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Item Rate BoQ

Tender Inviting Authority: BHEL-PSER

Name of Work: Supply, Erection, Testing, Commissioning and Operation & Maintenance (O&M), for Construction Power sources & temporary illumination of all the working areas, at coal to chemical project, BCGCL Lakhanpur, Odissa.

TENDER NO - PSER:SCT:LKP-E2429:26

Name of the Bidder/ Bidding Firm / Company :			
<p style="text-align: center;">PRICE SCHEDULE</p> <p style="text-align: center; color: red;">(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only, rate/price filled here will automatically reflect in SCH-1 - TOTAL PRICE</p>			
NUMBER #	TEXT #	NUMBER #	TEXT #
Sl. No.	Item Description	TOTAL PRICE (INR) IN FIGURE	TOTAL PRICE (INR) IN WORDS
1	2	13	55
1	Total price for Supply, Erection, Testing, Commissioning and Operation & Maintenance (O&M), for Construction Power sources & temporary illumination of all the working areas, at coal to chemical project, BCGCL Lakhanpur, Odissa as per the terms & conditions of tender.		INR Zero Only

VOLUME-III PRICE SCHEDULE, REV-00	
Job: Supply, Erection, Testing, Commissioning and Operation & Maintenance (O&M), for Construction Power sources & temporary illumination of all the working areas, at coal to chemical project, BCGCL Lakhanpur, Odissa.	
TENDER NO: PSER:SCT:LKP-E2429:26	
PREAMBLE	
BIDDER'S NAME	0
SL NO	DESCRIPTION
1.0	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully before filling in rates for various items. Clauses under this preamble shall be read in conjunction with various volumes of tender and other tender sections as applicable and shall have precedence over any contrary statement mentioned anywhere in this document. The tenderer shall sign & stamp all the pages of the tender document as a token of their acceptance. Submission of unfilled formats with sign & stamp shall be construed as acceptance of the contents of the same.
2.0	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions. Drawings enclosed with the tender are only preliminary and for guidance/tender purposes giving some idea of the work involved. The work is to be executed as per terms & conditions of the tender and actual drawings/documents, which shall be furnished during execution.
3.0	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
4.0	Unless specifically mentioned otherwise in the tender document, the tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, constructional plants, temporary works, labour, dismantling of all temporary piping, structures, valves, pumps, tanks & other misc. equipment, strengthening of roads/culverts/bridges etc. including arranging all clearances etc. required for carrying out different activities & tests, materials, levies, transport, layout, repairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the complete tender document and this schedule.
5.0	The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or be deleted altogether.
6.0	Prior written approval of BHEL shall be sought by the contractor in case quantity variation of any item crosses +50% (plus fifty percent) limit during execution and approval to be obtained before execution of further quantity for this item.
7.0	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing, clearing of old structures and leveling etc. including fixing of grid pillars, benchmarks etc. required for commencement of site activities. No separate payment will be made towards the same. However, if separate rate for such item is available in the rate schedule, the same shall be considered.
8.0	All works item wise shall be measured upon completion and paid for at the rates quoted and accepted as per BHEL approved payment schedule/billing break-up.
9.0	The tender shall be deemed to have visited site and made himself aware of all the site conditions, studied the specifications and details of work to be done within the time schedule attached and to have acquainted himself of the conditions prevailing at site before submission of his bid/offer. No claim whatsoever due to lack of knowledge of site conditions shall be entertained after award of the work.
10.0	No splitting of the job is envisaged
11.0	Bidders are not allowed to alter the Price Schedule format including item description, quantity etc. and the offer is liable for rejection if the bidders submit their prices in Price Schedules modified by them. BHEL reserves the right to reject the offers of bidders who submit offers in Price Formats which are modified/alterd by them. Also putting any comments instead of rates/price in the designated column of the rate schedule shall make the offer liable for rejection.
12.0	Bidders to note that for Civil &/Structural packages, against a particular item against a ST No. appearing in more than one schedule of the BOQ, same rate must be quoted in all schedules for that particular items with same descriptions. If by error, different rates are quoted in different schedules for same ST No. (i.e. item with same description), then the higher of the rates shall be considered for evaluation but awarding shall be done with the lower rate, if the bidder becomes L-1. The same modality shall be applicable for other item rate service contracts where item with same description is repeated in different schedules.
13.0	Engineer's decision shall be final and binding on the contractor regarding clarification of items in the schedule with respect to the other sections/volumes of the contract.
14.0	No interest, whatsoever, shall be payable by BHEL on the security deposit, any bank guarantee submitted or any amount due to successful bidder/contractor. No idling charge whatsoever (either for labour or any other resources) is payable by BHEL for any reason whatsoever.
15.0	Size and weights of various items are mentioned in the attached BOQ cum rate/price schedule for reference purpose only & these shall not be taken into consideration for quoting/calculating amount in the rate schedule. These shall be utilised as per relevant sections of tender. Bidders shall quote for each item in the rate column, taking unit as mentioned in the quantity column. Rates shall be filled in both figures and words. Amount shall be calculated based upon these rates multiplied by the mentioned quantity for the respective items.
16.0	Bidder's Total price shall be considered for evaluation unless stated otherwise.

VOLUME-III PRICE SCHEDULE, REV-00			
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TENDER NO: PSER:SCT:LKP-E2429:26			
BIDDER'S NAME	0		
SCH-1-TOTAL PRICE			
SL NO	DESCRIPTION	PRICE SCHEDULE REF	TOTAL QUOTED PRICE (IN INR) (IN FIGURE AND WORDS)
1.0	Total price for Supply, Erection, Testing, Commissioning and Operation & Maintenance (O&M), for Construction Power sources & temporary illumination of all the working areas, at coal to chemical project, BCGCL Lakhanpur, Odissa as per the terms & conditions of tender.	SCH 2 - BREAK UP OF TOTAL PRICE	0.00
NOTE			
1.0	Bidder shall quote total price for total price of SCH-1- Part only at sl no 1 above. All other amounts/ rates of each item of works in respective schedules/ parts will be derived based on allocated percentages. As such, any uncalled figure/ amount noted at any other place/ schedule of Volume-III will not be recknoed & will stand null & void.		
2.0	Bidder to note that total price at sl no 1.0 above shall be considered for evaluation & awarding. As such grand total price should be complete in all respect for the full scope defined and considering all terms and conditions.		
3.0	Bidder to note that SCH-3 covers scope of ENABLING ELECTRICAL SUPPLY (ELECTRIFICATION WORK AND AREA LIGHTING)		
4.0	Bidder to note that SCH-4 covers scope of ENABLING ELECTRICAL SERVICE (ELECTRIFICATION WORK AND AREA LIGHTING)		
5.0	Bidder to note that SCH-5 covers scope of Man-power services for Regular O&M activities.		
6.0	Bidder's quoted total price of SCH-3,SCH-4 & SCH-5 at Sl. no 1 above respectively shall be apportioned into amount of various items of works based on allocated percentages against respective item, in respective schedules/ parts. As such, bidder shall not indicate/ quote any amount/ rate in these schedules/ parts and any amount/ rate quoted against any item shall not be taken into cognizance/ account and offer may be liable for rejection.		
7.0	Based on the itemwise percentage allocations, the amount for the individual items of the Bill of Quantity shall be arrived at. The rates of individual items shall be derived from the amount against each items after roundeding off .		
8.0	Bidders to note that this is an item rate contract. Payment shall be made for the actual quantities of work executed at the unit rate arrived at as per SI No.6.0 above.		
9.0	Unit rates of each item of works of respective schedules/ parts will be derived by dividing derived amount by corresponding quantities. In deriving the unit rates of each item in this manner, figures only upto 9 decimal places will be taken into account. Any adjustment, if required, due to such methodology, will be effected in final bill.		
10.0	The quoted price shall be inclusive of freight on FOR site basis.		

VOLUME-III
PRICE SCHEDULE, REV-00

Job: Supply, Erection, Testing, Commissioning and Operation & Maintenance (O&M), for Construction Power sources & temporary illumination of all the working areas, at coal to chemical project, BCGCL Lakhanpur, Odissa.

TENDER NO: PSER:SCT:LKP-E2429:26

BIDDER'S NAME

0

SCH-2 : BREAK UP OF TOTAL PRICE

SL NO	DESCRIPTION	PRICE SCHEDULE REF	Weightage
1.0	TOTAL PRICE FOR PROCUREMENT, SUPPLY, ERECTION, TESTING, COMMISSIONING, OPERATION & MAINTAINANCE (O&M) etc. RELATED WITH EXTENSION OF CONSTRUCTION POWER SOURCES, GENERAL ILLUMINATION OF ALL THE WORKING AREAS, AND OFFICES AS PER THE TERMS & CONDITIONS OF TENDER.		
a	ENABLING ELECTRICAL SUPPLY (ELECTRIFICATION WORK AND AREA LIGHTING)	SCH-3- ELECTRICAL SUPPLY	0.35224245
b	ENABLING ELECTRICAL SERVICE (ELECTRIFICATION WORK AND AREA LIGHTING)	SCH-4- ELECTRICAL SERVICE	0.24264299
c	O&M	SCH-5- OPERATION AND MAINTAINANCE	0.40511456
2.0	TOTAL (1a + 1b + 1c)		1.000000000

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BIDDER'S NAME	0			
SCH-3- ELECTRICAL SUPPLY				
SL NO	DESCRIPTION	UOM	QTY	WEIGHTAGE
1	Preparation of Drawing & obtaining statutory approval-Route survey, preparation of route drawing, Detailed SLD, Detailed 6.6/6.6 KV and 6.6kV/433V substation drawing, 6.6kV distribution drawing, Two/Four/Six/Eight pole structure arrangement drawing, Earthing layout, sag calculation for OH line & any other document /drawing as required by Electrical inspectorate and getting approval of above from statutory authority and also includes liaison with electrical inspectorate for field inspection and obtaining clearance certificate for charging the entire system in a phased manner as per site requirement (any number of times till completion of entire scope under this contract.)	Lumpsum	1	0.01688884
2	6.6 Substation			0
2.1	Supply of Lightning arrestor set suitable for 6.6kV as per ISS/IEC Spec No. IS:3070/2-1985/Latest. (Each set consist of all 3 Phases).	Sets	3	0.00081218
2.2	Supply of 6.6 kV pin insulator with pins as per IS: 2544/1963 AMD 125 & IEC 168/1969 Latest. (Each set consist of all 3 Phases).	Sets	15	0.00040609
2.3	Supply of 6.6 kV disc insulator with fixing arrangements & conductor holding clamps as per IS:3188/1965 & IEC 309/1969/Latest. (Each set consist of all 3 Phases).	Sets	9	0.00068222
2.4	Supply of 6.6 kV 400A Air break switch-double break-horizontal mounting rotating type as per ISS/IEC Spec No.4710/1968-265-C/1970/Latest. (Each set consist of all 3 Phases).	No	6	0.00584763
2.5	Supply of 6.6kV HG fuse as per ISS/IEC Spec IS: 9385/Latest. (Each set consist of all 3 Phases)	Sets	4	0.00077968
2.6	Supply of 6.6 kV DO fuse as per ISS/IEC Latest. (Each set consist of all 3 Phases)	Sets	3	0.00081218
2.7	Supply of Pole ISMB-250 12 MTR or More for 6.6 kV Height for Overhead line two/four/six/eight pole steel structure at Sub Station.	No	16	0.00962576
2.8	Supply of ISMC-100 for cross beam for Overhead line two/four/six/eight pole steel structure at Sub Station.	MT	3	0.00649738
2.9	Supply of ISMC-75 for cross beam for Overhead line two/four/six/eight pole steel structure at Sub Station.	MT	1	0.00216579
2.10	Supply of 2kVA 230V 1 phase sine wave UPS of Mictrotek make with 2 nos. of exide make 150AH 12V tubuler lead acid batteries. Vendor shall submit relevant certificates along with supply.	Sets	2	0.00360966
2.11	Supply of 63kVA 3 phase 4 wire 6.6 kV/433V copper wound DYN11 oil filled out door plinthmounted Distribution transformer of reputed make to provide auxiliary power supply to 6.6/11.0kV sub station and illumination etc.	No	1	0.01203219
2.12	Supply of 125A out door type Floor mounted Power distribution board (PDB), IP 55 protection, Double Door type, Incomer-01 no. 125A TPN MCCB. Outgoing-02 nos. 63A TPN ELCBs with 30mA tripping, 03 nos. 40A TPN ELCBs with 30mA tripping, 02 nos. 32 A TPN ELCBs with 30mA tripping withTimer & contactors for auto on/off and 3 indicating lamps with fuse for indication bus supply ON, Digital voltmeter & VSS 0-500V, suitable bus bar arrangement for phase and neutral. Sufficient space should be provided in the removable cable gland plate to accommodate minimum 1Rx3.5Cx70/ 3.5Cx95 sq. mm. All incoming cable and outgoing cables of different sizes. All MCCB, MCBs and ELCBs shall be of reputed make.	No	1	0.00300804
2.13	Supply of operator remote control desk with chair for operating the 6.6kV Substation consisting of 02 Nos. of 6.6 kV Outdoor Ring Main Unit and ono 63 kVA 6.6 kV/0.440kV Transformers, . This remote control desk shall control all operation points of Substation i.e control supply on status, UPS and battery healthiness, main supply on status for 6.6KV and 6.6 KV/0.440kV transformers, RMUs.Other healthiness monitoring which includes breaker on/off status, trip circuit healthy indication, trip alarm annunciation window etc. The panel shall be approved by BHEL.	Sets	1	0.00300804
				0
3	6.6 KV Overhead Ring Main Line			0
3.1	Supply of 9 m long 280kg working load pre-stressed cement concrete poles (PSCC) as per IS 1678	No	80	0.0231018
3.2	Supply of Pole ISMB-250 11 Mtr or more for 6.6 KV Height for Overhead line two/ four pole steel structure at Sub Station.	No	12	0.0115509

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TENDER NO: PSER:SCT:LKP-E2429:26				
BIDDER'S NAME	0			
SCH-3- ELECTRICAL SUPPLY				
3.3	Supply of ISMC-100 for cross beam for Overhead line two/four pole steel structure at Sub Station.	MT	1.5	0.00324869
3.4	Supply of ISMC-75 for cross beam for Overhead line two/four pole steel structure at Sub Station.	MT	0.5	0.00108289
3.5	Supply of 6.6 kV V' Cross arms/ Straight Arm with suitable back clamps including supply of necessary fasteners as per IE specification.	No	70	0.00673802
3.6	Supply of 6.6 kV GI stay (7/3.15mm) sets with Guy, Bow, Stay Rod, wire etc. as per I.E. Specifications.(Each set for each pole).	Sets	120	0.02165793
3.7	Supply of 6.6 KV top fittings (I Clamp) with suitable back clamps including supply of necessary fasteners as per IE specification.	No	70	0.00210562
3.8	Supply of 6.6 kV disc insulator with fixing & conductor and holding clamp as per IS: 3188/ 1965 & IEC 309/ 1969/Latest.along with fastenenrs (Each set consist of all 3 Phases).	Sets	16	0.00121285
3.9	Supply of 6.6 kV pin insulator with pins as per IS: 2544/1963 AMD 125 & IEC 168/1969 Latest.along with fastenenrs (Each set consist of all 3 Phases).	Sets	70	0.00189486
3.10	Supply of 6.6 kV 400A Air break switch-double break-horizontal mounting rotating type as per ISS/IEC Spec No.4710/1968-265-C/1970/Latest.along with fastenenrs (Each set consist of all 3 Phases).	No	5	0.00487303
3.11	Supply of 6.6 kV 400A Air break switch-double break-Vertical mounting rotating type as per ISS/IEC Spec No.4710/1968-265-C/1970/Latest.along with fastenenrs (Each set consist of all 3 Phases).	No	6	0.00584764
3.12	Supply of 6.6 kV Lightning arrestor set as per ISS/IEC Spec No. IS:3070/2-1985/Latest.along with fastenenrs (Each set consist of all 3 Phases).	Sets	7	0.00210563
3.13	Supply of 6.6 kV HG fuse as per ISS/IEC Spec IS: 9385/Latestalong with fastenenrs (Each set consist of all 3 Phases)	Sets	5	0.0010829
3.14	Supply of 6.6 kV DO fuse as per ISS/IEC Latest.along with fastenenrs (Each set consist of all 3 Phases)	Sets	7	0.00210563
3.15	Supply and fixing of anti climb device (barbed wire) roled on the poles at 2m height as per I.E. specification and numbering of poles.	Sets	80	0.01443862
3.16	Supply Coil type earthing as per REC Construction Standard J-1	No	200	0.06016098
3.17	Supply of ACSR Dog Conductor 100mm2	Mtr	6000	0.01902387
				0
4	Common Items for 6.6 kV			0
4.1	Supply of 65x10 mm GI earth flat.	Meters	150	0.00270725
4.2	Supply of 50x6 mm GI earth flat.	Meters	300	0.00259895
4.3	Supply of 25x3 mm GI earth flat.	Meters	350	0.00168452
4.4	Supply of 8SWG wire	Meters	1500	0.0010831
4.5	Supply of Required MS/GI/Nickel cadmium fasteners/anchor fasteners for erection of all supply materials and completion of entire works covered under this package. (M6 to M16).	Kg	50	0.00030081
4.6	Supply of Heat shrink type HT Indoor/Outdoor termination kits of reputed make suitable for 3Cx150 sqmm 6.6 kV Cables including for RMUs. The exact details of RMU end termination shall be shared separately (touch proof/ normal).	No	18	0.00649738
4.7	Supply of Heat shrink type HT Indoor/Outdoor termination kits of reputed make suitable for 3Cx95 sqmm 6.6 kV Cables including for RMUs. The exact details of RMU end termination shall be shared separately (touch proof/ normal).	No	15	0.00541449
4.8	Supply of Heat shrink type HT straight through jointing kits of reputed make for 3CX150 6.6 kV Armoured Cables.	No	16	0.00962575
4.9	"Supply of 200mm dia RCC hume pipes for make use of cable crossing where ever required such as existing culverts, trenches and road etc for HT Cables."	Meters	150	0.00433157
4.10	"Supply of 150mm NB 4.8mm thick medium class GI pipes for make use of cable crossing wherever required such as existing culverts, trenches and road etc for HT,LT Cables."	Meters	150	0.00270725
4.11	Supply of Fire Buckets with stand floor mounted type of rigid & good quality-4 nos. 10 ltr capacity Fire buckets per stand-Type & make shall be approved by BHEL/ Engineer.	Sets	10	0.00096257

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TENDER NO: PSER:SCT:LKP-E2429:26				
BIDDER'S NAME	0			
SCH-3- ELECTRICAL SUPPLY				
4.12	Supply of Aluminium alloy 4.5kg CO2 fire extinguisher industrial type with ISI Mark of reputed make. Type & make shall be approved by BHEL/ engineer.	No	10	0.0010829
4.13	Supply of HT cable route markers standard size with 1m height angle support with round shape 100 MM dia and 2.7mm Thickness	No	200	0.00360967
4.14	Supply of LT cable route markers standard size with 1m height angle support round shape 100 MM dia and 2.7mm Thickness	No	250	0.00451209
4.15	Supply and fixing of Griddle Guards of length 15m, with 8SWG GI Wire for Road crossing with necessary fixing arrangement etc, as per IS Specification.	No	6	0.00228521
4.16	Supply of outdoor type metal clad LT distribution board (LTDB) having IP -55 Protection, Two incomer 400A TPN MCCB with 400A TPN CHANGE OVER SWITCH for EB supply & DG SET POWER SUPPLY and 2 nos. 200 A, 100A 2 nos. TPN MCCB and 2 nos. outgoing feeders with 63 A TPN RCCBs, 3 indicating lamps with fuse for indication bus supply ON, Voltmeter & VSS 0-500V etc. Sufficient space should be provided for the removable cable gland plate to accommodate the power cable and all outgoing cables from suitable connectors from each MCB/RCCB. Neutral link bar for incoming and outgoing neutrals.	No	2	0.00601609
				0
5	Area Lighting & Yard Lighting			0
5.1	Supply of steel tubular swaged poles, 9 mtr long made of sheet steel having ultimate tensile strength 42 kg F/sq. mm conforming to BIS: 2713 (part-II) complete with 300x300x6 mm thick MS base plate for welding at site and size as per configuration given in BIS for 410 SP-28 (113 kg- pole weight) with single arm bracket length 1.5 meter.	No	60	0.0231018
5.2	Supply of Electrical junction box (GI/PVC)of good quality to suit the opening available in above lighting pole, one connector block for 3 Phase 4 wire incoming and outgoing cable to next street light pole with 01 no. 6A SP MCB for street light and earthing etc.	No	60	0.00360965
5.3	Supply of 100W LED Flood light fitting of make Philips/CGL/Bajaj/Havells/Wipro only.	No	70	0.00808563
5.4	Supply of 50mm NB 3.6mm thick medium class standard GI pipe with 7 Mtr length for incoming and outgoing cables.	No	150	0.0032487
5.5	Supply of out door type metal clad Lighting distribution board (LDB) having IP-55 protection with double door type and one incomer with 100A TPN MCCB additionally with 3 nos. 32 A TPNRCCBs with 30mA tripping and timer & contactors for auto on/off street lights and 3 indicating lamps with fuse for indication bus supply ON, Digital Voltmeter & VSS 0-500V etc. Suitable bulbar arrangement for Phase and Neutral. Sufficient space should be provided in the removable cable gland plate to accommodate incoming power cable and all outgoing cables.	No	3	0.00649737
				0
6	Others & Spares			0
6.1	Suppy of 6.6 KV and 440 V danger board of standard size.	Nos	40	0.00133304
6.2	Direct connected three-phase energy meter,4 wire Direct connected Current Rating 20-100 A Voltage Rating 230/240 V(P-N), 400/415 V (P-P). Repute make like L&T, Secure, HPL	Nos	10	0.00253912
Total				0.35224245

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TENDER NO: PSER:SCT:LKP-E2429:26				
BIDDER'S NAME	0			
SCH-4- ELECTRICAL SERVICE				
SL no	Description	UOM	QTY	Weightage
1	6.6 KV Substation			
1.1	Erection of Lightning arrestor set suitable for 6.6 kV as per ISS/IEC Spec No. IS:3070/2-1985/Latest. (Each set consist of all 3 Phases).	Sets	2	0.00028877
1.2	Erection of 6.6 kV pin insulator with GI pin as per IS:731-1971 IS:2486 Part-II — 1989. (Each set consist of all 3 Phases).	Sets	15	0.00014439
1.3	Erection of 6.6 kV disc insulator with fixing arrangements & conductor holding clamps as perIS"• 3188/1965 & IEC 309/1969/Latest. (Each set consist of all 3 Phases).	Sets	9	0.0002599
1.4	Erection of 6.6 kV 400A Air break switch-double break-horizontal mounting rotating type as per ISS/IEC Spec No.4710/1968-265-C/1970/Latest.	No	6	0.0021658
1.5	Erection of 6.6 kV HG fuse as per ISS/IEC Spec IS: 9385/Latest. (Each set consists of all 3 Phases)	Sets	4	0.00013965
1.6	Erection of 6.6 kV DO fuse as per ISS/IEC Latest. (Each set consist of all 3 Phases)	Sets	3	0.00010474
1.7	Erection of Pole ISMB-250 12m for 6.6 kV Overhead line two/four/six/eight pole steel structureat Sub Station.The erection includes excavation of earth of size 1x1x1.8m depth, fasteners,foundation bolt, grouting with concrete of ratio 1:4:8 for size of 1x1x1.8m depth including supply of cement, sand, metal etc for the foundation and coping of poles by 1 feet height.	No	16	0.00308025
1.8	Erection of ISMC-100 for cross beam for Overhead line two/four/six/eight pole steel structure at Sub Station.	MT	3	0.00288773
1.9	Erection of ISMC-75 for cross beam for Overhead line two/four/six/eight pole steel structure at Sub Station.	MT	1	0.00096257
1.10	Erection, testing and commisioning of 2kVA 230V 1 phase sine wave UPS of microtek make with 2 nos. of exide make 150AH 12V tubuler lead acid batteries.	Sets	2	0.00060162
1.11	Erection, testing and commisioning, including oil filtration and submission of oil test report of63 kVA 3 phase 4 wire 6.6 KV/433V copper wound DYN11 oil filled out door plinth mounted Distribution transformer of reputed make to provide power supply to 11/11.5kV sub station and illumination etc.	No	1	0.00180483
1.12	Erection, testing and commissioning of 125A out door type Floor mounted Power distribution board (PDB), IP 55 protection, Double Door type, Incomer-01 no. 125A TPN MCCB. Outgoing-02 nos. 63A TPN ELCBs with 30mA tripping, 03 nos. 40A TPN RCCB Bs with 30mA tripping, 02 nos. 32 A TPN RCCB s with 30mA tripping withTimer & contactors for auto on/off and 3 indicating lamps with fuse for indication bus supply ON, Digital voltmeter & VSS 0-500V, suitable bus bar arrangement for phase andneutral. Sufficient space should be provided in the removable cable gland plate to accommodate minimum 1Rx3.5Cx70/ 3.5Cx95 sq. mm. All incoming cable and outgoing cables of different sizes. All MCCB, MCBs and RCCBBs shall be of reputed make.	No	1	0.00025392
1.13	Erection, testing and commissioning of ooperator remote control desk with chair for operating the 6.6kV Substation consisting of 02 Nos. of 6.6 kV Outdoor Ring Main Unit and ono 63 kVA 6.6 kV/0.440kV Transformers, . This remote control desk shall control all operation points of Substation i.e control supply on status, UPS and battery healthiness, main supply on status for 6.6KV and 6.6 KV/0.440kV transformers, RMUs.Other healthiness monitoring which includes breaker on/off status, trip circuit healthy indication, trip alarm annunciation window etc. The panel shall be approved by BHEL.	Sets	1	0.00060162
1.14	Erection, testing & commissioning of 6.6 KV Ring Main Unit Panel(RMU) including supply of accessories, complete in all respect.	Nos.	2	0.0021083
2	6.6 KV Overhead Ring Main Line & PSS			0
2.1	Stringing of ACSR DOG conductors as per IS:398/1961	Meters	6000	0.00866284

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BIDDER'S NAME	0			
SCH-4- ELECTRICAL SERVICE				
2.2	Erection of 9 m long 280kg working load pre-stressed cement concrete poles (PSCC). The erection includes excavation of earth of size 1x1x1.8m depth, grouting with concrete of ratio 1:4:8 for size of 1x1x1.8m depth including supply of cement, sand, metal etc. for the foundation and coping of poles by 1 feet height.	No	80	0.00866317
2.3	Erection of Pole ISMB-250 12 m Height for 6.6kV Overhead line two/four/six/eight pole steel structure at Sub Station.The erection includes excavation of earth of size 1x1x1.8m depth, fasteners, foundation bolt, grouting with concrete of ratio 1:4:8 for size of 1x1x1.8m depth including supply of cement, sand, metal etc for the foundation and coping of poles by 1 feet height.	No	12	0.00231018
2.4	Erection of ISMC-100 for cross beam for Overhead line two/four/six/eight pole steel structure at Sub Station.	MT	1.5	0.00144386
2.5	Erection of ISMC-75 for cross beam for Overhead line two/four/six/eight pole steel structure at Sub Station.	MT	0.5	0.00048129
2.6	Erection of 6.6kV 'V' Cross arms/Straight Arm with suitable back clamps including erection of necessary fasteners as per IE specification.	No	70	0.00101071
2.7	Erection of 6.6 kV GI stay (7/3.15mm) sets with Guy, Bow, Stay Rod, wire etc. as per I.E. Specifications. (Each set consist of all 3 Phases).	Sets	120	0.00721931
2.8	Erection of 6.6 kV top fittings (I Clamp) with suitable back clamps including erection of necessary fasteners as per IE specification.	No	70	0.00067381
2.9	Erection of 6.6 kV disc insulator with fixing & conductor and holding clamp as per IS: 3188/1965 & IEC 309/1969/Latest. (Each set consist of all 3 Phases).	Sets	16	0.00023102
2.10	Erection of 6.6kV pin insulator with pins as per IS: 2544/1963 AMD 125 & IEC 168/1969 Latest. (Each set consist of all 3 Phases).	Sets	70	0.00067381
2.11	Erection of 6.6 kV 400A Air break switch-double break-horizontal mounting rotating type as per ISS/IEC Spec No.4710/1968-265-C/1970/Latest.	No	5	0.00180483
2.12	Erection of 6.6 kV 400A Air break switch-double break-vertical mounting rotating type as per ISS/IEC Spec No.4710/1968-265-C/1970/Latest.	No	6	0.00173264
2.13	Erection of 6.6 kV Lightning arrestor set as per ISS/IEC Spec No. IS:3070/2-1985/Latest. (Each set consist of all 3 Phases).	Sets	6	0.00086631
2.14	Erection of 6.6 kV HG fuse as per ISS/IEC Spec IS: 9385/Latest. (Each set consist of all 3 Phases)	Sets	5	0.00017456
2.15	Erection of 6.6 kV DO fuse as per ISS/IEC Latest. (Each set consist of all 3 Phases)	Sets	7	0.00024439
2.16	Erection, Testing & Commissioning of Package Substation (PSS), 500 KVA 6.6KV/433V	No	5	0.00533215
2.17	Erection and fixing of anti climb device (barbed wire) roled on the poles at 2m height as per I.E. specification and numbering of poles.	Sets	80	0.00770059
2.18	Overhead Laying and ternination of HT OR LT cables on poles/ any support above the ground including supply and installation of required accessories.	Meters	1500	0.05414468
2.19	Laying and Termination of 6.6 KV 3CX150/3Cx95 Armoured HT Cable, in trench/hume pipe along with supply and installation of double compression type brass cable glands and required number of termination lugs of reputed make	Meters	1500	0.00721935
3	Common Items for 6.6 KV OH lines and Substation equipment			0
3.1	Laying and Termination of 3.5Cx 300sqmm LT Power Cable along with supply and erectionof double compression type brass cable glands and required number of termination lugs of reputed make	Meters	1000	0.00360967
3.2	Laying and termination of 3.5Cx70 sqmm/3.5Cx95 sq.mm LT Power Cable / along with supply and erection of double compression type brass cable glands and required number of termination lugs of reputed make	Meters	1500	0.00541451
3.3	Laying and termination of 3.5Cx25sqmm LT Power Cable along with supply and erection of double compression type brass cable glands and required number of termination lugs of reputed make	Meters	4000	0.0144387

VOLUME-III PRICE SCHEDULE, REV-00				
Job: Supply, Erection, Testing, Commissioning and Operation & Maintenance (O&M), for Construction Power sources & temporary illumination of all the working areas, at coal to chemical project, BCGCL Lakhanpur, Odissa.				
TENDER NO: PSER:SCT:LKP-E2429:26				
BIDDER'S NAME	0			
SCH-4- ELECTRICAL SERVICE				
3.4	Laying and termination of 5Cx2.5sqmm LT Power Cable along with supply and erection of double compression type brass cable glands and required number of termination lugs of reputed make suitable for CT and PT Wiring from VCB's to Control Panels.	Meters	500	0.00090234
3.5	Laying and termination of 3Cx2.5sqmm LT Power Cable along with supply and erection of double compression type brass cable glands and required number of termination lugs of reputed make suitable for extending AC/DC control supply to VCB's and Xmers.	Meters	1000	0.00180467
3.6	Laying and termination of 7C/9C/10Cx1.5sqmm LT Control Cable along with supply and erection of double compression type brass cable glands and required number of termination lugs of reputed make suitable for extending alarm, annunciation and protection VCB's and Xmers.	Meters	1000	0.00180468
3.7	Erection of 65 x 10 mm GI earth flat.	Meters	150	0.00054145
3.8	Erection of 50 x 6 mm GI earth flat.	Meters	300	0.00086629
3.9	Erection of 25 x 3 mm GI earth flat.	Meters	350	0.00084225
3.10	Erection of 8 SWG wire.	Meters	1500	0.00090218
3.11	Erection of Required MS/GI/Nickel cadmium fasteners/ anchor fasteners for erection of all Erection materials and completion of entire works covered under this package (M6 to M16).	Kg	50	0.00024064
3.12	Erection of Heat shrink type HT Indoor/Outdoor termination kits of reputed make suitable for 3Cx150 sqmm 6.6 kV Cables including for RMUs. The exact details of RMU end termination shall be shared separately.	No	18	0.00194921
3.13	Erection of Heat shrink type HT Indoor/Outdoor termination kits of reputed make suitable for 3Cx95 sqmm 6.6 kV Cables including for RMUs. The exact details of RMU end termination shall be shared separately.	No	15	0.00162435
3.14	Erection of Heat shrink type HT straight through jointing kits of reputed make for 6.6 KV 3CX150 sqmm Armoured Cables.	No	10	0.00180483
3.15	Erection of 200 mm dia RCC hume pipes for make use of cable crossing where ever required such as existing culverts, trenches and road etc for HT Cables.	Meters	150	0.00180484
3.16	Erection of 150mm NB 4.8mm thick medium class GI pipes for make use of cable crossing where ever required such as existing culverts, trenches and road etc for for LT Cables.	Meters	150	0.00090242
3.17	Erection of Fire Buckets with stand floor mounted type of rigid & good quality-4 nos. 10 liter capacity Fire buckets per stand-Type & make shall be approved by BHEL/ Engineer.	Sets	10	0.0010829
3.18	Erection of Aluminium alloy 4.5kg CO2 fire extinguisher industrial type with ISI Mark of reputed make. Type & make shall be approved by BHEL/ engineer.er.	No	10	0.0010829
3.19	Erection of HT cable route markers standard size with 1m height angle support.	No	200	0.00096259
3.20	Erection of LT cable route markers standard size with 1m height angle support.	No	250	0.00120323
3.21	Erection and fixing of Griddle Guards of length 15m, with 8 SWG GI Wire for Road crossing with necessary fixing arrangement etc, as per IS Specification.	No	6	0.0101333
3.22	E&C of Outdoor type metal clad LT distribution board (LTDB) having IP -55 Protection, Two incomer 400A TPN MCCB with 400A TPN CHANGE OVER SWITCH for EB supply & DG SET POWER SUPPLY and 2 nos. 200 A, 100A 2 nos. TPN MCCB and 2 nos. outgoing feeders with 63 A TPN RCCBs, 3 indicating lamps with fuse for indication bus supply ON, Voltmeter & VSS 0-500V etc. Sufficient space should be provided for the removable cable gland plate to accommodate the power cable and all outgoing cables from suitable connectors from each MCB/RCCB. Neutral link bar for incoming and outgoing neutrals.	No	2	0.00120322
3.23	Dismantling, shifting, re-erection, testing & commissioning of PCC Poles as per BHEL Instruction.	No	10	0.00162437
3.24	Dismantling, shifting, re-erection, testing & commissioning of Rail Poles as per BHEL Instruction.	No	5	0.00144386
3.25	Erection of 6.6 KV and 440V danger board of standard size.	No	40	0.00006348
				0

VOLUME-III PRICE SCHEDULE, REV-00				
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TENDER NO: PSER:SCT:LKP-E2429:26				
BIDDER'S NAME	0			
SCH-4- ELECTRICAL SERVICE				
4	Area Lighting & Yard Lighting			0
4.1	Installation/Erection of steel tubular swaged poles, 9 mtr long made of sheet steel having ultimate tensile strength 42 kg F/sq. mm conforming to BIS: 2713 (part-II) complete with 300x300x6 mm thick MS base plate for welding at site and size as per configuration given in BIS for 410 SP-28 (113 kg- pole weight) with 1.5 mtr deep excavation, concreting in 1:4:8 ratio size 45 cms x 45 cms x 150 cms and pole plinth in 1:3:6 cement concreting having 300 mm height and 300 mm dia including double earthing of pole with suitable arrangement, duly painted with two coats of red oxide paint and one coat of aluminium paint to be applied after erection; the Length of pole below ground to be painted with two coats of black bituminous paint. the pole shall be complete with JB, fuse and minor fabrication as below : i) Driling Nos. 20 mm dia hole at about 2.5 mtr from ground level for wire leads from junction box to light fixture. ii) Driling 15mm dia holes at about 0.7 and at 2.5 mtr from ground level and welding 12 mm nuts for using a 12 mm GI bolt for fastening earth conductors. iii) Welding required holes for fixing pole cap of street light bracket. iv) Welding diametrally 10 mm MS round 30 mm below pole top edge for clipping wire leads. (v) Erection of single arm bracket length 1.5 meter	No	60	0.01082896
4.2	Erection of Electrical junction box (GI/PVC)of good quality to suit the opening availabe in abovelighting pole, one connector block for 3 Phase 4 wire incoming and outgoing cable to next street\ light pole with 01 no. 6A SP MCB for street light and earthing etc.	No	60	0.00072194
4.3	Erection of 100W LED flood light fitting of make Philips/CGL/Bajaj/Havells/Wipro only.	No	70	0.00336901
4.4	Erection of 50mm NB 3.6mm thick medium class standard GI pipe for incoming and outgoing cables.	No	150	0.00072196
4.5	Erection, testing and commissioning of out door type metal clad Lighting distribution board (LDB) having IP-55 protection with double door type and one incomer with 100A TPN MCCB additionally with 3 nos. 32 A TPN RCCBs with 30mA tripping and timer & contactors for auto on/off street lights and 3 indicating lamps with fuse for indication bus supply ON, Digital Voltmeter & VSS 0-500V etc. Suitable bulbar arrangement for Phase and Neutral. Sufficient space should be provided in the removable cable gland plate to accommodate incoming power cable and all outgoing cables.	No	3	0.00180483
4.6	Laying and termination of 2Cx2.5sqmm LT Cable along with supply and erection of double compression type brass cable glands and required number of termination lugs of reputed make suitable for power supply for street light poles.	Meter	3000	0.00541403
4.7	Installation of 30m high lighting mast complete with accessories such as head frame, steel wire, trailing cable, double drum winch galvanized lantern carriage, luminaries and their control gear boxes, electrical control panel (mimumin 12 Nos of 200/400/450W LED Luminaire) as per BHEL Instruction. (Excluding Civil foundation)	NO	5	0.00547116
4.8	Dismantling, shifting,testing & commissioning of 30m high lighting mast complete with accessories such as head frame, steel wire, trailing cable, double drum winch galvanized lantern carriage, luminaries and their control gear boxes (Minimun 12 Nos of 200W/400 W Luminaire) as per BHEL Instruction. (Excluding civil foundation)	No	1	0.00054712
				0
5	SUPPLY & ERECTION PORTION OF BOM FOR CIVIL RELATED WORKS.			0

VOLUME-III PRICE SCHEDULE, REV-00				
Job: Supply, Erection, Testing, Commissioning and Operation & Maintenance (O&M), for Construction Power sources & temporary illumination of all the working areas, at coal to chemical project, BCGCL Lakhanpur, Odissa.				
TENDER NO: PSER:SCT:LKP-E2429:26				
BIDDER'S NAME	0			
SCH-4- ELECTRICAL SERVICE				
5.1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.			0
5.1.1	Excavation of cable trench size 0.4x1.0 m depth in rock for HT cable and 0.4x0.8 m depth for LT cable. After cable laying, the trench will be back filled with excavated earth materials / other outside earth materials with compaction.	CUM	100	0.00222966
5.1.2	Excavation of cable trench size 0.4x1.0 m depth in soil for HT cable and 0.4x0.8 m depth for LT cable. After cable laying, the trench will be back filled with excavated earth materials / other outside earth materials with compaction.	CUM	1800	0.01386278
5.2	Supply & Erection of 3m long 50mm dia 3.6 mm thick medium class GI funnel type earth electrode with filling of bentonite earthing powder as per standard, along with required materials for four side brick work chamber with cement plastering and removable type RCC/ cast iron cover plate. Scope includes supply of required bentonite earthing powder, cement, brick, sand, RCC/cast iron cover plate. Location & Distrubution : 1. Two nos for each four pole Structure and Hlgh Mast	Nos.	40	0.00721931
5.3	Supply and installation of One No. vertical air terminations, 6m height 50 mm NB 3.6mm thick medium class GI Pipe with 1m height lightning spike on the top (total height-7m) with suitable Base plate & foundation bolts for Lightning protection of PSS. Vertical air terminal shall be grounded with earth pits. Required civil works for lightning pole erection and grouting including supply of grouting civil materials are in the scope of Contractor.	Sets	6	0.00314216
5.4	Lights , fans and exhaust Fan, Air conditioner , sockets. MCB's ,Wires DBs ,pipe /casing capping and other electrical works for sub station control room including installation and charging for 6.6 KV Sub Station.	Lumpsum	1	0.0030636
Total				0.24264299

VOLUME-III PRICE SCHEDULE, REV-00				
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TENDER NO: PSER:SCT:LKP-E2429:26				
BIDDER'S NAME	0			
SCH-5- OPERATION AND MAINTAINANCE				
S no	Description	UOM	QTY	Weightage
11	Operation & Maintenance of Construction Power system (36 months)	Lumsum		
11.1	Highly Skilled Supervisor with experience in maintenace of 6.6 KV substation, overhead line, 415 V construction power network, electrical wiring, illumination system, Highmast, BHEL office, Yard etc.	Man-month	36	0.04606832
11.2	Skilled Electrician having valid Electrical license for installation of LT system and adequate experience (minimum 5 years experience or ITI with one year experience) in maintenace of 415 V construction power network, electrical wiring, illumination system etc. alongwith necessary tools, insulation tapes as required for the work [8 hrs shift per day, with paid holiday & weekly off].	Man-month	180	0.19610877
11.3	Semi-skilled Electrical helper having adequate experience (minimum 3 years experience) in maintenace of 415 V construction power distribution network, electrical wiring, general illumination system etc. alongwith necessary tools, insulation tapes as required for the work [8 hrs shift per day, with paid holiday & weekly off].	Man-month	180	0.16293747
Total				0.40511456