus system. ii. Three, 2-core, single phase or single 3 – fvoltage transformers/ PTs. iii. 1250A, One 3 – f or three 1 – f, single pole, group operated isolator/disconnector and one, 3 – f or three 1 – f, single pole, group operated earthing switch with manual and motor driven operating mechanisms. iv. 1250A, One high speed fault make 3 – f or three 1 – f, single pole, group operated earthing switches, complete with manual and motor driven operating mechanisms. v.Each GIS compartment with gas monitoring device, pressure switch etc. as required. vi. Terminal boxes/ Local Control Cubicle. vii. Interconnecting wiring/ piping. viii. Grounding, support structures and platforms.	2	Set	2169131.74	4338263.48	206662.55	413325.10	0.00	0.00	4751588.58	5606874.52
2	72.5kV, 800A, single 3 – □ or three 1 –□, Bus coupler bay module, consisting of 800A single 3 – □ or three 1 –□ SF6 gas insulated switchgears, comprising of: i. 800A, One 3 – f or three 1 –f, SF6 gas insulated circuit breaker, complete with operating mechanism. ii. Three,3-core,single phase current transformers(600-300-150/1-1-1A). iii Two sets of isolator/disconnector switches each of 800A, One 3 – □ or three 1 – □, single pole, group operated isolator/disconnector switches each with 3 – □ or three 1 – □, single pole, group operated earthing switch and complete with manual and motor driven operating mechanisms. iv. Each GIS compartment with gas monitoring device, pressure switch etc. as required. v. Terminal boxes/ Local Control Cubicle. vi. Interconnecting wiring/ piping. vii Grounding, support structures and platforms.	1	Set	4338263.48	4338263.48	711836.55	711836.55	0.00	0.00	5050100.02	5959118.03

3	72.5kV, 800A, single 3 – □ or three 1 –□, Transmission line feeder circuit breaker bay modules, consisting of 800A single 3 – □ or three 1 –□ SF6 gas insulated switchgears, each comprising of:- i. 800A, One 3 – f or three 1 –f, SF6 gas insulated circuit breaker, complete with operating mechanism for outgoing feeder. ii.Three, 66kV LAs and Voltage detectors /sensors. iii.Three, 3-core, single phase current transformers (600-300-150/1-1-1A). iv. 800A, One 3 – f or three 1 – f, single pole, group operated isolator/disconnector without earthing switch, complete with manual and motor driven operating mechanisms. v. 800A, One 3 – f or three 1 – f, single pole, group operated isolator/disconnector with one, 3 – f or three 1 – f, single pole, group operated earthing switch, complete with manual and motor driven operating mechanisms. vi. 800A, One 3 – f or three 1 – f, single pole, group operated isolator/disconnector with one normal and one high speed fault make 3 – f or three 1 – f, single pole, group operated earthing switches, complete with manual and motor driven operating mechanisms. vii. Each GIS compartment with gas monitoring device, pressure switch etc. as required. viii Terminal boxes/ Local Control Cubicle. ix. interconnecting wiring/piping. x. Grounding support structures and platforms.	5	Set	6373474.96	31867374.79	711836.55	3559182.73	0.00	0.00	35426557.52	41803337.87
4	72.5kV, 400A, single 3 – □ or three 1 –□, Transformer feeder circuit breaker bay modules, consisting of 400A single 3 – □ or three 1 –□ SF6 gas insulated switchgears, for 66/11kV transformer, each comprising of: - i. One 3 – f or three 1 – f, SF6 gas insulated circuit breaker, complete with operating mechanism for incomer bay from 66/11kV transformer. ii. Three, 3-core, single phase current transformers (300-150/1-1-1A). iii. 400A, One 3 – f or three 1 – f, single pole, group operated isolator/disconnector without earthing switch, complete with manual and motor driven operating mechanisms. iv. 400A, One 3 – f or three 1 – f, single pole, group operated isolator/disconnector with one, 3 – f or three 1 – f, single pole, group operated earthing switch, complete with manual and motor driven operating mechanisms. v. 400A, One 3 – f or three 1 – f, single pole, group operated isolator/disconnector with two earthing switches each comprising of one 3 – f or three 1 – f, single pole, group operated earthing switches complete with manual and motor driven operating mechanisms. vi. Each GIS compartment with gas monitoring device, pressure switch etc. as required. vii Local Control Cubicle. viii Interconnecting wiring/piping. ix. Grounding, support structures and platforms.	4	SET	5962283.35	23849133.41	711836.55	2847346.19	0.00	0.00	26696479.59	31501845.92
5	a.) 66kV XLPE copper Cable 1XC (400mm2) along with one no. spare cable coated with fire retardant Paint for connecting 66kV side of 66/11kV transformer with GIS with termination kit for both side	640	Mtr	6304.72	4035020.04	87.48	55984.65	0.00	0.00	4091004.69	4827385.53
6	b). O/D Termination kit for 66kV XLPE copper Cable 1XC (400mm2).	16	Nos	51870.52	829928.25	7347.99	117567.77	0.00	0.00	947496.02	1118045.30
7	c) I/D Termination kit for 66kV XLPE copper Cable 1XC (400mm2).	16	Nos	49040.90	784654.35	7347.99	117567.77	0.00	0.00	902222.11	1064622.09

8	25/31.5 MVA, 66/11 kV Power T/F **(To be supplied by HVPNL)**	4	No.	0.00	0.00	367399.27	1469597.08	0.00	0.00	1469597.08	1734124.56
9	220V 100 AH Battery	1	Set	249921.74	249921.74	22962.91	22962.91	0.00	0.00	272884.66	322003.90
10	48V , 120AH Battery & Battery charger	1	Set	245206.32	245206.32	22962.91	22962.91	0.00	0.00	268169.24	316439.70
11	66 kV Surge Arrestor (for new T/F bays /Plinths)	12	No.	24520.91	294250.90	3673.99	44087.91	0.00	0.00	338338.82	399239.80
12	11 kV Surge Arrestor	12	No.	4229.24	50750.82	459.48	5513.75	0.00	0.00	56264.57	66392.20
13	66 kV NCT For 66/11 kV T/F (300-200-150/1A) **(To be supplied by HVPN)**	4	No.	0.00	0.00	4592.95	18371.81	0.00	0.00	18371.81	21678.73
14	11 kV NCT For 66/11 kV T/F(1800-900/5A) **(To be supplied by HVPN)**	4	No.	0.00	0.00	1377.52	5510.07	0.00	0.00	5510.07	6501.88
15	66kV MK **(To be supplied by HVPN)**	4	No.	0.00	0.00	4592.95	18371.81	0.00	0.00	18371.81	21678.73
16	**66kV C&R Panels:** a) Line Protection & Circuit breaker Panel (without auto reclose)	5	Set	509745.77	2548728.85	41332.88	206664.39	0.00	0.00	2755393.24	3251364.02
17	b) T/F Protection & Circuit breaker Panel (without auto reclose)	4	Set	585665.74	2342662.98	50517.86	202071.44	0.00	0.00	2544734.42	3002786.61
18	c) Bus Coupler Protection & Circuit breaker Panel (without auto reclose)	1	Set	266802.77	266802.77	22962.91	22962.91	0.00	0.00	289765.69	341923.51
19	Time synchronization equipment	1	No.	141465.29	141465.29	16532.97	16532.97	0.00	0.00	157998.26	186437.95
20	11 kV 15 Panel Board (2000A) with one SEM on each T/F I/C Panel (including one no. bus sectionalizer panel)	4	Set	5089066.44	20356265.78	137774.73	551098.91	0.00	0.00	20907364.68	24670690.33
21	11 kV Power Cable XLPE 1C x1000mm2 coated with fire retardant paint for T/F to 11kV incomer with termination kit for both ends (4 runs per phase for each transformer allocating them 2 runs per phase for each 11kV I/C)	2400	mtr.	1674.01	4017635.33	92.08	220992.04	0.00	0.00	4238627.37	5001580.30
22	11 kV Power Cable XLPE 3C x 400sq mm coated with fire retardant Paint for Capacitor Bank with termination kit for both ends(2 runs)	480	mtr.	2296.48	1102308.31	138.12	66297.61	0.00	0.00	1168605.92	1378954.99
23	11 kV Power Cable XLPE 3C x 50 sq mm coated with fire retardant Paint for station T/F with termination kit for both ends	100	mtr.	905.15	90514.66	69.06	6906.00	0.00	0.00	97420.66	114956.38
24	6.804 MVAR 11 kV rating Capacitor Bank with 11 kV L&E Switch, RVTs and 11KV LA, reactor etc. as per technical specification.	4	Set	1744736.78	6978947.11	45924.91	183699.64	0.00	0.00	7162646.75	8451923.16
25	220V 100 AH Battery charger	1	Set	249921.74	249921.74	22962.91	22962.91	0.00	0.00	272884.66	322003.90
26	220V 100AH D.C.D.B.	1	Set	117887.28	117887.28	13777.93	13777.93	0.00	0.00	131665.22	155364.96
27	415V LT AC Distribution Board 300A	1	No.	282930.59	282930.59	3214.51	3214.51	0.00	0.00	286145.10	337651.22
28	11/0.4 kV Station T/F 200 KVA	1	No.	297076.84	297076.84	9184.98	9184.98	0.00	0.00	306261.82	361388.95
29	EOT-Crane as per clause1.10.7 Section-1 and Clause 24.0 of GIS Specification	1	No.	1603271.48	1603271.48	91849.82	91849.82	0.00	0.00	1695121.30	2000243.14
30	Mechnical operated crane as per clause 2.9. section-1	1	No.	328035.06	328035.06	9208.00	9208.00	0.00	0.00	337243.06	397946.82

31	1.1 kV Copper Control Cable armoured (FRLS) for 66kV bays & 11kV side of sizes 7CX4mm2, 2CX4mm2, 4CX4mm2, 2CX6mm2, 16CX2.5mm2, 10CX2.5mm2, 7CX2.5mm2, 3CX2.5mm2 etc. including junction box (as per Section-6 of copper control cable specification and Section-7 of Switchyard Erection).	1	Lot	1202453.61	1202453.61	183699.64	183699.64	0.00	0.00	1386153.25	1635660.83
32	650/1100 Volts 3.5 core 240 mm2 aluminium power cable (FRLS) from Aux. T/F to ACDB	1	Lot	188620.39	188620.39	9184.98	9184.98	0.00	0.00	197805.37	233410.34
33	650/1100 Volt 3.5 core 70 mm2 aluminium cable (FRLS) for oil filtration set.	1	Lot	94310.20	94310.20	13777.93	13777.93	0.00	0.00	108088.13	127543.99
34	650/1100 Volt 4 core 16 mm2 armoured (FRLS) copper power cable for MLDB etc and other cable required as per contract for 66kV bays.	1	Lot	471550.06	471550.06	45924.91	45924.91	0.00	0.00	517474.97	610620.46
35	Grounding system of the substation. Earthing Mat Material. The earth mat will be designed/quoted for soil resistivity of 50□m. In case soil resistivity is more than 50□m then the earth mat will be designed for actual soil resistivity. The payment of extra material to be used for earth mat shall be made on pro rata basis. The approximate area of earth mat to be laid is given in the corresponding columns of the substations. However, item will remain a Lot item. **(850 meter2 (approx))**	1	Lot	1791891.88	1791891.88	229624.54	229624.54	0.00	0.00	2021516.42	2385389.38
36	**Computer system :** a) Computer system (SFF) with intel core i5 9th generation processor 8 GB RAM, 1 TB HDD, 19.5" Display with UPS	1	No.	94310.20	94310.20	4592.95	4592.95	0.00	0.00	98903.15	116705.71
37	b) Mono chrome multifunctional printer, A-4, 25PPM, wi-fi	1	No.	16032.97	16032.97	918.96	918.96	0.00	0.00	16951.93	20003.28
38	**Fire Fighting equipments as per section-6** i) 22.5 Kg Capacity FE CO2 type, Trolley Mounted	8	No	16975.87	135806.98	87.48	699.81	0.00	0.00	136506.78	161078.01
39	ii) 25 Kg Capacity FE DCP type, Trolley Mounted	8	No	7545.04	60360.29	87.48	699.81	0.00	0.00	61060.10	72050.92
40	iii) DCP 9 Kg Capacity, Wall mounted	8	No	3301.07	26408.55	87.48	699.81	0.00	0.00	27108.36	31987.86
41	iv) FE CO2 6.5 Kg Capacity, Wall mounted	4	No	6602.14	26408.55	87.48	349.90	0.00	0.00	26758.45	31574.97
42	v) DCP 6 Kg Capacity, Wall mounted	4	No	2829.62	11318.48	87.48	349.90	0.00	0.00	11668.38	13768.69
43	vi) Foam Type 9 Litre Capacity, Wall mounted	2	No	1697.96	3395.91	87.48	174.95	0.00	0.00	3570.86	4213.62
44	vii) Water CO2 9 Litre, Wall mounted	2	No	1509.19	3018.38	87.48	174.95	0.00	0.00	3193.34	3768.14
45	viii) Fire Buckets (12 No.s with stand in one set)	4	Set	2829.62	11318.48	87.48	349.90	0.00	0.00	11668.38	13768.69
46	**Complete lightning of control room building, switch yard area, road and street as per section-7 of the specification.** Supply and installation of 2 fittings of 240W LED lamps with all accessories for Complete lighting of outdoor Switch yard area as per clause 16.0 of section 7 of the specifications.	14	No.	18861.67	264063.39	2296.48	32150.66	0.00	0.00	296214.05	349532.58
47	Supply and installation of 35W LED tube on tubular steel poles along with the boundary wall at a distance of 30 meter as per as per clause 16.0 of section 7 of the specification	8	No.	22634.19	181073.51	3214.51	25716.11	0.00	0.00	206789.62	244011.75

48	Complete lighting of road and street by providing 90W LED lamps on tubular steel poles at a distance of 15meter along the roads and streets as per as per clause 16.0 of section 7 of the specification.	4	No.	30179.23	120716.90	4133.47	16533.89	0.00	0.00	137250.79	161955.93
49	Supply and installation of post top lantern 40W LED Lamps with all complete accessories at the entrance gate of sub-station.	2	No.	7167.51	14335.02	688.76	1377.52	0.00	0.00	15712.53	18540.79
50	Supply and installation of 40W LED Lamps with all complete accessories on corners of control room building.	4	No.	2263.33	9053.31	459.48	1837.92	0.00	0.00	10891.22	12851.64
51	High wall type split AC unit of 2 Ton capacity for computer room and specifically C&R Panel room (as per technical specification)	3	No.	61301.35	183904.05	5051.51	15154.53	0.00	0.00	199058.58	234889.13
52	Complete Substation automation system of 66/11kV substations including hardware (along with transducers) for 10 No. 66kV present bays along with associated equipment for the bays (bay as defined in the technical specification, sec-sub-station automation system) as per technical specification.	1	Lot	3772403.22	3772403.22	367399.27	367399.27	0.00	0.00	4139802.49	4884966.94
53	Testing of IUM System at NABL accredited lab	1	Lot	920.80	920.80	459249.09	459249.09	0.00	0.00	460169.89	543000.47
54	66 kV bolted type single suspension string assembly with 6 numbers ANTI FOG type disc insulators (E&M strength 9000 kg) per string with all hardware accessories including ball & socket connections and suspension clamp set suitable for single zebra conductor. Alternatively the bidder may quote silicon polymer composite insulator string in place of Disc Insulators (type of insulator whether disc or polymer insulator to be identified at the time of bidding and quoted accordingly which will not be altered at later stage by the bidder).	12	No.	11317.55	135810.66	1102.20	13226.37	0.00	0.00	149037.03	175863.70
55	Bolted type 11kV Single tension string assembly with 3 numbers Anti FOG type disc insulators (E&M strength 9000 kg) per string with all hardware accessories including ball & socket connections and tension clamp sets suitable for Twin tarantulla Conductor. Alternatively the bidder may quote silicon polymer composite insulator string in place of Disc Insulators (type of insulator whether disc or polymer insulator to be identified at the time of bidding and quoted accordingly which will not be altered at later stage by the bidder).	24	No.	6602.14	158451.29	413.44	9922.54	0.00	0.00	168373.84	198681.13
56	Boltless C-Type Wedge connectors matching with conductor size.	1	Lot	254637.16	254637.16	27554.95	27554.95	0.00	0.00	282192.11	332986.68
57	Spacers suitable for Twin Tarantulla conductor	1	Lot	33008.84	33008.84	4592.95	4592.95	0.00	0.00	37601.80	44370.12
58	Copper lugs glands, PVC ferrules for control cabling.	1	L/S	51870.52	51870.52	4592.95	4592.95	0.00	0.00	56463.47	66626.89
59	Fibre cleats, Aluminium clamps, bolts, nuts, washers etc for fixing control cables in trenches	1	L/S	47155.10	47155.10	3673.99	3673.99	0.00	0.00	50829.09	59978.33
60	Galvanized iron perforated tray with side coupler plate bolts, nuts, washers and clamps etc. of size 75x25x2 mm, 150x25x2mm, 100x25x2mm etc. & G.I. Conduits of 50mm/100mm dia from equipment to main trench as per Section-7, Switchyard erection.	1	L/S	282930.59	282930.59	68887.82	68887.82	0.00	0.00	351818.41	415145.72
61	Painted lattice type steel trays of adequate size as per site requirement for laying control and power cables from panels to GIS & Transformers and for 11kV Outgoing cables & other cables identified as per site requirement confirming to Section-7 & 9.	1	L/S	235775.49	235775.49	45924.91	45924.91	0.00	0.00	281700.40	332406.47

62	Twin Tarantulla Conductor (approx.)	500	Mtr.	377.53	188764.04	55.25	27624.01	0.00	0.00	216388.04	255337.89
63	Single Zebra Conductor (approx.)	200	Mtr	282.69	56537.13	36.83	7366.40	0.00	0.00	63903.53	75406.17
64	7/3.15 Earthwire	1	Lot	47155.10	47155.10	2021.16	2021.16	0.00	0.00	49176.25	58027.98
65	U-bolt 20mm dia	1	Lot	16975.87	16975.87	551.56	551.56	0.00	0.00	17527.43	20682.37
66	Lattice type steel structure for 66kV GIS S/Stn. Sector 10 A, Gurugram. Supply of material, preparation of fabrication drawing, galvanizing and delivery of lattice type steel structure for tower and beams for 66/11kV switchyard fabricated from steel conforming to IS:2062 including nuts-bolts gusset plates foundation bolts and other accessories as per drawings supplied by the owner. **Main S/Stn. Tower and beam** **i)** Tower type CT-4 (HW/ST-5199)	5	No.	113171.87	565859.33	6429.95	32149.74	0.00	0.00	598009.07	705650.70
67	ii) Beam type CB-6 (HW/ST-10)	4	No.	37724.26	150897.05	4592.95	18371.81	0.00	0.00	169268.85	199737.25
68	iii) Tower type DT-2 (HW/ST-5210)	4	No.	67903.49	271613.95	4592.95	18371.81	0.00	0.00	289985.76	342183.19
69	iv) Tower type DT-3 (HW/ST-5211)	4	No.	49040.90	196163.59	4592.95	18371.81	0.00	0.00	214535.39	253151.76
70	v) Beam type DB-2X (HTD/ST-154)	4	No.	39610.06	158440.24	4592.95	18371.81	0.00	0.00	176812.05	208638.22
71	**Equipment Supporting Structure:** i) 66 kV NCT& 11kV NCT combined structure Drg. No. HTD/ST-149	4	No.	35366.09	141464.37	3673.99	14695.97	0.00	0.00	156160.34	184269.21
72	ii) 66 kV Surge Arrestor Drg. No. HTD/ST-89R	12	No.	20748.39	248980.68	1929.08	23148.92	0.00	0.00	272129.60	321112.93
73	iii) 11 kV NCT Drg. No. HTD/ST-88 (if required)	4	No.	11789.00	47156.02	1377.52	5510.07	0.00	0.00	52666.09	62145.98
74	iv) 66kV Cable structure of galvanized iron along with foundation to be designed by bidder as per site requirement/size of cable. ***cable support structure shall be designed in such way that the spare cable shall be mounted on the y-phase structure with termination kit upto mid.**	12	No.	31122.13	373465.50	3214.51	38574.16	0.00	0.00	412039.66	486206.80
75	**MAINTENANCE EQUIPMENT & SPARES:** **Equipments for maintenance:** i) Portable circuit breaker operation analyzer.	1	Set	188620.39	188620.39	0.00	0.00	0.00	0.00	188620.39	222572.06
76	ii) Digital Micro-Ohm meter for contact resistance measurement Ranges: (0-100 ohm) (0-1 milliohm) (0-10 milliohm).	1	set	306507.68	306507.68	0.00	0.00	0.00	0.00	306507.68	361679.06
77	iii) Dew Point meter	1	Set	113171.87	113171.87	0.00	0.00	0.00	0.00	113171.87	133542.80
78	iv) Portable partial discharge monitoring system for GIS.	1	Set	377240.78	377240.78	0.00	0.00	0.00	0.00	377240.78	445144.12
79	v) SF-6 Gas filling and evacuating plant	1	Set	188620.39	188620.39	0.00	0.00	0.00	0.00	188620.39	222572.06
80	vi) SF-6 Gas leak detector **(Portable)**	1	Set	61301.35	61301.35	0.00	0.00	0.00	0.00	61301.35	72335.59

81	vii) Tools for gas handling	1	Set	6602.14	6602.14	0.00	0.00	0.00	0.00	6602.14	7790.52
82	viii) LT DC Leakage detector from control cabinets and LT cables	1	No.	28293.43	28293.43	0.00	0.00	0.00	0.00	28293.43	33386.24
83	**Common Spares, Maintenance and Testing Tools (66 KV)** i) SF6 Gas pressure relief devices	3	Nos.	9430.84	28292.51	0.00	0.00	0.00	0.00	28292.51	33385.16
84	ii) Pressure gauges (of each type) along with coupling device	1	Set	23577.09	23577.09	0.00	0.00	0.00	0.00	23577.09	27820.96
85	iii) Rubber Gaskets, " o" Rings and seals for SF6 Gas **(each type)**	1	Set	14146.25	14146.25	0.00	0.00	0.00	0.00	14146.25	16692.58
86	iv) Molecular filter for SF6 Gas with filter bags **(20% of total weight)**	1	Set	4715.42	4715.42	0.00	0.00	0.00	0.00	4715.42	5564.19
87	v) Density Monitors for SF6 Gas **(Each type)**	1	No.	2829.62	2829.62	0.00	0.00	0.00	0.00	2829.62	3338.95
88	vi) All types of Control Valves for SF6 Gas **(Each type)**	1	Set	3772.52	3772.52	0.00	0.00	0.00	0.00	3772.52	4451.57
89	vii) SF6 Gas of total gas requirement **(20%)**	1	Set	136749.88	136749.88	0.00	0.00	0.00	0.00	136749.88	161364.85
90	viii) Enclosures, Insulators & main circuit to replace on each phase, any compartment of Busbar or bay **(each type)**	1	Set	84879.36	84879.36	0.00	0.00	0.00	0.00	84879.36	100157.65
91	ix) a. Covers with all accessories necessary to close a compartment in case of dismantling of any part of the enclosure to ensure the sealing of this compartment (as applicable) a) For 3 Phase Enclosure	2	Nos.	7545.04	15090.07	0.00	0.00	0.00	0.00	15090.07	17806.29
92	b) For Single phase enclosure	3	Nos.	6602.14	19806.41	0.00	0.00	0.00	0.00	19806.41	23371.57
93	x) Locking device to keep the Disconnectors (Isolators) and Earthing switches in close or open position in case of removal of the driving Mechanism	1	Set	27349.61	27349.61	0.00	0.00	0.00	0.00	27349.61	32272.54
94	xi) Bus Support insulator of each type for 3 phase/single phase enclosure **(5% of total population)**	1	Set	94310.20	94310.20	0.00	0.00	0.00	0.00	94310.20	111286.03
95	xii) Pipe length (Copper or Steel as applicable) for SF6 Circuit of each type	1	Set	3772.52	3772.52	0.00	0.00	0.00	0.00	3772.52	4451.57
96	xiii) SF6 to air bushing (66 KV of each type & rating) **(each)**	1	No.	249921.74	249921.74	0.00	0.00	0.00	0.00	249921.74	294907.66
97	**CIRCUIT BREAKERS (66 KV)** i) Complete Circuit Breaker pole of each type & rating complete with interrupter, main circuit, enclosure and Marshalling Box with operating mechanism	3	Nos	396102.45	1188307.36	0.00	0.00	0.00	0.00	1188307.36	1402202.69
98	ii) Fixed, moving and arcing contacts including insulating nozzles, **(3 Nos. of each type)**	1	Set	94310.20	94310.20	0.00	0.00	0.00	0.00	94310.20	111286.03
99	iii) Rubber gaskets, `O' rings and seals for SF6 gas of each type	1	Set	33008.84	33008.84	0.00	0.00	0.00	0.00	33008.84	38950.44
100	iv) Trip coil assembly with resistor as applicable, 3 Nos. of each type	2	Sets	14146.25	28292.51	0.00	0.00	0.00	0.00	28292.51	33385.16
101	v) Closing coil assembly with resistor as applicable, 3 Nos. of each type	2	Set	11317.55	22635.11	0.00	0.00	0.00	0.00	22635.11	26709.43
102	vi) Molecular filter for SF6 gas with filter bags **(10% of total quantity used)**	1	Set	37724.26	37724.26	0.00	0.00	0.00	0.00	37724.26	44514.63
103	vii) SF6 Pressure gauge cum switch OR Density monitors and pressure switch as applicable, 3 Nos. of each type	1	Set	42439.68	42439.68	0.00	0.00	0.00	0.00	42439.68	50078.82

104	viii) Coupling device for pressure gauge cum switch/ for connecting Gas handling plant, 3 Nos. of each type	1	Set	11789.00	11789.00	0.00	0.00	0.00	0.00	11789.00	13911.03
105	ix) Corona rings if applicable	1	Set	3772.52	3772.52	0.00	0.00	0.00	0.00	3772.52	4451.57
106	x) Relays, Power contactors, push buttons, timers & MCBs etc of each type & rating	1	Set	5658.32	5658.32	0.00	0.00	0.00	0.00	5658.32	6676.81
107	xi) Closing assembly/ valve, 3 Nos. of each type Set	2	Set	2358.17	4716.34	0.00	0.00	0.00	0.00	4716.34	5565.28
108	xii) Trip assembly/ valve, 3 Nos. of each type	2	Set	1885.80	3771.60	0.00	0.00	0.00	0.00	3771.60	4450.49
109	xiii) Auxiliary switch assembly, 3 Nos. of each type	1	Set	11317.55	11317.55	0.00	0.00	0.00	0.00	11317.55	13354.71
110	xiv) Operation Counter, 3 Nos. of each type	1	Set	5658.32	5658.32	0.00	0.00	0.00	0.00	5658.32	6676.81
111	xv) Rupture disc, 3 Nos. of each type	1	Set	35837.54	35837.54	0.00	0.00	0.00	0.00	35837.54	42288.30
112	xvi) Windo scope/ Observing window, 3 Nos. of each type, if applicable	1	Set	14146.25	14146.25	0.00	0.00	0.00	0.00	14146.25	16692.58
113	xvii) Spring operated closing mechanism, 1 No. of each type, if applicable	1	Set	282930.59	282930.59	0.00	0.00	0.00	0.00	282930.59	333858.09
114	xviii) Terminal Pad & connectors	1	Set	11317.55	11317.55	0.00	0.00	0.00	0.00	11317.55	13354.71
115	**Isolators, E/Switch & High Speed E/Switch (66 KV)** i) Complete set of 3 nos. of single phase / one no. of 3-phase dis-connector including main circuit, enclosure, driving mechanism.	1	Set	259352.58	259352.58	0.00	0.00	0.00	0.00	259352.58	306036.04
116	ii.) 3 nos. of single phase / one no. of 3-phase Earthing switch including main circuit, enclosure, driving mechanism.	1	Set	7073.59	7073.59	0.00	0.00	0.00	0.00	7073.59	8346.83
117	ii.) Copper contact fingers for dis-connector male & female contact – for one complete (3 phase) dis-connector of each type and rating.	1	Set	28293.43	28293.43	0.00	0.00	0.00	0.00	28293.43	33386.24
118	iv). Copper contact fingers for earthing switch male & female contacts, for one complete (3 phase) earthing switch of each type and rating	1	Set	37724.26	37724.26	0.00	0.00	0.00	0.00	37724.26	44514.63
119	v). Open / Close contactor assembly, timers, key interlock for one complete (3 phase) dis-connector and (3 phase) earthing switch of each type and rating	1	Set	9430.84	9430.84	0.00	0.00	0.00	0.00	9430.84	11128.39
120	vi). Push button switch.-each type, as applicable	1	Set	6580.96	6580.96	0.00	0.00	0.00	0.00	6580.96	7765.53
121	vii Limit switch and Aux. Switches for complete 3 phase equipment a) For isolator	3	Sets	6602.14	19806.41	0.00	0.00	0.00	0.00	19806.41	23371.57
122	b) For earth switch	1	Set	113171.87	113171.87	0.00	0.00	0.00	0.00	113171.87	133542.80
123	viii) Rotor housing bearing assembly for complete 3 phase equipment a) For isolator	2	Sets	5658.32	11316.63	0.00	0.00	0.00	0.00	11316.63	13353.63
124	b) For earth switch	1	Set	942.90	942.90	0.00	0.00	0.00	0.00	942.90	1112.62
125	**ix) Motor with gear assembly for complete 3 phase equipment** a) For isolator	3	Sets	13203.35	39610.06	0.00	0.00	0.00	0.00	39610.06	46739.87
126	b) For earth switch	1	Set	13203.35	13203.35	0.00	0.00	0.00	0.00	13203.35	15579.96
127	x) Corona shield rings as applicable	1	Set	1885.80	1885.80	0.00	0.00	0.00	0.00	1885.80	2225.24

128	xi) Hinge pins for complete 3 phase equipment a) For isolator	3	Sets	2358.17	7074.51	0.00	0.00	0.00	0.00	7074.51	8347.92
129	b) For earth switch	1	Set	708.10	708.10	0.00	0.00	0.00	0.00	708.10	835.55
130	xii) **Bearings for complete 3 phase equipment** a) For isolator	5	Sets	3677.68	18388.38	0.00	0.00	0.00	0.00	18388.38	21698.29
131	b) For earth switch	1	Set	1885.80	1885.80	0.00	0.00	0.00	0.00	1885.80	2225.24
132	xiii) Interlocking coil with resistors, timers, key interlock for complete 3 phase	1	Set	1885.80	1885.80	0.00	0.00	0.00	0.00	1885.80	2225.24
133	xiv) Relays, Power contactors, resistors, fuses, push buttons & MCBs a)For isolator	3	Sets	11317.55	33952.66	0.00	0.00	0.00	0.00	33952.66	40064.14
134	b) For earth switch	1	Set	11317.55	11317.55	0.00	0.00	0.00	0.00	11317.55	13354.71
135	xv) Terminal pad and connectors (complete for one 3 phase equipment) a) For isolator	2	Sets	8016.49	16032.97	0.00	0.00	0.00	0.00	16032.97	18918.91
136	b) For earth switch	1	Set	4243.97	4243.97	0.00	0.00	0.00	0.00	4243.97	5007.88
137	xvi. Aux. switch assembly (complete) with 10 NO & 10 NC OR more contacts	1	Set	11789.00	11789.00	0.00	0.00	0.00	0.00	11789.00	13911.03
138	xvii) 72.5 kV, 1250 A, 3 – f or 1 –f high speed fault making grounding switch, Internal parts complete with all necessary gaskets mounting hardware etc.	1	Set	136749.88	136749.88	0.00	0.00	0.00	0.00	136749.88	161364.85
139	xviii) 72.5 kV, 1250 A, 3 – f or 1 –f high speed fault making grounding switch operating mechanism complete with all necessary gaskets connecting apparatus.	1	Set	28293.43	28293.43	0.00	0.00	0.00	0.00	28293.43	33386.24
140	**Current Transformer:** i) 66kV 1 ph CT ratio 600-300-150/0.577-1-1A complete with all gaskets and mounting hardware	6	Nos.	80163.94	480983.66	0.00	0.00	0.00	0.00	480983.66	567560.71
141	ii) 66kV 1 ph CT ratio 600-300-150/0.577-1-1A complete with all gaskets and mounting hardware	3	Nos.	80163.94	240491.83	0.00	0.00	0.00	0.00	240491.83	283780.36
142	iii) Secondary Bushing of Each Type (For 66KV CT)	2	sets	11317.55	22635.11	0.00	0.00	0.00	0.00	22635.11	26709.43
143	**Voltage Transformer/PT (66 kV):** i) 66kV, 1-phase VT as per technical specifications complete with all gaskets and mounting hardware.	1	No.	12071.69	12071.69	0.00	0.00	0.00	0.00	12071.69	14244.59
144	**Material to be dismantled (Electrical)** **(Amount of dismantlement at Sr. no. 144 to 174 is inserted in the erection column)** i) 25/31.5 MVA, 66/11 kV Power T/F	4	Nos.	0.00	0.00	87476.02	349904.07	0.00	0.00	349904.07	412886.80
145	ii) 66 kV NCT For 66/11 kV T/F (300-200-150/1A)	4	Nos	0.00	0.00	2449.33	9797.31	0.00	0.00	9797.31	11560.83
146	iii) 11 kV NCT For 66/11 kV T/F(1800-900/5A)	4	Nos.	0.00	0.00	2449.33	9797.31	0.00	0.00	9797.31	11560.83
147	v) 11 kV panel set	4	Nos	0.00	0.00	24493.28	97973.14	0.00	0.00	97973.14	115608.30
148	vi) 11KV XLPE Cable 1000 and 630 sq mm single core	1	Lot	0.00	0.00	24493.28	24493.28	0.00	0.00	24493.28	28902.08
149	vii) Control cables	1	lot	0.00	0.00	34290.60	34290.60	0.00	0.00	34290.60	40462.91

150	viii) ACSR Zebra Conductor	1	Lot	0.00	0.00	14695.97	14695.97	0.00	0.00	14695.97	17341.25
151	ix) 66 kV Sf-6 Breaker	10	Nos.	0.00	0.00	19594.63	195946.28	0.00	0.00	195946.28	231216.61
152	x) 66kV Current Transformer of Line and T/F	30	Nos.	0.00	0.00	2449.33	73479.85	0.00	0.00	73479.85	86706.23
153	xi) 66kV LA	30	Nos.	0.00	0.00	2449.33	73479.85	0.00	0.00	73479.85	86706.23
154	xii) 66 kV CVT	5	Nos.	0.00	0.00	2449.33	12246.64	0.00	0.00	12246.64	14451.04
155	xiii) 66Kv bus isolator and line isolator	25	Nos.	0.00	0.00	7347.99	183699.64	0.00	0.00	183699.64	216765.57
156	xiv) 11 KV capacitor bank set	4	Nos.	0.00	0.00	8747.60	34990.41	0.00	0.00	34990.41	41288.68
157	xv) 11 kV station transformer	1	No.	0.00	0.00	17495.20	17495.20	0.00	0.00	17495.20	20644.34
158	xvi) 66 Kv Control and relay panel	10	Nos.	0.00	0.00	39189.26	391892.56	0.00	0.00	391892.56	462433.22
159	xvii) 220 kv battery set with DCDB and ACDB with charger	1	Set	0.00	0.00	4373.80	4373.80	0.00	0.00	4373.80	5161.08
160	xviii) 66 kv M.K	10	Nos.	0.00	0.00	2186.90	21869.00	0.00	0.00	21869.00	25805.42
161	**xix) SUB-STATION STRUCTURE** a) CT-4	14	Nos.	0.00	0.00	6858.12	96013.68	0.00	0.00	96013.68	113296.14
162	b) CT-5	15	Nos.	0.00	0.00	6858.12	102871.80	0.00	0.00	102871.80	121388.72
163	c) CB-6	21	Nos.	0.00	0.00	6858.12	144020.51	0.00	0.00	144020.51	169944.21
164	d) CT-6	4	Nos.	0.00	0.00	6858.12	27432.48	0.00	0.00	27432.48	32370.33
165	e) CT-8	8	Nos.	0.00	0.00	6858.12	54864.96	0.00	0.00	54864.96	64740.65
166	f) CB-7	8	Nos.	0.00	0.00	6858.12	54864.96	0.00	0.00	54864.96	64740.65
167	g) 66 Kv CVT	5	Nos.	0.00	0.00	3918.93	19594.63	0.00	0.00	19594.63	23121.66
168	h) 66 Kv isolator and L&E	25	Nos.	0.00	0.00	3918.93	97973.14	0.00	0.00	97973.14	115608.30
169	i) 66 KV NCT	4	Nos.	0.00	0.00	3918.93	15675.70	0.00	0.00	15675.70	18497.33
170	j) 11 KV NCT	4	Nos.	0.00	0.00	3918.93	15675.70	0.00	0.00	15675.70	18497.33
171	k) DT-2	4	Nos.	0.00	0.00	3918.93	15675.70	0.00	0.00	15675.70	18497.33
172	l) DT-3	4	Nos.	0.00	0.00	3918.93	15675.70	0.00	0.00	15675.70	18497.33
173	m) DB2X	4	Nos.	0.00	0.00	3918.93	15675.70	0.00	0.00	15675.70	18497.33
174	n) 11 KV Capacitor bank set	4	Nos.	0.00	0.00	9797.31	39189.26	0.00	0.00	39189.26	46243.32
175	**Civil Portion: EARTH WORK IN FILLING:** Earth filling with good earth (as per satisfaction of Executive Engineer/Civil Works Division), laying in layers (as per specification), dressing, including carriage, irrespective of lead, loading, unloading, watering and compaction in layers with roller including compensation of earth complete in all respect.	7000	Cum	0.00	0.00	0.00	0.00	349.90	2449328.47	2449328.47	2890207.59

176	**FOUNDATIONS:** **Supply of labour, T&P, material and construction of RCC footings & pedestals etc. for steel gantry and equipment structures complete in all respects as per technical specifications & drawings attached with the tender document including cost of excavation, concreting, cement, reinforcement steel, form work, grouting, holding down bolts, backfilling etc. and other items not mentioned herein but required for the completion of work.** **GANTRY TOWERS** i) CT-4	5	Nos.	0.00	0.00	0.00	0.00	65388.78	326943.91	326943.91	385793.82
177	ii) DT-2	4	Nos.	0.00	0.00	0.00	0.00	65388.78	261555.13	261555.13	308635.06
178	iii) DT-3	4	Nos.	0.00	0.00	0.00	0.00	65388.78	261555.13	261555.13	308635.06
179	**B) 66 kV side** i) 66kV LA	12	Nos.	0.00	0.00	0.00	0.00	65388.78	784665.40	784665.40	925905.17
180	ii) 66kV NCT	4	Nos.	0.00	0.00	0.00	0.00	75448.52	301794.10	301794.10	356117.04
181	**11kV Side** i) 11 kV NCT	4	Nos.	0.00	0.00	0.00	0.00	28167.28	112669.11	112669.11	132949.55
182	**CABLE SUPPORT STRUCTURE:** **Design, Engineering, supply of labour, material and construction of cable support structure foundations including all associated works, RCC, PCC, reinforcement steel, misc. structural steel and other items not mentioned herein but required for the completion of work as per technical specification.** 66kV cable support structure	16	Nos.	0.00	0.00	0.00	0.00	25149.82	402397.04	402397.04	474828.51
183	**ROADS:** **Supply of labour, material and construction of cement concrete roads and walkways/shoulders from NH/SH/etc. to Switch yard/Switch house building as per GELO/CLO as per sectional detail drawing no. HCD/SK-181 R1 and technical specification.** i) 6.0m wide road at main entry gate of substation land until 5.0m or as per site conditions inside main entrance gate(s) leading to switch house building and switchyard.	45	M	0.00	0.00	0.00	0.00	10497.12	472370.49	472370.49	557397.18
184	ii) 5.0m wide road within substation land	100	M	0.00	0.00	0.00	0.00	8747.60	874760.17	874760.17	1032217.00
185	iii) 3.66m wide road within substation land	65	M	0.00	0.00	0.00	0.00	6998.08	454875.29	454875.29	536752.84
186	**CAPACITOR BANK FOUNDATIONS:** **Design, Engg. & supply of labour, material & construction of foundations for following rating capacitor bank with capacitor unit (with allied equipments) & series Reactor etc. including chain link fencing 1.8M height around cap. bank complete in all respect including any other items not specifically mentioned herein but required for completion of job as per technical specification.** 1x6.804 MVAR 11 kV capacitor bank	4	Sets	0.00	0.00	0.00	0.00	260547.78	1042191.11	1042191.11	1229785.50

187	**ROAD CULVERT:** Design, Engineering and const. of Pipe culvert(s) at suitable locations under the approach road (from main PWD/ HUDA/Municipal/Village road to the sub-station entry point) including, cost of labour, material complete in all respects as per I.R.C. Standards.	3	Nos.	0.00	0.00	0.00	0.00	226344.65	679033.96	679033.96	801260.07
188	**TRANSFORMER FOUNDATION:** **Construction of transformer foundation including all associated works, RCC, PCC, reinforcement steel, misc. structural steel and other items not mentioned herein but required for completion of work as per technical specifications & drawing attached. In case extra foundation(s) has/have to be constructed (as per approved T/F drawing) to complete the job, nothing extra would be paid on this account.** 25/31.5 MVA, 66/11kV T/F foundation	4	Nos.	0.00	0.00	0.00	0.00	437380.08	1749520.34	1749520.34	2064434.00
189	**Design, Engg., supply of labour, material and construction of station T/F foundation including all associated works, RCC, PCC, Reinforcement steel, misc. structural steel and other items not mentioned herein but required for the completion of work as per technical specifications and equipment drawing. Such drawing(s) shall, however, be got approved from HVPNL.:** 200KVA 11/0.4kv Station T/F	1	No.	0.00	0.00	0.00	0.00	60358.45	60358.45	60358.45	71222.97
190	**OUTDOOR CABLE TRENCHES:** Supply of labour, material such as cement, reinforcement steel, GI angles, flats, PCC & brick pillars below cable trenches for construction of Out-Door Cable Trenches (ODCT) of required depth/ type with pre-cast RCC covers including associated works like Cable Trench Culverts crossings for roads and sumpit-cum-pump chamber with 2HP motor of reputed make, starter, volt meter, amp-meter etc. as per approved Trench layout plan, HVPNL drgs. & tech. specs. complete in all respect.	1	L/S	0.00	0.00	0.00	0.00	1005974.19	1005974.19	1005974.19	1187049.55
191	**SITE SURFACING:** **i)** Providing, supplying & laying 100mm thick in two layers of 50mm each of 20mm nominal size uncrushed/crushed/ broken stone pebbles gravel fill including dressing, rolling & compacting complete in all respects as per specs. & instructions of XEN/Civil Works Division.	150	Sqm.	0.00	0.00	0.00	0.00	569.05	85358.18	85358.18	100722.65
192	ii) Providing, supplying & laying 100mm thick PCC (1:4:8) using 20mm nominal coarse aggregates and supplying & spreading 100mm thick layer of 40mm nominal size uncrushed/ crushed/broken stone pebbles over the PCC including construction of toe wall (exposed wall plastered with cement mortar 1:5) to hold 40mm single size uncrushed/ crushed /broken stone pebbles wherever required in the bays covered under the present scope as detailed in the GELO & instructions of concerned XEN/Civil Works Division.	500	Sqm.	0.00	0.00	0.00	0.00	569.05	284527.25	284527.25	335742.16
193	**BOUNDARY WALL:** Supply of labour, T&P, material & construction of front, side & U/C boundary walls (brickwork below DPC level) as per GELO/CLO, tech. spec. & HVPNL drgs including excavation, PCC, back filling etc. complete in all respects.	470	Cum	0.00	0.00	0.00	0.00	3521.14	1654935.74	1654935.74	1952824.17

194	**Supply of labour, material and construction of front, C & U/C boundary walls above DPC including main gate foundations as per GELO/CLO, technical specifications. & HVPNL drgs. including DPC complete in all respect.** i) 6 ft. high U/C B/wall with barbed wire on angles at top including construction of entrance gate(w/o wicket gate) for yard.	265	Mtr.	0.00	0.00	0.00	0.00	5248.56	1390868.67	1390868.67	1641225.03
195	ii) 4½ ft. high front boundary wall including providing grill at top of wall & construction of main entrance gate (with wicket gate).	50	Mtr.	0.00	0.00	0.00	0.00	5231.07	261553.29	261553.29	308632.88
196	iii) 4½ ft. high side boundary wall with barbed wire on angles at top of wall.	55	Mtr.	0.00	0.00	0.00	0.00	5231.07	287708.62	287708.62	339496.17
197	**MULTI-STORY GIS HALL:** Design including architecture and structure design/drawings, Engineering, supply of labour, T&P and material etc. for construction of multi storey GIS Hall comprising of ground floor, ground floor-A, intermidiate floor and First floor as per GELO (to accommodate at 66kV GIS hall, switchgear & Control Room Building) including exterior weather proof paint, interior emulsion, all internal services like water supply including supply and providing of 5000ltr. Capacity double layer Sintex/Diplast PVC tank alongwith all fittings etc, Sewerage System, electrification (including wiring, modular switches, lighting, maximum 20W 4ft. long LED tubes with fittings minimum 1960 lumens. ceiling/exhaust fans, lighting in GIS hall as per IS code etc.), plinth protection, Indoor trenches for GIS/other rooms wherever required, arrangement for providing EOT & mechanical operated crane system septic tank/Soakage pit near building or connection of sewerage system to Soakage pit/sewerage system of local authority (as applicable), connection to main water supply system of local authority/ bore well (as applicable) etc., **design/providing suitable cable tray arrangment in side as well as along the building the building for outgoing/incoming cables.** Any other item not mentioned herein but required for completion of job as per specifications is in scope of successful bidder. Minimum size of the buildings has been provided in the GELO.	1	Lot	0.00	0.00	0.00	0.00	25782404.94	25782404.94	25782404.94	30423237.83
198	**U/C FENCING & GATES :** Providing & fixing chain link fencing including foundations, GI angle iron posts and gate(s) complete as per electrical layout & tech. spec. & as per drawing attached.	35	M	0.00	0.00	0.00	0.00	4023.90	140836.39	140836.39	166186.94
199	**PCC PAVEMENT:** Construction of PCC pavement in front, rear or side (as per site requirement around the building) as per drawing no. HCD/SK-172 & technical specifications.	150	Sqm.	0.00	0.00	0.00	0.00	2011.95	301792.26	301792.26	356114.86
200	**DRAINAGE-CUM-RAIN HARVESTING SYSTEM:** Supply of labour, material for construction of One no. recharge structures with bore well(s) as per HVPN drawings & specs. complete in all respect. The location of recharge structures shall preferably be located on corner(s) of the substation and shall be got decided from the concerned XEN/Civil Works Division on the basis of surroundings of the substation(s). **In case ground water table is less than 8m from FGL, rain harvesting well shall not be constructed (the drainage system with sump pit is to be constructed as per item mentioned below).**	1	No.	0.00	0.00	0.00	0.00	262428.05	262428.05	262428.05	309665.10

201	The successful bidder shall evolve design & drawing for drains, manholes with RCC covers and settlement tank including preparation of drainage layout drawing for disposal of rain water from building's roof top & switch yard (s/stn.) area into respective bore well(s) in such a way that there shall be no ponding of water on the roof and switch yard (s/stn.). The layout so developed shall be got approved from the employer. The location of sump-pit-cum-pump chamber shall preferably be located on corner(s) of the s/stn. and shall be got decided from the concerned XEN/Civil Works Division on the basis of surroundings of the substation(s). The successful bidder will also supply labour and material for construction of sump-pit-cum-pump chamber as per HVPNL drgs. & provide one no. non clog pump(s) of 5HP of reputed make capacity with main switch, starter, volt meter, Amp. Mtr. etc. (for each sump pit) for disposal of excess water to outfall point. Any other item(s) not mentioned herein but is/are required for completion of works shall be done by the successful bidder without any extra cost to the employer.	1	L/S	0.00	0.00	0.00	0.00	1049712.20	1049712.20	1049712.20	1238660.40
202	**RCC ANTIFIRE WALL:** **Construction of RCC anti fire wall of suitable height between T/F as per HVPNL drawing and all associated works including supply of labour, material, cement, reinforcement steel, steel form work etc. as per technical specification.:** 7.00 Mtr. High Firewall bitween T/F's.	27	Mtr.	0.00	0.00	0.00	0.00	27161.76	733367.62	733367.62	865373.79
203	RCC M-20 inclusive of labour, material, shuttering, Steel reinforcement etc. complete in all respects to compensate excess quantity required to be executed due to difference in existing natural ground level and the formation level to be fixed after contouring or difference on account of revised drawing issued at the time of construction and the tender drawing.	10	Cum	0.00	0.00	0.00	0.00	16095.59	160955.87	160955.87	189927.93
204	**DISMANTLEMENT (Civil)** **(Amount of Dismantlement to be entered in the civil column)** Dismantling of civil structures i.e.control room building, pump chamber, boundary wall, road, towers and equipments foundations & T/F's plinth etc. of existing 66 kV S/Stn., complete in all respect. Removal and disposal of Malba/debris whatsoever received after dismantlement is in the scope of successful bidder and is to be disposed of as per satisfaction of engineer-incharge. The material whatsoever shall be the property of the successful bidder. The dismantled material shall not be allowed for reuse at any of the sub-stations.	1	Lot	0.00	0.00	0.00	0.00	437380.08	437380.08	437380.08	516108.50
					129348111.06		**15137389.53**		**44073821.44**	**188559322.03**	**222500000.00**
Twenty Two Crores Twenty Five lacs only including GST and all other taxes & duties etc.											

TAXES & DUTIES:-

As per clause 15 of ITB and clause 6 of Special Conditions of Contract.

PAYMENT TERMS:

The payment shall be regulated as per clause 9.0 of SCC of Bidding Documents as briefed under: -

A **Interest bearing Mobilization advance**:

Interest bearing mobilization advance equal to 10% of the contract value shall be made on request by the turnkey as under:

i 1st installment of advance payment to the extent 2% at the time of signing of contract.

ii 2nd installment of advance payment to the extent 2% at the time of opening of site office.

iii 3rd installment of advance payment to the extent 6% on submission of invoice and proof by the contractor that civil subcontractor is appointed.

This advance shall be subject to fulfillment of following conditions:-

i Submission of an unconditional and irrevocable Bank Guarantee **(from a Nationalized Bank or scheduled commercial bank approved by the Govt. of Haryana for conducting Govt. Business i.e. ICICI Bank, Axis Bank, HDFC Bank, IndusInd Bank, Yes Bank, Kotak Mahindra Bank)** equivalent to 110% of initial advance valid upto contractual completion period.

ii Submission of an unconditional and irrevocable Bank Guarantee **(from a Nationalized Bank or scheduled commercial bank approved by the Govt. of Haryana for conducting Govt. Business i.e. ICICI Bank, Axis Bank, HDFC Bank, IndusInd Bank, Yes Bank, Kotak Mahindra Bank)** equivalent to 11% of the contract value. BG submitted by the contractor in lieu of mobilization advance can be reduced proportionately to the amount pending to be paid to the Nigam on account of advance at a given time i.e. if payment is recovered from the bill than simultaneously, the firm will be allowed to revise the amount of bank guarantee in five equal installments. Firm can submit 5 Nos. BG's of equal amount for the total amount of advance to be taken from the Nigam.

iii Submission of an undertaking that they will mobilize construction gangs within one month of receipt of advance which will include deployment of labour and construction T&P, opening of site office, commencement of work of sub-station, placement of orders of major equipment etc.

iv The advance shall bear an interest rate equal to one year MCLR+1%, prevailing at the time of payment of mobilization advance. The interest on outstanding amount will be calculated at the end of each calendar month and will be recovered from the invoices to be submitted for payment in the next calendar month by the contractor.

v The amount of advance will be recovered @ 20 % of the value of each invoice submitted by the contractor for payment. The Bank Guarantee submitted by the contractor for mobilization advance will be released in 5 equal installments after the amount of advance is recovered from the contractor.

vi The payment of mobilization advance is optional. The contractor has the option of taking the interest-bearing **interim advance within 3 months of issue of PO**.

B **Payment for supply of equipment including mandatory spares:**

90% payment of the unit price alongwith payable GST after deducting mobilization advance @ 20% of the bill amount and upto date accrued interest thereon shall be paid within 30 days after receipt of material in site stores, but after verification by the concerned XEN. The payment shall be made on submission of following documents by the supplier to **CAO, HVPNL**, Panchkula:-

Documentary evidence of handing over of material at the contractor's site store, to HVPN and its reissue to the contractor against indemnity bond for execution of work.

Contractor's detailed invoice.

Detailed packaging list.

Insurance Policy/ Certificate.

Dispatch authorization issued by the employer

Sequential certificate

Balance ten percent (10%) ex-works price alongwith GST shall be paid within 30 days as per following conditions:-

i) Successful completion of erection, testing, commissioning and taking over the works by HVPN.

ii) Proof of submission of required number of O&M Manuals, Reproducibles and sets of approved drawings etc.

STAGES DEFINED FOR ISSUE OF SEQUENTIAL CERTIFICATES:-

Issuance of Sequential Certificate i.r.o. following items are only proposed to be necessary for payment of the equipment which shall be issued by the concerned XEN/TS as per conditions defined. The stages for issuance of sequential certificates are as under:-

Sr. No.	Name of Equipments	Stage for issue of Sequential Certificate
1	Earth Mat material	After approval of (Earth Mat) resistance calculation
2	Power Transformer	Completion of Transformer Plinths, Casting of slabs of control room building and GIS Halls
3	Breakers	
4	C&R Panel, AC Kiosk , SCADA, GIS equipment	
5	400/220/132/66/33 kV XLPE Cables for GIS	
6	Towers and Equipment structures	Completion of 50% of foundations in the switchyard

• Payment of all other items shall be made as per PERT chart provided in the contract without requirement of sequential certificate.

• In case of mismatch in the completion of line/Sub-station or due to other urgencies, if a part of sub-station is to be energized/ utilized, the concerned CE/TS may issue instruction to concerned offices to facilitate the payment of above equipment without sequential certificate.

C) **The release of retention money shall be dealt as under:-**

I. Balance Ten percent (10%) shall be paid within 30 days:-
   a) Against taking over certificate as per clause 31.0 of GCC.
   b) Proof of submission of required number of O&M Manuals, Reproducible and sets of approved drawings etc. In case of non-submission of these documents, an additional amount of INR 10 Lakhs shall be deducted which shall be paid after submission of the same.

II. The money so due shall be released after deduction of three (3) times the cost of pending punch points, if any.

III. **In case of deemed commissioning**, 2% of retention money or three (3) times the cost of pending punch points, whichever is higher, shall be retained. Additional INR 10 lakhs shall be retained in case of non-submission of required number of O&M Manuals, Reproducible and sets of approved drawings etc. The balance retention money will be released accordingly.

IV. Balance/Withheld retention money will be released after completion of the punch points by the firm within 2 months from the date of commissioning, failing which the withheld retention money shall be forfeited and the leftover work/punch points will be got done departmentally.

D **Payment for Erection & Civil Services:**

90% payment of the unit price alongwith payable GST after deducting mobilization advance @ 20% of the bill amount and upto date accrued interest thereon shall be paid on 30th day of submission of erection / civil bill by the contractor to concerned SDO. The payment shall be made by **CAO, HVPNL** after certification by the concerned Xen.

The payment of any activity completed earlier than the period stipulated in PERT chart will be released as per schedule of erection in the approved PERT chart.

E **The release of retention money shall be dealt as per C) mentioned above.**

F **Type test charges:**

100% payment for tests conducted would be made on 30th day after deducting mobilization advance @ 20% of the bill amount and upto date accrued interest thereon, on successful completion of tests, approval of test reports by the employer and receipt of copies of approved type test reports as per contract.

G **Payment of Lot items:**

The payment of lot items shall be made as under:-

I) Payment of control room building & **GIS Hall/Building.**

The payment of control room building or GIS Hall/Building shall be divided into three stages as under: -

i)	On completion upto plinth level	15% price of control room or **GIS Hall/Building.**
ii)	On casting of roof	Next 20% price of control room or **GIS Hall/Building.**
iii)	On completion	Balance 65% price of control room or **GIS Hall/Building.**

II) **Payment of Cable Trenches:**
The payment of cable trenches shall be divided as under:-

i	On completion of 50 % of total length of trenches without trench covers	1/3rd of total cost of trenches
ii	On completion of 100 % length of trenches without trench covers	Next 1/3rd of total cost of trenches
iii	On completion	Balance 1/3rd of total cost of trenches

Payment of other Lot items:
The payment of Other lot items shall be made as under:-
Payment of other lot items will be paid on completion of the lot activity
The payment of any equipment/material supplied earlier than the period stipulated in PERT chart will be released only as per schedule of delivery of material in the approved PERT chart as per clause 12.3 of GCC and 11.3 of SCC.

LIQUIDATED DAMAGES

In addition to provisions of the penalty as detailed in clause 11.1 of SCC, if the Contractor fails to perform the work within the specified period given in the Purchase Order or any extension thereof, with respect to successful completion of testing & commissioning of sub-stations, the Contractor shall pay to the Employer liquidated damages as under:-

1st week to 8th week or part thereof	0.25% per week	2% Max
9th week to 20th week or part thereof	0.50% per week	6% Max
Total		8%

However, the amount of liquidated damages for the contract be limited to a maximum of Eight percent (8%) of the total contract price of the works not commissioned in time.

In case where works/supplies extend beyond the contractual completion period, the amount towards LD shall not be withheld/ retained from the RA/supply bills. The same shall however be withheld/ retained from the pending bills/retention money after payment of 90% of the contract amount to the contractor. In case the LD is not recovered in full, the same shall be recovered from payments due to the contractor in other contracts being executed in HVPNL.

DAMAGES FOR LOSSES OF POWER

TRANSFORMERS:-
With specified fixed loss figures of maximum losses, manufactures have to adhere to these figures by designing transformer suitably.

INSURANCE:
As per clause 38 of GCC of bidding documents.

CONTRACTOR'S LIABILITY:
You shall indemnify the employer against all losses and expenses in the event of accident/loss due to defective material supplied by you as per clause 39 GCC of bidding documents.

PERFORMANCE SECURITY:
Within 30 days of receipt of Purchase Order from the owner, you shall be required to furnish a Performance Guarantee **(from a Nationalized Bank or scheduled commercial bank approved by the Govt. of Haryana for conducting Govt. Business i.e. ICICI Bank, Axis Bank, HDFC Bank, Indusind Bank, Yes Bank, Kotak Mahindra Bank),** in the form attached as Annexure-II, Section-V to this Vol-I in favour of the Owner. The guarantee amount shall be equal to ten percent (10%) of the Contract price and it shall guarantee the faithful performance of the Contract in accordance with the terms and conditions specified in these documents and specifications. The guarantee shall be valid upto 90 days after the end of Warrantee Period as per clause 43.0 ITB of bidding documents/amendments thereof.

CONTRACT AGREEMENT:
Within thirty (30) days of the issue of Purchase Order you shall sign the contract agreement and shall submit required performance guarantee as per clause 42.0 ITB of bidding documents.

FORCE MAJEURE:
As per clause 42.0 of General Conditions of Contract of bidding documents.

GUARANTEE:
As per clause 15.0 of GCC of bidding documents.

INSPECTION AND TESTING:
As per clause 20.0 of SCC of bidding documents.

SPECIAL TOOLS AND TACKLES:
Any items of special tools and tackles required for erection and maintenance of the system equipment shall be furnished by you without any extra cost as per clause 8.3 of SCC of Bidding Documents.

PACKING:
The material shall be packed before despatch as per provision in clause: 25.0 of General Conditions of Contract of bidding documents and packing clause of technical specification.

QUANTITY VARIATION:
As per clause 24.0 of GCC and clause 13.0 of SCC of bidding documents. Accordingly, the Empowered Officer of HVPNL reserves the right to increase or decrease up to 15% of contract value, the quantity of Goods and Services, for the items for which quantities have been indicated in the price schedule without any change in unit price or other terms and conditions, during the execution of the contract. The quantities of individual items may vary upto any extent.

MAKES OF EQUIPMENT:
You have declared that all bought out items shall be as per approved vendor of HVPNL, in Schedule-5 and as per clause 2.2 Equipment Qualification of ITB.

DESPATCH OF MATERIAL:
The equipments will be dispatched directly in your site stores and will be verified by the Engineer of HVPNL in site stores and will be handed over to you on submission of indemnity bond.

TYPE TEST CERTIFICATES:
The type test certificates as per provision in technical specification shall be submitted on the makes to be supplied by you within 3 months from the date of signing of the contract. These type tests shall be from Govt./Govt. approved test house and will not be more than 7 years old reckoned from the date of bid opening. No. extra payment will be made to you on this account.

TECHNICAL:
You have submitted the undertaking regarding guaranteed technical particulars of the equipments along with the bid. Notwithstanding any errors and omissions in the said GTP's the same shall conform to technical specification of HVPNL/relevant ISS. All drawings and designs shall be submitted by you for approval in time as per provisions in the technical specification/ bidding documents. The submission of correct drawings shall be your sole responsibility.

You have agreed to all terms and conditions without any deviations as per General Conditions of contract, Special Conditions of contract and technical specification of bidding documents. Unless there is anything repugnant or contrary to the context, all other terms and conditions will be applicable as per conditions of NIT and bidding document.

Superintending Engineer/Contracts,
For CE(PD&C), HVPNL, Panchkula.

Endst. No. Ch- 01/HDP- 39/PD&C/EPC-D-40/PD&C/Xen/(WB) Dated: 08.09.2022

Copy of the above is forwarded to the following for information and necessary action please:-

1 Director/Technical, HVPNL, Panchkula
2 Director/Projects, HVPNL, Panchkula
3 Director/Finance, HVPNL, Shakti Bhawan, Panchkula
4 Chief Engineer/PD&C, HVPNL, Panchkula
5 Chief Engineer/P&M, HVPNL, Panchkula
6 Chief Engineer/TS, NCR, HVPNL, Gurugram
7 Chief Engineer/SO & Commercial, HVPNL, Panchkula
8 CAO, HVPNL, Panchkula.
9 Superintending Engineer/TS, HVPNL, Gurugram
10 Superintending Engineer/Design, HVPNL, Panchkula.
11 Superintending Engineer/Civil, HVPNL, Hisar
12 Superintending Engineer/Civil Design, HVPNL, Panchkula.
13 FA/Contracts, HVPNL, Panchkula
14 FA/HQ, HVPNL, Shakti Bhawan, Panchkula.
15 Sr. AO/C&P, HVPNL, Panchkula.
16 Executive Engineer/Protection Design, HVPNL, Panchkula.
17 Executive Engineer/S.Stn Design, HVPNL, Panchkula.
18 Executive Engineer/IT & Infra HVPNL, Panchkula for uploading the PO on HVPNL website.
19 Executive Engineer/Civil Design, HVPNL, Panchkula.
20 Executive Engineer/TS, HVPNL, Gurugram
21 Executive Engineer/Civil, HVPNL, Gurugram
22 Supdt./PD&C, HVPNL, Panchkula.

This issues with the approval of the Utility Level High Powered Purchase Committee in its meeting held on 27.08.2022 (copy placed at Ch-69 of File No. EPC-D-40/PD&C and duly pre-audited by pre-audit cell of FA/Contracts, HVPNL, Panchkula.

08/09/2022

Executive Engineer/World Bank
for CE(PD&C), HVPNL, Panchkula