



गेल (इंडिया) लिमिटेड

(भारत सरकार का उपक्रम – महारत्न कंपनी)

GAIL (India) Limited

(A Government of India Undertaking - A Maharatna Company)

झाबुआ कम्प्रेसर स्टेशन, पोस्ट बॉक्स नं-8,
झाबुआ (म.प्र.) - 457661

Jhabua Compressor Station, Post Box No.-8,
Jhabua (M.P.) - 457661

दूरभाष/PHONE : (07392) - 244582, 243357
फैक्स /FAX : (07392) - 243308

FAX OF ACCEPTANCE (FOA)

FOA REF NO.: GAIL/SR20103705/5300037468/SR/C-04/2022/FOA

DATE: 09/09/2022

To,

M/s NAAGAR INFRASTRUCTURE (P) LTD.

DWRAKA 108, POCKET-B/3, SEC.-17

DWRAKA NEW DELHI-110078

Mob: 7011403890, Mr. DILIP NAGAR

Mob: 7011827125, Mr. NISHANT KUMAR SANWARIA

Email: - dilip@nagarinfrastructure.com ; nishant@nagarinfrastructure.com

VC: 101031453

SUB: FAX OF ACCEPTANCE (FOA) FOR “SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 33 KV SUBSTATION/ E-HOUSE AND MODIFICATION OF EXISTING 6.6 KV SWITCHGEAR AT GAIL JHABUA COMPRESSOR STATION”

REF. Tender Id No. 2022_GAIL_116853_1 (GAIL/JHA/C&P/SR/04/2022) Dated 30.05.2022.

DEAR SIR,

WITH REFERENCE TO YOUR BID NO. 434375-DATED 21.06.2022 AGAINST OUR NIC TENDER ID NO. 2022_GAIL_116853_1 DATED 30.05.2022 FOR “SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 33 KV SUBSTATION/ E-HOUSE AND MODIFICATION OF EXISTING 6.6 KV SWITCHGEAR AT GAIL JHABUA COMPRESSOR STATION”; WE ARE PLEASED TO ISSUE THIS FAX OF ACCEPTANCE (FOA) FOR THE SUBJECT JOB/SERVICE AS PER SPECIFICATIONS/SCOPE OF TENDER DOCUMENT WITH FOLLOWING TERMS & CONDITIONS:

SERVICE	:	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 33 KV SUBSTATION/ E-HOUSE AND MODIFICATION OF EXISTING 6.6 KV SWITCHGEAR AT GAIL JHABUA COMPRESSOR STATION
ESTIMATED CONTRACT VALUE	:	Rs. 3,27,14,190.20 (RUPEES THREE CRORE TWENTY-SEVEN LAC FOURTEEN THOUSAND ONE HUNDRED NINETY & PAISE TWENTY ONLY) AS PER ANNEXURE-A INCLUSIVE OF ALL TAXES, DUTIES AND IGST@18%.
CONTRACT PERIOD	:	AS PER CLAUSE NO. 5 OF SCC, COMPLETION TIME AND VALIDITY OF THE CONTRACT AS UNDER: A. THE VALIDITY OF THE CONTRACT SHALL BE FOR 01 YEARS, WHICH SHALL BE RECKONED FROM THE DATE OF ISSUE OF FAX OF INTENT/ LETTER OF INTENT WHICHEVER IS ISSUED EARLIER.



	B. THE TIME OF COMPLETION FOR THE ENTIRE WORK IS INTENDED TO BE WITHIN 12 (TWELVE) MONTHS, WHICH SHALL BE RECKONED FROM THE DATE OF ISSUE OF FAX OF INTENT/ LETTER OF INTENT WHICHEVER IS ISSUED EARLIER. THE PERIOD OF COMPLETION GIVEN INCLUDES THE TIME REQUIRED FOR DRAWING APPROVALS, SUPPLY, INSTALLATION, COMMISSIONING AND SAT. C. A SCHEDULE OF EXECUTION OF WORK SHALL BE PREPARED BY THE BIDDER AND APPROVED BY ENGINEER-IN-CHARGE. THIS SCHEDULE SHALL TAKE CARE INTO ACCOUNT THE TIME OF COMPLETION MENTIONED ABOVE IN CLAUSE 3.B. D. THE BIDDER SHALL STRICTLY ADHERE TO THE TIME SCHEDULE BY DEPLOYING ADEQUATE MANPOWER AND EQUIPMENT. IN ALL MATTERS CONCERNING THE EXTENT OF THE TARGET SET OUT TO COMPLETE THE ENTIRE WORK WITHIN THE STIPULATED TIME PERIOD, THE DECISION OF THE ENGINEER-IN-CHARGE SHALL BE FINAL AND BINDING ON THE BIDDER.
PAYMENT TERMS	AS PER CLAUSE NO. 6 OF SCC, PAYMENT SHALL BE REGULATED AS UNDER: 1. ON SUPPLY AND RECEIPT AT SITE OF THE EQUIPMENT ALONG WITH TEST REPORTS ETC. 60% OF QUOTED PRICE 2. AFTER ERECTION ALONG WITH ASSOCIATED WORKS (READY FOR TESTING & COMMISSIONING): 15% OF QUOTED PRICE 3. AFTER COMMISSIONING, TESTING, AND ACCEPTANCE. 15% OF QUOTED PRICE 4. HANDING OVER OF COMPLETE PROJECT INCLUDING HOUSEKEEPING AND CLEANING OF SITE. 10% OF QUOTED PRICE
CONTRACT PERFORMANCE BANK GUARANTEE/ SECURITY DEPOSIT	THE CONTRACTOR IS REQUIRED TO SUBMIT CONTRACT CUM PERFORMANCE BANK GUARANTEE (CPBG)/SECURITY DEPOSIT OF @3% OF TOTAL ORDER/CONTRACT VALUE OF Rs. 9,81,426.00 THE CONTRACTOR IS REQUIRED TO SUBMIT (CPBG)/SECURITY DEPOSIT WITH IN 30 DAYS FROM THE DATE OF ISSUE OF FOA. THE CPG/SD SHOULD BE EITHER IN THE FORM OF BANK GUARANTEE (REFER TENDER DOCUMENT FOR PROFORMA F-4) OR DEMAND DRAFT [IN FAVOUR OF "GAIL (INDIA) LIMITED" PAYABLE AT "JHABUA"] OR BANKER'S CHEQUE (BC). IN CASE THE SECURITY DEPOSIT IS SUBMITTED IN THE FORM OF BANK GUARANTEE (BG), THEN THE SAME SHOULD BE AS PER GAIL PROFORMA (F-4) OF NON-JUDICIAL STAMP PAPER. STAMP PAPER SHOULD BE PURCHASED BY BANK IN THEIR NAME ONLY AND BG SHOULD BE VALID UPTO 09.06.2025.



CONTRACT AGREEMENT	:	CONTRACTOR IS REQUIRED TO EXECUTE THE CONTRACT AGREEMENT ON NON JUDICAIL STAMP PAPER OF REQUISITE VALUE AS PER STAMP ACT OF M.P. STATE WITHIN 15 DAYS FROM THE DATE OF ISSUE OF FOA. REFER TENDER DOCUMENT FOR PROFORMA.
ABNORMALLY HIGH RATED (AHR)	:	THE MENTIONED AHR ITEMS IN ANNEXURE-A WHICH SHALL BE DEALT AS PER TENDER STIPULATIONS
ENGINEER INCHARGE (EIC)	:	EIC: SHRI PRABUDDHA MAJUMDAR, DY GENERAL MANAGER (O&M), INSTRUMENTATION GAIL (INDIA) LIMITED, JHABUA PHONE: 07392-244582, Extn.No.1460 EMAIL: prabuddha.majumdar@gail.co.in YOU ARE ADVISED TO IMMEDIATELY CONTACT FOR FURTHER INSTRUCTION & EXECUTION OF JOB.

ALL OTHER TERMS & CONDITIONS SHALL BE AS PER TENDER ID NO. 2022_GAIL_116853_1 (GAIL/JHA/C&P/SR/04/2022) DATED 30.05.2022.

KINDLY CONFIRM RECEIPT TO THIS FAX OF ACCEPTANCE PER RETURN E-MAIL.

DETAILED WORK ORDER SHALL FOLLOW SEPARATELY.

FOR GAIL (INDIA) LTD.



[RAJNEESH KUMAR]

SR OFFICER [C&P]

E-MAIL: rajneesh.kumar@gail.co.in

PHONE: 07392-244582, Extn.No.1382

ANNEXURE-A

Sl. No.	Item Description	Quantity	Units	Basic Unit price	Total basic	Total with GST	AHR / NON-AHR
1	SITC OF 33 KV DP STRUCTURE : Note : SITC for all Items shall be done as per specifications, Data sheet, Drawings, Scope of work, guidelines of CEA rule and Instructions of Engineer In-Charge(EIC) and details as mentioned below.	1.00	LS	1,95,000.00	1,95,000.00	2,30,100.00	AHR
1.01	Design, Engineering, Supply, installation and commissioning including foundation of 33 KV DP structure with necessary arrangement for 33 KV HT connection from M/s MPPKV Co. Ltd. ME DP structure to GAIL's DP Structure inside the Compressor Station, The 2-pole structure shall comprise of:-						
1.02	33 KV, 11.0 mtr long GI in concrete (1:3:6) foundation including excavation pole foundation and refilling etc as per latest IS:2713 @ 2 Nos						
1.3	Steel section, channels angles, flats, clamps,GI nuts, bolts and required hardware etc. of different sizes for cross arms, bracings, supports etc. for pole, Isolators, GODO etc.including anticlimbing barbed wires etc. @ 1 Set						
1.4	33KV class disc / pin / support insulator complete with clamps and fixing hard wares etc. complete as required. @ 1 Set.						
1.5	33 KV Lightning Arrester (36 KV / 10 KA) CL- 1 Station Class Type @ 1 Set (3 Nos.- 1 per phase)						
1.6	33 KV, 400 amp GOAB switch with drop out-lock out (DOLO) fuse, gang operated device with pad locking arrangement (operating rod to be supported properly), complete with operating handle and locking arrangement @ 1-Set						
1.7	Connection of G.O switch, 2 pole structure, earthwire of overhead network etc.to the earthing grid using 50x6 mm G.I strip, complete as described & as per specifications and drawings.						
1.8	TOTAL AMOUNT (IN RS.)				1,95,000.00	2,30,100.00	



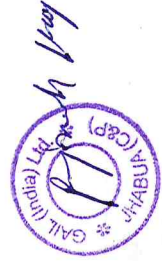
ANNEXURE-A

Sl. No.	Item Description	Quantity	Units	Baisc Unit price	Total basic	Total with GST	AHR / NON-AHR
2	SITC OF 33 KV E-HOUSE Note : SITC for all Items shall be done as per specifications, Data sheet, Drawings, Scope of work, guidelines of CEA rule and Instructions of Engineer In-Charge(EIC) and details as mentioned below.	1.00	LS	97,50,000.00	97,50,000.00	1,15,05,000.00	Non-AHR
2.01	SITC of Prefabricated Containerized Substation enclosure details for Enclosure of Prefabricated Containerized substation shall be as follows: CRCA enclosure made of 2.0mm thickness -275 GSM. IP65 enclosure with 50mm thick rockwool thermal insulation Sandwich Panel for Switchgear Compartment. 1 no Entry / Exit Door Provision in Containerized substation 1 fire door shall be suitable for equipment entry. False floor with cable trays for inter-panel cabling and with bottom plates for sealing the Container from bottom side. Interior Lighting with false ceiling & emergency DC lighting. Interior Lighting suitable for 200 lux level at floor & emergency DC lights @ lux as per NFPA. Exterior Lighting around the E House and at door exits. All wiring factory installed & connected with Cu/Al cables with FRLS outer sheath. Safety, sign boards for exit, movement, shock treatment charts. Air Conditioning units with Control Panel (N+1 Philosophy). Natural Ventilation System or exhaust fans for Transformer Compartment. Fire Detection and Alarm System with Multi -Sensor Smoke & Heat Detector, and Other accessories. Industrial type S/S outlets inside the switchgear room. Fire extinguishers inside the switchgear room and for transformer.- 1 set						



ANNEXURE-A

Sl. No.	Item Description	Quantity	Units	Basic Unit price	Total basic	Total with GST	AHR / NON-AHR
2.02	33kV 400 A / 630 A, 20 KA for 1sec (or superior) SF6 insulated Non-Extensible Ring Main Unit Compact switchgear (Type V+M) consisting of One No. remote operated vacuum circuit breaker in SF6 insulated Stainless steel enclosure OF THICKNESS 2mm with Cable Earthing Switch & One No Air Insulated Metering Module. Microprocessor based Numerical Multifunction Relay - IDMT, Under voltage, over voltage, shunt trip, auxiliary relay, earth fault relay, Instantaneous (please refer SLD for releases). Interconnection cable. Protection CT shall be 40/1A 10 VA 5P10 Metering CT shall be 40/1A 10 VA CI 0.5 Metering PT shall be 33kV / R3 // 110V / R3, 50VA, CI 0.5 Cable end terminal boxes with single gland trifurcating cable box suitable for 33KV aluminium XLPE (E) armoured cable of size 3.0x185Sq.mm for circuit breaker. 33KV Touch proof cable Termination Kits (Make:Raychem/ 3M/ Equivalent) for 1 No. VCB Module only (1 Set/ 3 Nos.) - 1 set						
2.03	2000 KVA 33 KV/ 6.6 kV 3Ph DYn11 AN cooled Copper Wound Cast Resin Dry Type transformer with off circuit tap links of rating +5% to -5% in steps of 2.5%. Temp. Rise of AN winding over an ambient temp. shall be 115 Deg.C. Insulation Class H and Losses (Subject to IS Tol) NLL AND FLL (or as per IS Standard). Impedance 6.15 % (IS tol)Winding. Temperature Indicator with alarm and Trip contact + Surge Arrester with Neutral CT for REF Protection. - 1 set						



ANNEXURE-A

Sl. No.	Item Description	Quantity	Units	Basic Unit price	Total basic	Total with GST	AHR / NON-AHR
2.04	6.6kV 630A 20KA/1 sec (or superior) Non-Extensible Ring Main Unit Compact switchgear with Copper busbar (VVVV+M) consisting Five Nos. remote operated Vacuum Circuit Breaker in robotically welded having IP67 in SF6 encapsulated stainless steel enclosure of thickness 2.5 mm and One No. Air Insulated Metering Module with Microprocessor based numerical Multifunction relay. Protection CT shall be 200/5A-10VA 5P10. Metering CT with MFM shall be 200/1A 15VA Class 0.5 Accuracy Metering 3 Phase PT: 11000/$\sqrt{3}$, 110V/ $\sqrt{3}$, 50VA Class 0.5 Accuracy Digital MFM Class 1.0 Accuracy with RS485port (Make: Secure/Rishabh/Equivalent) Fault Passage Indicator with Short Circuit and Earth Fault Indication Voltage Presence Indicator (L1, L2, L3) for each Module PS Class CT set in Incoming Module for REF protection, Numerical based relay (please refer SLD) Cable end terminal boxes with single gland trifurcating cable box suitable for 6.6 KV aluminium XLPE (E) armoured cable of size 3C x 240 sq.mm for incoming and outgoing breaker. 6.6 KV Touch proof cable termination kits (Make: Raychem/ 3M/ Equivalent) for 1 No. VCB Module only (1 Set/ 3 Nos.) - 5 set For Incoming and outgoing feeder details please refer SLD.						
2.05	800kVAR APFC Panel – with followings Steps Configuration - 100kVAR x 5 Steps 50kVAR x 5 Steps 25kVAR x 2 Steps The APFCR Panel shall be provided with 14% detuned filter, capacitor duty contactor and protection switchgear. For detail information please refer SLD.						
2.06	The LT Panels comprises of MDB, LDB, PDB etc. For details, please refer SLD attached with the bid document.						



ANNEXURE-A

Sl. No.	Item Description	Quantity	Units	Basic Unit price	Total basic	Total with GST	AHR / NON-AHR
2.07	Battery + Battery Charger Set -- BATTERY BANK 220V DC Battery Bank - Ni-Cd battery with all accessories to complete the battery bank in factory charged condition (Make: HBL/ Amco/ Amaraja/ Exide/ Vertiv). BATTERY CHARGER Dual Float Cum boost Battery Charger with 220V DC suitable for loads- Switchgear and DC Critical lights (with back-up as per OISD 149). (Make: Chhabji/ Caldine/ HBL/ Statcon/ Amaraja/ Vertiv). DCDB shall be integral part of Battery Charger.						
2.08	INTERCONNECTIONS AND EARTHING 3CX185 sq mm cable shall be used for interconnection of 33 kV RMU, 2000 KVA 33/6.6 kV transformer and 6.6 kV RMU. Interconnection with Control cable Between Various Switchgear Panels Inside Containerized Substation Battery and Battery chargers ACDB & DCDB, AC systems, Fire management systems and Illumination will be carried out with suitable cross-sectional cable/ wire.						
2.09	The incomer of the 33 KV and outgoing of 6.6 KV RMU Panel shall be provided with Surge diverter.						
2.10	HT Danger Plate (as per IS specification).						
2.11	Min. 50x6 mm GI earth bus shall be provided for the full length of the panel.						
2.12	TOTAL AMOUNT (IN RS.)				97,50,000.00	1,15,05,000.00	
3	S & L OF HT CABLE, TERMINATIONS & MS PIPES: Note : SITC for all items shall be done as per specifications, Data sheet, Drawings, Scope of work, guidelines of CEA rule and Instructions of Engineer In-Charge (EIC) and details as mentioned below.						
3.01	Supply, design, Transportation & handling of 33 KV(UE) grade XLPE insulated, PVC sheathed armoured FRLS aluminium conductor cable of following size conforming of IS:7098.						
3.02	3C X 185 Sq.mm Al "Al" Cable.	200.00	M	4,350.00	8,70,000.00	10,26,600.00	AHR



ANNEXURE-A

Sl. No.	Item Description	Quantity	Units	Baisc Unit price	Total basic	Total with GST	AHR / NON-AHR
3.03	Laying of one number XLPE power cable of 33 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench /existing RCC/Hume/ metal pipe/ existing cable tray etc as required.						
3.04	3C X 185 Sq.mm Al "Ar" Cable.	200.00	M	550.00	1,10,000.00	1,29,800.00	AHR
3.05	Supply, design, Transportation & handling of 6.6 KV grade(UE) XLPE insulated, PVC sheathed armoured FRLS aluminium conductor cable of following size conforming of IS:7098.						
3.06	3C X 240 Sq.mm Al "Ar" Cable.	750.00	M	2,500.00	18,75,000.00	22,12,500.00	AHR
3.07	Laying of one number XLPE power cable of 6.6 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench/ existing RCC/ Hume/ metal pipe/ existing cable tray etc as required.						
3.08	3C X 240 Sq.mm Al "Ar" Cable.	750.00	M	600.00	4,50,000.00	5,31,000.00	AHR
3.09	Supplying and fixing cable route marker for 33 KV HT Cable with 10 cm X 10 cm X 5 mm thick G.I. plate with inscription there on, bolted /welded to 35 mm X 35 mm X 6 mm angle iron, 60 cm long and fixing the same in ground as required.	4.00	Each	2,000.00	8,000.00	9,440.00	AHR
3.10	Supplying and fixing cable route marker for 6.6 KV HT Cable with 10 cm X 10 cm X 5 mm thick G.I. plate with inscription there on, bolted /welded to 35 mm X 35 mm X 6 mm angle iron, 60 cm long and fixing the same in ground as required.	15.00	Each	1,500.00	22,500.00	26,550.00	AHR
3.11	Supplying and making for Indoor end termination for with brass compression gland and aluminium lugs for following size of XLPE insulated and FRLS PVC sheathed aluminium conductor cable of 33 KV grade as required.						
3.12	3C X 185 Sq.mm Al "Ar" Cable.	2.00	Each	42,000.00	84,000.00	99,120.00	AHR
3.13	Supplying and making for Outdoor end termination for with brass compression gland and aluminium lugs for following size of XLPE insulated and FRLS PVC sheathed aluminium conductor cable of 33 KV grade as required.						
3.14	3C X 185 Sq.mm Al "Ar" Cable.	4.00	Each	60,000.00	2,40,000.00	2,83,200.00	AHR



ANNEXURE-A

Sl. No.	Item Description	Quantity	Units	Basic Unit price	Total basic	Total with GST	AHR / NON-AHR
3.15	Supplying and making for Indoor end termination for with brass compression gland and aluminium lugs for following size of XLPE insulated and FRLS PVC sheathed aluminium conductor cable of 6.6 KV grade as required.						
3.16	3C X 240 Sq.mm Al "Ar" Cable.	6.00	Each	2,650.00	15,900.00	18,762.00	Non-AHR
3.17	Supplying and making for Outdoor end termination for with brass compression gland and aluminium lugs for following size of XLPE insulated and FRLS PVC sheathed aluminium conductor cable of 6.6 KV grade as required.						
3.18	3C X 240 Sq.mm Al "Ar" Cable.	1.00	Each	400.00	400.00	472.00	Non-AHR
3.19	Providing, laying and fixing following dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (100 cm deep) and re-filling etc. as required						
3.20	150mm dia.	200.00	M	250.00	50,000.00	59,000.00	Non-AHR
3.21	TOTAL AMOUNT (IN RS.)				37,25,800.00	43,96,444.00	
4	S&L OF MV CABLES, TERMINATIONS & CABLE TRAY : Note : SITC for all Items shall be done as per specifications, Data sheet, Drawings, Scope of work, guidelines of CEA rule and Instructions of Engineer In-Charge(EIC) and details as mentioned below.						
4.1	SUPPLY & LAYING OF ALUMINIUM CABLES						
4.11	Supply,design, Transportation & handling of 1.1 KV grade XLPE insulated, PVC sheathed armoured FRLS aluminium conductor cable of following size conforming of IS:7098.						
4.12	4.0 C x 35 sq.mm.Al. Ar. XLPE FRLS cable	100.00	M	1,500.00	1,50,000.00	1,77,000.00	AHR
4.13	Laying of one number XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench /existing RCC/Hume/ metal pipe/ existing cable tray etc as required.						
4.14	4.0 C x 35 sq.mm.Al. Ar. XLPE FRLS cable	100.00	M	330.00	33,000.00	38,940.00	AHR
4.2	CABLE TERMINATION :						



ANNEXURE-A

Sl. No.	Item Description	Quantity	Units	Basic Unit price	Total basic	Total with GST	AHR / NON-AHR
4.21	Supply, Installation, testing and commissioning of Cable end Termination of following sizes 1.1KV grade LT XLPE insulated, FRLS grade PVC sheathed, stranded Aluminum conductor, Armoured/ Unarmoured cables as per IS:7098 part-I including cost of tinned copper, heavy duty crimping lugs, double compression glands (including gland earthing), insulation tape and all necessary material to complete the termination.						
4.22	4.0 C x 35 sq.mm.AL Ar. XLPE FRLS cable	8.00	Each	650.00	5,200.00	6,136.00	AHR
4.3	SUPPLY & LAYING OF COPPER CABLES						
4.31	Supply, design, Transportation & handling of 1.1 KV grade XLPE insulated, PVC sheathed armoured FRLS Copper conductor cable of following size conforming of IS:7098.						
4.32	3.0C x 6.0 sq.mm.Cu. Ar. XLPE FRLS cable	25.00	M	960.00	24,000.00	28,320.00	AHR
4.33	4.0C x 10 sq.mm. Cu. Ar. XLPE FRLS cable	25.00	M	250.00	6,250.00	7,375.00	Non-AHR
4.34	4.0C x 16 sq.mm. Cu. Ar. XLPE FRLS cable	50.00	M	1,750.00	87,500.00	1,03,250.00	AHR
4.35	Laying of one number XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench /existing RCC/Hume/ metal pipe/ existing cable tray etc as required.						
4.36	Cables upto 35 Sq.mm	100.00	M	2,200.00	2,20,000.00	2,59,600.00	AHR
4.4	CABLE TERMINATION :						
4.41	Supply, Installation, Testing and Commissioning of Cable end Termination of following sizes 1.1KV grade LT XLPE insulated, FRLS grade PVC sheathed, stranded Copper conductor, Armoured/ Unarmoured cables as per IS:7098 part-I including cost of tinned copper, heavy duty crimping lugs, double compression glands (including gland earthing), insulation tape and all necessary material to complete the termination.						
4.42	3.0C x 6.0 sq.mm. Cu. Ar. XLPE FRLS cable	2.00	Each	2,500.00	5,000.00	5,900.00	AHR
4.43	4.0C x 10 sq.mm. Cu. Ar. XLPE FRLS cable	2.00	Each	150.00	300.00	354.00	Non-AHR
4.44	4.0C x 16 sq.mm. Cu. Ar. XLPE FRLS cable	4.00	Each	210.00	840.00	991.20	Non-AHR
4.5	SUPPLY & LAYING OF CONTROL CABLES						
4.51	Supplying, Transportation & handling of 1.1 KV grade XLPE/PVC insulated, PVC sheathed armoured FRLS Copper conductor or Optical Fiber control cable of following size conforming of IS:7098/1554.						



ANNEXURE-A

Sl. No.	Item Description	Quantity	Units	Basic Unit price	Total basic	Total with GST	AHR / NON-AHR
4.52	2.0C x 2.5 sq.mm.Cu. Ar. XLPE FRLS cable	100.00	M	180.00	18,000.00	21,240.00	AHR
4.53	4.0C x 2.5 sq.mm.Cu. Ar. XLPE FRLS cable	100.00	M	250.00	25,000.00	29,500.00	Non-AHR
4.54	12 core MM/SM Optical fibre cable and HDPE duct (of dia > 1.5 times the cable dia)	750.00	M	1,800.00	13,50,000.00	15,93,000.00	AHR
4.55	Laying of one number XLPE power cable of 1.1 KV grade and OFC of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench /existing RCC/Hume/ metal pipe/ existing cable tray etc as required.						
4.56	Cables upto 35 Sq.mm including OFC	950.00	M	1,200.00	11,40,000.00	13,45,200.00	AHR
4.57	Supply, installation, testing of patch cord of 2 mtr. Complete in all respects as per standard technical specification accepted by Engineer-In-charge.	50.00	Each	1,300.00	65,000.00	76,700.00	AHR
4.6	CABLE TERMINATION :						
4.61	Cable end Termination of following sizes 1.1kV grade LT XLPE insulated, FRLS grade PVC sheathed, stranded Copper conductor Control cable, OFC Armoured/ Unarmoured cables as per IS:7098 part-I including cost of tinned copper, heavy duty crimping lugs, double compression glands (including gland earthing), insulation tape and all necessary material to complete the termination.						
4.62	2.0C x 2.5 sq.mm.Cu. Ar. XLPE cable	4.00	Each	1,500.00	6,000.00	7,080.00	AHR
4.63	4.0C x 2.5 sq.mm.Cu. Ar. XLPE cable	4.00	Each	2,000.00	8,000.00	9,440.00	AHR
4.64	6.0C x 2.5 sq.mm.Cu. Ar. XLPE cable	2.00	Each	8,500.00	17,000.00	20,060.00	AHR
4.65	Supplying and fixing cable route marker for 1.1 KV LT Cable with 10 cm X 10 cm X 5 mm thick G.I. plate with inscription there on, bolted /welded to 35 mm X 35 mm X 6 mm angle iron, 60 cm long and fixing the same in ground as required.	4.00	Each	2,100.00	8,400.00	9,912.00	AHR
4.66	Splicing and termination of OFC complete with all accessories as per standard technical specification accepted by Engineer-In-charge..	6.00	Each	1,800.00	10,800.00	12,744.00	Non-AHR
4.7	PERFORATED CABLE TRAY :						



ANNEXURE-A

Sl. No.	Item Description	Quantity	Units	Basic Unit price	Total basic	Total with GST	AHR / NON-AHR
4.71	Supply, fabrication and installation of GI perforated type cable trays including suitable structural steel support complete with all bends, tees, elbows, reducers etc. of various width in two tier/ three/ five tier fashion either on one side of the wall or on two sides of the wall or at other places and paint afterward if required. (All bends & tees shall be of factory built in of same make as that of tray).						
4.72	600mm tray, 2mm thick 50mm collar.	125.00	M	120.00	15,000.00	17,700.00	Non-AHR
4.73	450mm tray, 2mm thick 50mm collar.	125.00	M	12,000.00	15,00,000.00	17,70,000.00	AHR
4.8	CABLE TRAY SUPPORTS						
4.81	Supply, fabrication, erection of structure steel for fixing cable trays including 1 coat of primer and two coat of painting as approved.	250.00	Kg.	21,000.00	52,50,000.00	61,95,000.00	AHR
4.82	Note : SITC for all Items shall be done as per specifications, Data sheet, Drawings, Scope of work, guidelines of CEA rule and Instructions of Engineer In-Charge(EIC) and details as mentioned above.						
4.83	TOTAL AMOUNT(IN RS.)				99,45,290.00	1,17,35,442.20	
5	EARTHINGS : Note : SITC for all Items shall be done as per specifications, Data sheet, Drawings, Scope of work, guidelines of CEA rule and Instructions of Engineer In-Charge(EIC) and details as mentioned below.						
5.1	EARTH ELECTRODE :						
5.11	Supply and Installation of 600mm X 600mm X 6 mm G.I Plate vertically for earthing with its top at least 3 metres below ground level complete with 20mm dia G.I pipe and funnel for watering and one earthing lead of two no G.I wire in 15 mm dia G.I pipe including 30 cm square C.I frame with hinged cover masonry housing alternate layers of charcoal / coke and salt atleast 150mm thick allround etc. as per directions of Engineer in charge complete in all respects(as per IS : 3043).	2.00	LS	10,000.00	20,000.00	23,600.00	Non-AHR



ANNEXURE-A

Sl. No.	Item Description	Quantity	Units	Basic Unit price	Total basic	Total with GST	AHR / NON-AHR
5.12	Supply and Installation of 600mm X 600mm X 3 mm copper Plate vertically for earthing with its top at least 3 metres below ground level complete with 20mm dia G.I pipe and funnel for watering and one earthing lead of 2 nos. copper wire in 15 mm dia G.I pipe including 30 cm square C.I frame with hinged cover masonry housing alternate layers of charcoal / coke and salt atleast 150mm thick around etc. as per directions of Engineer in charge complete in all respects(as per IS : 3043).	2.00	LS	390.00	780.00	920.40	Non-AHR
5.13	Supply and Installation of 65 mm dia x 3.0 metres long G.I Pipe vertically for earthing having 12mm dia. Holes spaced 75mm apart drilled up to 2 metre from the bottom complete with earthing lead of G.I wire in G.I Pipe,including 30 cm square C.I box with hinged cover masonry enclosure, funnel at top, alternate layers of charcoal / coke and salt atleast 150mm thick around etc. as per directions of Engineer in charge complete in all respects(as per IS : 3043).	6.00	LS	330.00	1,980.00	2,336.40	Non-AHR
5.2	GI EARTHING						
5.21	Supply and fixing of following GI wires & tapes on existing tray/ trench/ ground/ PVC pipe/ walls including all necessary fixing accessories and effecting connections with copper riveting/ welding etc. as approved:						
5.22	50 mm x 6 mm thick GI tape.	250.00	M	250.00	62,500.00	73,750.00	Non-AHR
5.23	25 mm x 6 mm thick GI tape.	100.00	M	60.00	6,000.00	7,080.00	Non-AHR
5.24	25 mm x 3 mm thick GI tape.	50.00	M	3,100.00	1,55,000.00	1,82,900.00	AHR
5.25	8 SWG bare GI wire.	300.00	M	950.00	2,85,000.00	3,36,300.00	AHR
5.3	COPPER EARTHING						
5.31	Supply and fixing of following Copper wires & tapes on existing tray/ trench/ ground/ PVC pipe/ walls including all necessary fixing accessories and effecting connections with copper riveting/ welding etc. as approved. All copper joints shall be tinned:						
5.32	40 mm x 5 mm thick Cu.tape.	50.00	M	450.00	22,500.00	26,550.00	Non-AHR
5.33	8 SWG bare Cu. wire.	50.00	M	550.00	27,500.00	32,450.00	AHR
5.4	SINGLE CORE COPPER ARMoured CABLE EARTHING:						
5.41	Supply & laying of 1.1KV grade PVC insulated, sheathed stranded copper conductor armoured cable (IS:1554) in existing PVC pipes/ on existing cable trays etc. including terminations:						



ANNEXURE-A

Sl. No.	Item Description	Quantity	Units	Basic Unit price	Total basic	Total with GST	AHR / Non-AHR
5.42	1C x 2.5sq.mm PVC insulated copper conductor armoured cable.	25.00	M	180.00	4,500.00	5,310.00	Non-AHR
5.43	1C x 4.0 sq.mm PVC insulated copper conductor armoured cable.	25.00	M	320.00	8,000.00	9,440.00	AHR
5.5	SINGLE CORE COPPER UNARMoured CABLE EARTHING:						
5.51	Supply and laying of 1.1kV grade PVC insulated, unsheathed, stranded copper conductor unarmoured cable (IS:694) in existing PVC pipes/ on existing cable trays etc. including terminations:						
5.52	1C x 2.5sq.mm PVC insulated copper conductor unarmoured cable.	100.00	M	180.00	18,000.00	21,240.00	AHR
5.53	1C x 4.0 sq.mm PVC insulated copper conductor unarmoured cable.	50.00	M	320.00	16,000.00	18,880.00	AHR
5.54	1C x 6.0 sq.mm PVC insulated copper conductor unarmoured cable.	25.00	M	400.00	10,000.00	11,800.00	AHR
5.55	Note : SITC for all Items shall be done as per specifications, Data sheet, Drawings, Scope of work, guidelines of CEA rule and Instructions of Engineer In-Charge(EIC) and details as mentioned above.						
5.6	TOTAL AMOUNT(IN RS.)				6,37,760.00	7,52,556.80	
6	LIGHTNING PROTECTION :						
6	Note : SITC for all Items shall be done as per specifications, Data sheet, Drawings, Scope of work, guidelines of CEA rule and Instructions of Engineer In-Charge(EIC) and details as mentioned below.						
6.1	Supply and Fixing of Vertical Air Termination final rod comprising of 300mm long x 25mm dia, copper rod with one pointed prong and 100mm dia x 3mm thick base plate etc. complete in all respects	1.00	LS	1,000.00	1,000.00	1,180.00	Non-AHR
6.2	Providing and fixing GI tape 20mm x 3 mm thick on parapet or surface of wall complete with Fixing arrangement for lightning conductor complete as required. (For horizontal run)	50.00	M	136.00	6,800.00	8,024.00	Non-AHR
6.3	Providing and fixing GI tape 20mm x 3 mm thick on parapet or surface of wall complete with fixing arrangement for lightning conductor complete as required. (For vertical run).	20.00	M	212.00	4,240.00	5,003.20	Non-AHR



ANNEXURE-A

Sl. No.	Item Description	Quantity	Units	Basic Unit price	Total basic	Total with GST	AHR / NON-AHR
6.4	Providing and fixing B-class 50mm dia GI pipe (nominal) complete with GI fittings including trenching and refilling etc.(for road crossing).	15.00	M	700.00	10,500.00	12,390.00	Non-AHR
6.5	Supply and Installation of 65 mm dia x 3.0 metres long G.I Pipe vertically for earthing having 12mm dia. Holes spaced 75mm apart drilled up to 2 metre from the bottom complete with earthing lead of G.I wire in G.I Pipe,including 30 cm square C.I box with hinged cover masonry enclosure, funnel at top, alternate layers of charcoal / coke and salt atleast 150mm thick around etc. as per directions of Engineer in charge complete in all respects(as per IS : 3043).	2.00	Each	11,000.00	22,000.00	25,960.00	AHR
6.6	TOTAL AMOUNT(IN RS.)				44,540.00	52,557.20	
7	MODIFICATION ON 6.6 KV EXISTING PANEL : Note : SITC for all Items shall be done as per specifications, Data sheet, Drawings, Scope of work, guidelines of CEA rule and Instructions of Engineer In-Charge(EIC) and details as mentioned below.	1.00	LS	23,00,000.00	23,00,000.00	27,14,000.00	AHR
7.01	The scope includes designing, supplying, erecting, testing & commissioning of HT panel for Grid Incomer feeder at existing Switchgear. The vendor may be required to perform/ supply the following indicative works/ services/ materials for the same (but not limited to the following).						
7.02	a) Retrofit (Changing and upgradation) of wiring plate of control panel, however there should be no modification in the existing control scheme.						
7.03	b) Fixing of new control panel door matching with the dimension of existing door. Cut-outs for fitting the modified/ upgraded relays shall be done.						
7.04	c) Changing and upgradation of existing electromagnetic and numerical relays with new relay enabled with IEC 61850 universal communication protocol (however relay shall be able to operate with hardwired scheme independently). Master trip relay shall be installed for trip command to breaker.						



ANNEXURE-A

Sl. No.	Item Description	Quantity	Units	Basic Unit price	Total basic	Total with GST	AHR / NON-AHR
7.05	d) Cutting, welding and other modification in the existing panel for fitting of retrofitted module.						
7.06	e) Design, supply, testing and commissioning of suitable extension busbar and Cu-Al bi-metallic strips for connection of Aluminium cable with existing terminals.						
7.07	f) Supply, installation, testing and commissioning of PS class CTs, Line PT, protection and metering CTs.						
7.08	g) Implementation of Breaker inter-trip logic for Upstream/ downstream Circuit breakers.						
7.09	h) Differential protection relay for line.						
7.10	Work shall be carried out in line with GAIL/ OEM requirement as per latest IS/ IEC standards.						
7.11	TOTAL AMOUNT(IN RS.)				23,00,000.00	27,14,000.00	
8	SAFETY DEVICES :						
	Note : SITC for all Items shall be done as per specifications, Data sheet, Drawings, Scope of work, guidelines of CEA rule and Instructions of Engineer In-Charge(EIC) and details as mentioned below.						
8.01	Providing and fixing M.V. danger notice plate of 200mmx150mm made of mild steel, atleast 2mm thick and vitreous enamelled white on both sides and with inscription single red colour on front side as required.	2.00	Each	3,500.00	7,000.00	8,260.00	Non-AHR
8.02	Providing and fixing H.V. danger notice plate of 250mmx200mm made of mild steel, atleast 2mm thick and vitreous enamelled white on both sides and with inscription single red colour on front side as required.	2.00	Each	5,500.00	11,000.00	12,980.00	AHR
8.03	Supply and fixing of fire bucket, round bottom made of G.I sheet 9-11 litres capacity duly painted as per fire brigade design, supported on hanging bracket chained and locked, initially filled with fine river sand, water as per directions of Engineer in - charge. Hanging Arrangement Stand shall be provided for each set. (each set consists of 4 Nos. of Bucket).	2.00	Set	15,000.00	30,000.00	35,400.00	AHR
8.04	Supply and fixing of shock treatment chart (prescribed under IE rules) duly framed with glass and supported from back with hard board or soft board with supply of all materials labour T&P for proper completion of work.	2.00	Each	6,500.00	13,000.00	15,340.00	AHR



ANNEXURE-A

Sl. No.	Item Description	Quantity	Units	Basic Unit price	Total basic	Total with GST	AHR / NON-AHR
8.05	Supply and laying of 1000mm(L) x 1000mm(W) x 3.0 mm thick chequered rubber matting of tested quality to withstand 33 KV dielectric strength.	6.00	Each	17,500.00	1,05,000.00	1,23,900.00	AHR
8.06	Supply and laying of 1000mm(L) x 1000mm(W) x 2.0 mm thick chequered rubber matting of tested quality to withstand 1.1 KV dielectric strength.	15.00	Each	12,500.00	1,87,500.00	2,21,250.00	AHR
8.07	Supply of Rubber Gloves of 33 KV grade as per IS 4770-68.	2.00	Pair	6,000.00	12,000.00	14,160.00	Non-AHR
8.08	Supply of Rubber Gloves of 1.1 KV grade as per IS 4770-68.	2.00	Pair	5,000.00	10,000.00	11,800.00	Non-AHR
8.09	TOTAL AMOUNT(IN RS.)				3,75,500.00	4,43,090.00	
9	NO OBJECTION CERTIFICATE(NOC) & LIASIONING WORKS : Note : Work shall be as per statutory requirement and Instructions of Engineer In-Charge(EIC) and details as mentioned below.						
9.1	Taking No Objection Certificate (NOC) from CEA and other statutory clearances for proposed Electrical Installation from Electrical Inspector and / or any statutory compliances etc. Also Coordination/ Liasioning with SEB/Power supply Co. for drawing 33kV grid power from SEB/Power supply Co. 2-pole structure to proposed substation as required.	1.00	LS	7,50,000.00	7,50,000.00	8,85,000.00	AHR
	TOTAL				2,77,23,890.00	3,27,14,190.20	



Signature Not Verified

Digitally signed by Rajneesh Kumar
Date: 2022.09.21 17:44:13 IST
Location: eProcurement System for Central PSUs