



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN - 01

Ref: PSER:SCT:NKP-E1890:18:TCN-01

Date: 23-03-2018

Sub	Tender Change Notice (TCN) - 01.	
Job	PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW North Karanpura STPP, Jharkhand. PACKAGE-2: Erection, Testing & Commissioning of Electrical System for Unit # 2 of 3x660 MW North Karanpura STPP, Jharkhand.	
Ref	1.0	Tender no: PSER:SCT:NKP-E1890:18.
	2.0	BHEL's NIT, vide reference no PSER:SCT:NKP-E1890:6609 Date: 16-03-2018.
	3.0	Other References, if any.

With reference to above, following points/ documents, relevant to tender, may please be noted and complied with while submitting offer.

- 1) Revised PRE QUALIFICATION CRITERIA (R-01) (ANNEXURE-1) attached, superseding previous criteria issued along with NIT.
- 2) BOQ cum Price Schedule format "VOLUME-III - PRICE SCHEDULE (PACKAGE-1), REV-00 and VOLUME-III-PRICE SCHEDULE (PACKAGE-2), REV-00" has been revised as "VOLUME-III-PRICE SCHEDULE (PACKAGE-1), REV-01 and VOLUME-III- PRICE SCHEDULE (PACKAGE-2), REV-01" which is enclosed herewith.

Bidders are requested to submit their offer as per revised BOQ/Price Schedule only and quote their price accordingly. Offer from bidders in superseded price schedules (Vol-III-Price schedule (Package-1)-REV-00 & Vol-III- Price schedule (Package-2)-REV-00) shall not be considered. Bidders are also requested to submit a declaration in techno-commercial offer that they have submitted their price bid in sealed envelopes as per **REVISED Price Schedule** format.

- 3) Revised 'No deviation certificate' as per enclosed Annexure-2. Bidder shall submit no deviation certificate as per enclosed format only.
- 4) All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,
for BHARAT HEAVY ELECTRICALS LTD

Sr.Engineer (SCT)

Encl: As Above.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION, DJ-9/1, SECTOR-II, SALT LAKE CITY, KOLKATA - 700 091

फैक्स/Fax : (033) 23211960

फोन/Phone : बोर्ड/EPABX : (033) 2339-8000/ 2339 8236

TENDER NO – PSER:SCT:NKP-E1890:18		
TCN-01	PRE QUALIFICATION CRITERIA - ANNEXURE-1 (REV 01)	PAGE 1 OF 2

ANNEXURE – 1 (R-01)

PRE QUALIFICATION CRITERIA

JOB	PACKAGE-1: ERECTION, TESTING & COMMISSIONING OF ELECTRICAL SYSTEM FOR UNIT # 1 AND COMMON SYSTEM OF 3X660 MW NORTH KARANPURA STPP, JHARKHAND. PACKAGE-2: ERECTION, TESTING & COMMISSIONING OF ELECTRICAL SYSTEM FOR UNIT # 2 OF 3X660 MW NORTH KARANPURA STPP, JHARKHAND.
TENDER NO	PSER:SCT:NKP-E1890:18.

SL.NO.	PRE-QUALIFICATION CRITERIA
1.0 (a)	BIDDER SHOULD HAVE AVERAGE MINIMUM ANNUAL TURNOVER OF Rs. 2.78 CRORES AND 2.47 CRORES RESPECTIVELY FOR PACKAGE # 1 AND PACKAGE # 2 DURING THE LAST 3 (THREE) FINANCIAL YEARS, ENDING ON 31-03-2017 AND SHOULD HAVE POSITIVE NET WORTH AS ON LATEST AUDITED ACCOUNTS AS SUBMITTED FOR PARA 1 (C).
(b)	BIDDER MUST HAVE EARNED PROFIT IN ANY ONE OF THE LAST THREE FINANCIAL YEARS ENDING ON 31.03.2017. AUDITED BALANCE SHEET AND PROFIT & LOSS ACCOUNT OF THE COMPANY FOR LAST 3 (THREE) FINANCIAL YEARS, ENDING ON 31.03.2017 NEED TO BE SUBMITTED IN SUPPORT OF ABOVE.
(c)	IN CASE AUDITED BALANCE SHEET AND PROFIT AND LOSS ACCOUNT HAS NOT BEEN SUBMITTED FOR ALL THREE YEARS INDICATED ABOVE THEN THE APPLICABLE FINANCIAL AUDITED STATEMENTS SUBMITTED BY THE BIDDERS AGAINST THE REQUISITE THREE YEARS WILL BE AVERAGED FOR THREE YEARS.
(d)	IF FINANCIAL STATEMENTS ARE NOT REQUIRED TO BE AUDITED STATUTORILY, THEN INSTEAD OF AUDITED FINANCIAL STATEMENTS, FINANCIAL STATEMENTS ARE REQUIRED TO BE CERTIFIED BY THE CHARTERED ACCOUNTANT.
2.0	BIDDER SHOULD HAVE EXECUTED ELECTRICAL OR C&I OR "ELECTRICAL AND C&I" WORKS IN THE CONSTRUCTION OF POWER/ INDUSTRIAL PROJECTS DURING LAST 7 (SEVEN) YEARS, ENDING ON THE LASTEST DUE DATE OF SUBMISSION OF OFFER, VALUE OF WHICH SHOULD BE EITHER OF THE FOLLOWING. RELEVANT DOCUMENT IN SUPPORT OF ABOVE SHALL BE SUBMITTED.
2.1	1 (SINGLE) WORK OF VALUE NOT LESS THAN Rs. 7.42 CRORES FOR PACKAGE-1 AND Rs. 6.59 CRORES FOR PACKAGE-2.
	OR
2.2	2 (TWO) WORKS EACH OF VALUE NOT LESS THAN Rs. 4.64 CRORES FOR PACKAGE-1 AND Rs. 4.12 CRORES FOR PACKAGE-2.
	OR
2.3	3 (THREE) WORKS EACH OF VALUE NOT LESS THAN Rs. 3.71 CRORES FOR PACKAGE-1 AND Rs. 3.30 CRORES FOR PACKAGE-2.
3.0	BIDDER SHOULD HAVE EXECUTED FOLLOWING WORKS OF ELECTRICAL/C&I WORK IN POWER/ INDUSTRIAL PROJECTS DURING LAST 7 (SEVEN) YEARS, ENDING ON LATEST DUE DATE OF OFFER SUBMISSION. RELEVANT SUPPORTING DOCUMENT SHALL BE SUBMITTED.
	3.1 CABLE TRAYS
	3.2 CABLING
	3.3 SWITCHGEAR PANELS
4.0	BIDDER SHOULD HAVE VALID PAN

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION, DJ-9/1, SECTOR-II, SALT LAKE CITY, KOLKATA - 700 091

फैक्स/Fax : +91 33 23211960

फोन/Phone : बोर्ड/EPABX : +91 33 23398000, Dir: +91 33 2339 8236

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TCN-01	PRE QUALIFICATION CRITERIA - ANNEXURE-1 (REV 01)	PAGE 2 OF 2

	RELEVANT DOCUMENT IN SUPPORT OF ABOVE SHALL BE SUBMITTED.
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NOTE:

(BIDDER SHALL SPECIFICALLY NOTE FOLLOWING POINTS & COMPLY WITH WHILE SUBMITTING TENDER)

A	CONSORTIUM / JV BIDDING IS NOT ALLOWED.
B	THE TERM 'EXECUTED' AT SL NO. 3.0 ABOVE MEANS 'CHARGING' IN RESPECT OF CABLE AND SWITCH GEAR.
C	AFTER SATISFACTORY FULFILLMENT OF ALL THE ABOVE CRITERIA, OFFER SHALL BE CONSIDERED FOR FURTHER EVALUATION AS PER NIT AND ALL OTHER TERMS OF THE TENDER.
D	IN CASE THE JOB IS UNDER EXECUTION, THE VALUE OF EXECUTED PORTION OF THE JOB SHALL AT LEAST CORRESPOND TO THE RESPECTIVE VALUES SPECIFIED EVEN IF THE CONTRACT HAS NOT BEEN COMPLETED OR CLOSED.
E	THE TENDER COMPRISES OF 2 PACKAGES, PACKAGE-1 & PACKAGE-2. BIDDER MAY SUBMIT OFFER FOR EITHER OF PACKAGES OR FOR BOTH PACKAGES. PACKAGE-1 & PACKAGE-2 SHALL BE EVALUATED SEPARATELY.
F	REVERSE AUCTION / PRICE BID OPENING OF PACKAGE-1 WILL BE DONE FIRST, FOLLOWED BY PACKAGE-2. SUCCESSFUL BIDDER OF PACKAGE-1 WILL NOT CONSIDERED FOR PACKAGE-2.

**VOLUME-III
PRICE SCHEDULE, REV-01
(PACKAGE-1)**

JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW North Karanpura STPP, Jharkhand.

TENDER NO PSER:SCT:NKP-E1890:18

PREAMBLE

SL NO	DESCRIPTION
1	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.
2	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 tender purposes and giving some idea of the work involved. The work is to be executed as per drawings & documents, which shall be furnished during execution.
3	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
4	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	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. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra items, if any but excluding any price variation remains, within plus minus fifteen percent ($\pm 15\%$) of the awarded price as per LOI.
6	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	In case Sealed /Paper Price Bids are opened for finalisation of the tender, for any Item Rate/BOQ based contract, possibility of variation of quantity/ addition/deletion of items can not be ruled out. Under such circumstances, after execution of work, if it is observed that standing as L-1 is changed based on actual quantity executed, the bidder shall give suitable rebate to maintain your standing as L-1. Since this aspect can be assessed at the end of execution, necessary adjustment will be effected at the end of execution in final bill. This condition shall not be applicable where the tender is finalised through Reverse Auction.
8	BHEL reserve the right to rationalize the rates, quoted by L-1 bidder against unit rate items and/ or other optional items with respect to item-wise lowest rates (amongst the participating bidders), before placement of order.
9	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.
10	Rates shall be quoted in figures and in words in clear legible writing. No overwriting is allowed. All scoring and cancellations should be countersigned and in case of illegibility the interpretation of engineer shall be final. All entries shall be in English language.
11	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.
12	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.
13	No splitting of the job is envisaged. Decision of BHEL in this regard shall be final and binding to the bidders.
14	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/altered 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.
15	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."
16	For Lumpsum Service Contract : The items/components indicated in the tender is indicative and may vary to any extent. No compensation shall be payable in case of any variation in the items/components listed in the bill of quantities if the executed weight remains within the variation limit. However, in case of deletion of any item or addition of new items over and above the items listed or variation of existing quantity beyond variation limit specified, adjustment (i.e. Payment or recovery as the case may be) shall be done on pro-rata basis based on the Rate per MT worked out from the quoted lump-sum Price and the total weight of components listed /indicated in price schedule plus 15% weight variation limit.
17	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.
18	In case of tender for Civil and/or Structural works, if the Non-schedule items are not quoted by the bidder, it will be treated at par with rate of corresponding item of CPWD/PWD/DSR schedule as prescribed in the tender/BOQ cum Rate Schedule.
19	No interest, whatsoever, shall be payable by BHEL on the security deposit, any bank guarantee submitted or any amount due to successful bidder/contractor.
20	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.
21	Bidder's Total price will be considered for evaluation unless stated otherwise.
22	In case of BOP packages, if Bidder does not quote/indicate the price for freight charges against indicated rate schedule, the same shall be considered as 2% of basic price and adjusted with the total quoted price against each item keeping the total quoted price unaltered.

**VOLUME-III
PRICE SCHEDULE, REV-01
(PACAKGE-1)**

JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW North Karanpura STPP, Jharkhand.

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-1 MAIN PRICE

SL NO	ITEM/SCHEDULE	ALLOCATED %AGE FOR DERIVING THE JOB VALUE	QUOTED PRICE (RS.) (IN FIGURES AND WORDS)
1	TOTAL PRICE FOR SERVICE PART AS PER SCH-2	0.9745863	
2	TOTAL PRICE FOR SUPPLY PART AS PER SCH-3	0.0254137	
3	GRAND TOTAL (SL. NO.1+ SL.NO.2)	1.0000000	
NOTE:			
A)	BIDDER'S QUOTED GRAND TOTAL PRICE AT SL NO 3 ABOVE SHALL BE TAKEN INTO ACCOUNT FOR EVALUATION AND AWARDING AND HENCE, SHALL BE COMPLETE IN ALL RESPECT FOR THE FULL SCOPE DEFINED IN SPECIFICATION AND IN ACCORDANCE WITH ALL TERMS & CONDITIONS OF TENDER.		
B)	BIDDER SHALL QUOTE THE TOTAL PRICE AT SL. NO 3 AND THE CORRESPONDING VALUES FOR SERVICE AND SUPPLY SCOPE SHALL BE DERIVED ACCORDING TO THE ALLOCATED PERCENTAGE.		
C)	INDIVIDUAL ITEM RATES FOR THE SERVICE AND SUPPLY SCOPE AS PER SCH-2 AND SCH-3 SHALL BE CALCULATED W.R.T THE QUOTED PRICES AT SRL. NO. 1 & 2 RESPECTIVELY.		
D)	PRICE FORMAT SHALL NOT BE CHANGED BY BIDDER IN ANY CASE, SINCE IT MAY LEAD TO CANCELLATION OF OFFER.		

**VOLUME-III
PRICE SCHEDULE, REV-01
(PACAKGE-1)**

**JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW
North Karanpura STPP, Jharkhand.**

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-2: SERVICE PRICE

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
A	CABLE TRAYS (complete with Coupler plate, Fastners, clamp, and fixing hardware etc.) (including site modifications required for 'A', 'B', 'C' & 'D' types of bends / turns as required to suit site layout)			
A.1	GALVANISED MS LADDER TYPE CABLE TRAY			
1.0	600mm wide	Metres	32650.00	0.02990212
2.0	450mm wide	Metres	5666.67	0.0041518
3.0	300mm wide	Metres	12646.00	0.00817531
4.0	150mm wide	Metres	4200.00	0.00230791
5.0	100mm wide	Metres	166.67	0.00009158
A.2	GALVANISED MS PERFORATED TYPE CABLE TRAY			
1.0	600mm wide	Metres	9000.00	0.00989105
2.0	450mm wide	Metres	1200.00	0.00109901
3.0	300mm wide	Metres	1500.00	0.00109901
4.0	150mm wide	Metres	1700.00	0.00109901
5.0	100mm wide	Metres	4200.00	0.00271519
6.0	50mm wide (ladder/ perforated/solid bottom)	Metres	500.00	0.00027475
A.3	CABLE TROUGH			
1.0	CABLE TROUGH 2 MM THICK 50 MM WIDTH	Metres	200.00	0.0001099
2.0	CABLE TROUGH 2 MM THICK 75 MM WIDTH	Metres	200.00	0.0001099
B	CABLE TRAY ACCESSORIES			
B.1	(LADDER TYPE)			
B.1.1	HORIZONTAL 90 DEG. BEND 600 MM RADIUS			
1.0	600mm wide	Nos.	220	0.00100742
2.0	450mm wide	Nos.	20	0.00009158
3.0	300mm wide	Nos.	45	0.00016485
B.1.2	VERTICAL 90 DEG. BEND 600 MM RADIUS (INSIDE)			
1.0	600mm wide	Nos.	65	0.00029765
2.0	450mm wide	Nos.	20	0.00009158
3.0	300mm wide	Nos.	30	0.0001099
B.1.3	VERTICAL 90 DEG. BEND 600 MM RADIUS (OUTSIDE)			
1.0	600mm wide	Nos.	100	0.00045792
2.0	450mm wide	Nos.	20	0.00009158
3.0	300mm wide	Nos.	40	0.00014653
B.1.4	TEES 600 MM RADIUS			
1.0	600mm wide	Nos.	400	0.00256435
2.0	450mm wide	Nos.	20	0.00012822
3.0	300mm wide	Nos.	35	0.00022438
B.1.5	CROSSES 600 MM RADIUS			
1.0	600mm wide	Nos.	25	0.00016027
2.0	450mm wide	Nos.	20	0.00012822
3.0	300mm wide	Nos.	4	0.00002564
B.1.6	REDUCERS LHS /RHS			
1.0	600mm wide - 450mm wide	Nos.	7	0.00003205
2.0	600mm wide - 300mm wide	Nos.	18	0.00008243
3.0	450mm wide - 300mm wide	Nos.	4	0.00001832
B.2	(PERFORATED TYPE)			
B.2.1	HORIZONTAL 90 DEG. BEND 600 MM RADIUS			
1.0	600mm wide	Nos.	196	0.00089752
2.0	450mm wide	Nos.	7	0.00003205
3.0	300mm wide	Nos.	28	0.00010257
4.0	150mm wide	Nos.	7	0.00002564
B.2.2	VERTICAL 90 DEG. BEND 600 MM RADIUS (INSIDE)			
1.0	600mm wide	Nos.	15	0.00006869
2.0	450mm wide	Nos.	7	0.00003205
3.0	300mm wide	Nos.	14	0.00005129
B.2.3	VERTICAL 90 DEG. BEND 600 MM RADIUS (OUTSIDE)			
1.0	600mm wide	Nos.	25	0.00016027
2.0	450mm wide	Nos.	7	0.00004488
3.0	300mm wide	Nos.	42	0.00019233
B.2.4	TEES 600 MM RADIUS			
1.0	600mm wide	Nos.	266	0.00170529
2.0	450mm wide	Nos.	7	0.00004488
3.0	300mm wide	Nos.	14	0.00008975
B.2.5	CROSSES 600 MM RADIUS			
1.0	600mm wide	Nos.	300	0.00192326
2.0	450mm wide	Nos.	7	0.00004488
3.0	300mm wide	Nos.	4	0.00002564
B.2.6	REDUCERS LHS /RHS			

JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW North Karanpura STPP, Jharkhand.

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-2: SERVICE PRICE

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
1.0	600mm wide - 450mm wide	Nos.	7	0.00003205
2.0	600mm wide - 300mm wide	Nos.	7	0.00003205
3.0	450mm wide - 300mm wide	Nos.	4	0.00001832
C	GALVANISED CABLE TRAY COVER COMPLETE WITH ACCESSORIES			
1.0	600mm wide	Metres	1400	0.00384652
2.0	450mm wide	Metres	500	0.00137376
3.0	300mm wide	Metres	850	0.00155692
4.0	150mm wide	Metres	200	0.00027583
D	CABLE TRAY SUPPORT MATERIAL (INCLUDING FABRICATION OF BASE FRAME OF SWITCHGEAR, PANEL,LPB. STARTER ETC.) (Angles, Channels, beams etc.)	MT	100	0.02747084
DA	CABLE TRAY SUPPORT MATERIAL (BOLTABLE TYPE)			
1.0	CABLE TRAY SUPPORT SYSTEM, WITH ANGLE FITTING, CLAMP, CHANNEL, ETC (BOLTABLE TYPE)			
1.1	SINGLE CHANNEL SC1	Mtr.	15000	0.0207405
1.2	DOUBLE CHANNEL DC1	Mtr.	4000	0.00645224
2.0	CANTILEVER ARM WITH HEX BOLT & WASHER, SPRING NUT, PAN HEAD SCREW & WASHER, ETC			
2.1	CANTILEVER ARM 750 MM FOR 600MM WIDE CABLE TRAY	No	400	0.00025812
2.2	CANTILEVER ARM 620/650 MM FOR 600 MM WIDE CABLE TRAY	No	23000	0.01484164
2.3	CANTILEVER ARM 500 MM FOR 450 MM WIDE CABLE TRAY	No	250	0.00014117
2.4	CANTILEVER ARM 320 MM FOR 300MM WIDE CABLE TRAY	No	8000	0.00335563
2.5	CANTILEVER ARM 170 MM FOR 150MM WIDE CABLE TRAY	No	1200	0.00030979
AE.1	FABRICATION OF IRREGULAR BEND TO BE DONE FROM THE EXISTING LADDER TYPE CABLE TRAY AS PER SITE REQUIREMENT (cable tray material will be issued by BHEL free of cost) (CONSUMABLES etc. TO BE PROVIDED BY VENDOR) (Applicable for BEND TYPE 'E', 'F' & G)			
1.0	IRREGULAR BEND FOR LADDER 600 MM WIDE TRAYS	NOS	350	0.00160272
2.0	IRREGULAR BEND FOR LADDER 450 MM WIDE TRAYS	NOS	280	0.00102574
3.0	IRREGULAR BEND FOR LADDER 300 MM WIDE TRAYS	NOS	280	0.0007693
4.0	IRREGULAR BEND FOR LADDER 150 MM WIDE TRAYS	NOS	500	0.00091584
AE.2	FABRICATION OF IRREGULAR BEND TO BE DONE FROM THE EXISTING PERFORATED TYPE CABLE TRAY AS PER SITE REQUIREMENT (cable tray material will be issued by BHEL free of cost) (CONSUMABLES etc. TO BE PROVIDED BY VENDOR) (Applicable for BEND TYPE 'E', 'F' & G)			
2.0	IRREGULAR BEND FOR PERF 600 MM WIDE TRAYS	NOS	170	0.00108985
3.0	IRREGULAR BEND FOR PERF 450 MM WIDE TRAYS	NOS	200	0.00109901
4.0	IRREGULAR BEND FOR PERF 300 MM WIDE TRAYS	NOS	200	0.00091584
5.0	IRREGULAR BEND FOR PERF 150 MM WIDE TRAYS	NOS	260	0.00095247
E	GALVANISED MS CONDUIT/ PIPE WITH COUPLER, BEND, CLAMP, ETC			
E.1	GALVANISED MS RIGID CONDUITS			
1.0	20-30 mm diameter	Metres	500	0.0003394
2.0	50 mm diameter	Metres	1000	0.00082964
3.0	75 mm diameter	Metres	300	0.00027475
4.0	100-125 mm diameter	Metres	300	0.00040728
E.2	FLEXIBLE CONDUIT (MADE OF COLD ROLLED ANNEALED ELECTRO GALVANISED MS STRIP, CLAMP, ETC)			
1.0	20-25 mm diameter	Metres	300	0.00013576
2.0	40-50 mm diameter	Metres	150	0.00010344
3.0	75-100 mm diameter	Metres	70	0.00006411
F	CABLE LAYING (INCLUDES SUPPLY & INSTALLATION OF REQUIRED CLAMP, AL STRIP, SADDLE, ETC FOR CABLE DRESSING, CLAMPING, ETC. TREFOIL CLAMP FOR SINGLE CORE CABLE OF OD 30 MM TO 50 MM, WILL BE SUPPLIED BY BHEL FREE OF COST)			
F.1	33/ 19 KV AL CONDUCTOR/ XLPE INSULATED/ ARMoured/ UNEARTHED GRADE POWER CABLE			

**JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW
North Karanpura STPP, Jharkhand.**

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-2: SERVICE PRICE

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
1.0	1C-185 SQMM	KM	2	0.00146534
F.2	11/ 11 KV AL CONDUCTOR/ XLPE INSULATED/ ARMoured/ GRADE POWER CABLE			
1.0	1C-300 SQMM	KM	0.5	0.00027475
2.0	1CX630 SQMM	KM	5	0.00323237
3.0	3C-185 SQMM	KM	1	0.00073267
F.3	11/ 11 KV AL CONDUCTOR/ XLPE INSULATED/ UN-ARMoured/ GRADE POWER CABLE			
1.0	1CX630 SQMM	KM	10	0.00646474
2.0	3C-185 SQMM	KM	12	0.00879205
F.4	3.3/ 3.3 KV AL CONDUCTOR/ XLPE INSULATED/ ARMoured/ UNEARTHED GRADE POWER CABLE			
1.0	1C-630 SQMM	KM	1	0.0005495
F.5	3.3/ 3.3 KV AL CONDUCTOR/ XLPE INSULATED/ UN-ARMoured/ UNEARTHED GRADE POWER CABLE			
1.0	1C-185 SQMM	KM	1	0.00046331
2.0	3C-185 SQMM	KM	9	0.00581827
F.6	1.1 KV LT ALUMINIUM .XLPE POWER CABLE (ARMoured/UNARMoured)			
1.0	1C-6 sq mm	KM	0.5	0.00004862
2.0	1C-10 sq mm	KM	0.5	0.00004862
3.0	1C-25 sq mm	KM	0.5	0.00004862
4.0	1C-35 sq mm	KM	15	0.00274751
5.0	1C-50 sq mm	KM	0.5	0.00009158
6.0	1C-70 sq mm	KM	13	0.00308153
7.0	1C-95 sq mm	KM	0.5	0.00011852
8.0	1C-120 sq mm	KM	4	0.00146534
9.0	1C-185 sq mm	KM	0.5	0.00018317
10.0	1C-400 sq mm	KM	6	0.00329702
11.0	1C-630 sq mm	KM	25	0.01373757
12.0	2C-2.5 sqmm	KM	50	0.00430983
13.0	2C-10 sqmm	KM	4	0.00043098
14.0	2C-25 sqmm	KM	1	0.00018317
15.0	2C-50 sqmm	KM	0.5	0.00011852
16.0	2C-95 sqmm	KM	9	0.00252125
17.0	2C-120 sq mm	KM	91	0.03333658
18.0	2C-150 sqmm	KM	0.5	0.00018317
19.0	2C-185 sqmm	KM	0.5	0.00018317
20.0	3C-2.5 sq mm	KM	205	0.01767029
21.0	3C-6 sq mm	KM	0.5	0.00005387
22.0	3C-10 sq mm	KM	24	0.0025859
23.0	3C-16 sq mm	KM	11.5	0.00123908
24.0	3C-25 sq mm	KM	46	0.0049563
25.0	3C-35 sq mm	KM	0.5	0.00005387
26.0	3C-50 sq mm	KM	12	0.00219801
27.0	3C-70 sq mm	KM	4	0.00073267
28.0	3C-95 sq mm	KM	8	0.00189632
29.0	3C-120 sq mm	KM	0.5	0.00011852
30.0	3C-150 sq mm	KM	4	0.00219801
31.0	3C-240 sq mm	KM	21	0.01153956
32.0	3C-400 sq mm	KM	0.5	0.00032324
33.0	3.5C-25 sq mm	KM	15	0.00210104
34.0	3.5C-50 sq mm	KM	22	0.00521489
35.0	3.5C-95 sq mm	KM	8	0.00224111
36.0	3.5C-120 sq mm	KM	0.5	0.00014007
37.0	3.5C-150 sq mm	KM	0.5	0.00014007
38.0	3.5C-185 sq mm	KM	4	0.00219801
39.0	3.5C-300 sq mm	KM	0.5	0.00027475
40.0	4C- 4 sq mm	KM	10	0.00107746
41.0	4C-10 sq mm	KM	0.5	0.00005387
42.0	4C-16 sq mm	KM	0.5	0.00005387
43.0	4C-50 sq mm	KM	1.5	0.00027475
F.7	1.1 KV LT COPPER XLPE POWER CABLE			
1.0	1C-70 sq mm	KM	0.5	0.00011852
2.0	1C-240 sq mm	KM	0.5	0.00018317
3.0	1C-630 sq mm	KM	0.5	0.00027475
4.0	2C-2.5 sq mm	KM	12	0.00103436
5.0	2C-6 sq mm	KM	0.5	0.00005387
6.0	2C-10 sq mm	KM	0.5	0.00005387
7.0	2C-25 sq mm	KM	0.5	0.00009158
8.0	2C-70 sq mm	KM	0.5	0.00011852
9.0	3C-2.5 sq mm	KM	73	0.00629235
10.0	3C-6 sq mm	KM	0.5	0.00005387

**JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW
North Karanpura STPP, Jharkhand.**

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-2: SERVICE PRICE

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
11.0	3C-50 sq mm	KM	0.5	0.00009158
12.0	4C-1.5 sq mm	KM	0.5	0.0000431
13.0	4C-35 sq mm	KM	0.5	0.00007003
F.8	LT. COPPER FIRE SURVIVAL CABLE			
1.0	1C-150 sq mm	KM	0.5	0.00018317
2.0	1C-400 sq mm	KM	0.5	0.00027475
3.0	2C-95 sq mm	KM	0.5	0.00014007
4.0	3C-2.5 sq mm	KM	0.5	0.0000431
5.0	5C-2.5 sq mm	KM	0.5	0.00005387
F.9	1.1 KV LT. COPPER CONTROL CABLE (AROURED/UNARMOURED)			
1.0	2C-1.5 sq mm	KM	80	0.00689572
2.0	2C-2.5 sq mm	KM	1	0.0000862
3.0	2C-4 sq mm	KM	0.5	0.00005387
4.0	3C-1.5 sq mm	KM	98	0.00844726
5.0	3C-2.5 sq mm	KM	5	0.00043098
6.0	4C-1.5 sq mm	KM	17	0.00183168
7.0	4C-4 sq mm	KM	0.5	0.00005387
8.0	4C-2.5 sq mm	KM	0.5	0.00005387
9.0	5C - 1.5 sqmm	KM	52	0.00560277
10.0	5C - 2.5 sqmm	KM	30	0.00323237
11.0	5C - 4 sqmm	KM	0.5	0.00007003
12.0	5C - 10 sqmm	KM	0.5	0.00007003
13.0	7C - 1.5 sqmm	KM	41	0.00530109
14.0	7C - 2.5 sqmm	KM	5	0.00064647
15.0	10C - 1.5 sqmm	KM	53.1	0.00686555
16.0	10C - 2.5 sqmm	KM	10	0.00129295
17.0	12C - 1.5 sqmm	KM	51	0.00659404
18.0	12C - 2.5 sqmm	KM	0.5	0.00006465
19.0	14C-1.5 sq mm	KM	0.5	0.00008081
20.0	16C-2.5 sq mm	KM	3	0.00048486
21.0	19C-1.5 sq mm	KM	2	0.00032324
22.0	19C-2.5 sq mm	KM	0.5	0.00008081
23.0	24C-1.5 sq mm	KM	1.5	0.00027349
24.0	24C-2.5 sq mm	KM	1	0.00018233
25.0	1C-2.5 sq mm COPPER Wire for ACC system (including termination)	KM	8	0.00068957
F.10	1.1 KV SCREENED CABLE			
1.0	Individual & Overall Screened Cable (Type-F) - Unarmoured cable			
	Multi pair (twisted) individual & overall shielded instrumentation cables (Type-F)			
1.1	225V Type-F(IO) 2P-0.5 unarmoured	KM	18	0.00155154
1.2	225V Type-F(IO) 4P-0.5 unarmoured	KM	80	0.00861965
1.3	225V Type-F(IO) 8P-0.5 unarmoured	KM	30	0.00387884
1.4	225V Type-F(IO) 12P-0.5 unarmoured	KM	24	0.00362025
1.5	225V Type-F(IO) 20P-0.5 unarmoured	KM	7	0.00158386
2.0	Overall Screened cable (Type-G) - Unarmoured cable			
	Multi pair (twisted) overall shielded instrumentation cables (Type-G)			
2.1	225V Type-G(O) 2P-0.5 unarmoured	KM	12	0.00103436
2.2	225V Type-G(O) 4P-0.5 unarmoured	KM	185	0.01993295
2.3	225V Type-G(O) 8P-0.5 unarmoured	KM	45	0.00581827
2.4	225V Type-G(O) 12P-0.5 unarmoured	KM	15	0.00226266
3.0	Overall Screened cable (Type-G) - Armoured cable			
	Multi pair (twisted) overall shielded instrumentation cables (Type-G)			
3.1	225V Type-G(O) 2P-0.5 Armoured	KM	1	0.0000862
3.2	225V Type-G(O) 4P-0.5 Armoured	KM	4	0.00043098
3.3	225V Type-G(O) 12P-0.5 Armoured	KM	2.5	0.00037711
F.11	OTHER CABLES (including termination)			
1.0	CAT - 5e COMMUNICATION CABLE WITHOUT CONDUIT	KM	1	0.00006078
2.0	CAT - 5e COMMUNICATION CABLE WITH CONDUIT	KM	1	0.00012929
3.0	OPTICAL FIBRE CABLE WITHOUT CONDUIT	KM	1.5	0.00014586
4.0	OPTICAL FIBRE CABLE WITH CONDUIT	KM	1.5	0.00029174
5.0	PTFE signal cable, earthing cable alongwith flexible GI conduit for Hopper Ash level indicator system.	KM	3	0.00038788
6.0	LT SCREENED CU UNARMOURED CABLE - 4C x 1.5 SQ. MM FOR ESP	KM	59	0.00635699
G	CABLE TERMINATION & JOINT KITS			

**JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW
North Karanpura STPP, Jharkhand.**

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-2: SERVICE PRICE

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
G.1	FOR 11/11 KV GRADE, XLPE INSULATED, ALUMINIUM CONDUCTOR CABLES FOR THE FOLLOWING SIZES			
1.0	1CX630 Unarmoured (Indoor type)	Nos	80	0.00293068
2.0	1CX630 Armoured (Indoor type)	Nos	12	0.0004396
3.0	03C X 185 SQ. MM Unarmoured (Indoor type)	Nos	80	0.00293068
4.0	03C X 185 SQ. MM Armoured (Indoor type)	Nos	4	0.00014653
G.2	FOR 3.3/3.3 KV GRADE, XLPE INSULATED, ALUMINIUM CONDUCTOR CABLES FOR THE FOLLOWING SIZES			
1.0	1C X 185 SQ. MM Unarmoured (Indoor type)	Nos.	10	0.00032324
2.0	3C X 185 SQ. MM Unarmoured (Indoor type)	Nos.	70	0.00256435
3.0	1C X 630 Armoured (Indoor type)	Nos.	15	0.0005495
4.0	1C X 400 SQ. MM Unarmoured (Indoor type)	Nos.	6	0.0002198
G.3	19/33kV,XLPE INSULATED ARMOURED AL CABLE FOR THE FOLLOWING SIZES			
1.0	1C X 185 SQ. MM armoured (Indoor type)	Nos.	15	0.00129295
	STRAIGHT THROUGH JOINTING KITS			
G.4	FOR 11/11 KV GRADE, XLPE INSULATED, ALUMINIUM CONDUCTOR CABLES FOR THE FOLLOWING SIZES			
1.0	1CX630 Unarmoured (Indoor type)	Nos.	1	0.00004579
2.0	1CX630 Armoured (Indoor type)	Nos.	6	0.00027475
3.0	03C X 185 SQ. MM Unarmoured (Indoor type)	Nos.	2	0.00009158
4.0	03C X 185 SQ. MM Armoured (Indoor type)	Nos.	1	0.00004579
G.5	FOR 3.3/3.3 KV GRADE, XLPE INSULATED, ALUMINIUM CONDUCTOR CABLES FOR THE FOLLOWING SIZES			
1.0	3C X 185 SQ. MM Unarmoured (Indoor type)	Nos.	1	0.00004579
G.6	1.1 KV LT ALUMINIUM .XLPE POWER CABLE			
1.0	1C-6 sq mm	Nos.	10	0.00001659
2.0	1C-10 sq mm	Nos.	10	0.00001821
3.0	1C-25 sq mm	Nos.	10	0.00001821
4.0	1C-35 sq mm	Nos.	40	0.0000918
5.0	1C-50 sq mm	Nos.	10	0.00002295
6.0	1C-70 sq mm	Nos.	30	0.00006885
7.0	1C-95 sq mm	Nos.	10	0.00002295
8.0	1C-120 sq mm	Nos.	10	0.00006874
9.0	1C-185 sq mm	Nos.	4	0.0000275
10.0	1C-400 sq mm	Nos.	20	0.00013748
11.0	1C-630 sq mm	Nos.	60	0.00041245
12.0	2C-2.5 sqmm	Nos.	150	0.00027475
13.0	2C-10 sqmm	Nos.	16	0.00003672
14.0	2C-25 sqmm	Nos.	6	0.00001377
15.0	2C-50 sqmm	Nos.	6	0.00001377
16.0	2C-95 sqmm	Nos.	26	0.00005967
17.0	2C-120 sq mm	Nos.	240	0.0016498
18.0	2C-150 sqmm	Nos.	10	0.00006874
19.0	2C-185 sqmm	Nos.	10	0.00006874
20.0	3C-2.5 sq mm	Nos.	600	0.00109901
21.0	3C-6 sq mm	Nos.	30	0.00005495
22.0	3C-10 sq mm	Nos.	80	0.0001836
23.0	3C-16 sq mm	Nos.	60	0.0001377
24.0	3C-25 sq mm	Nos.	120	0.0002754
25.0	3C-35 sq mm	Nos.	10	0.00002295
26.0	3C-50 sq mm	Nos.	40	0.0000918
27.0	3C-70 sq mm	Nos.	12	0.00002754
28.0	3C-95 sq mm	Nos.	26	0.00005967
29.0	3C-120 sq mm	Nos.	6	0.00001377
30.0	3C-150 sq mm	Nos.	12	0.00008249
31.0	3C-240 sq mm	Nos.	62	0.0004262
32.0	3C-400 sq mm	Nos.	6	0.00004125
33.0	3.5C-25 sq mm	Nos.	46	0.00010557
34.0	3.5C-50 sq mm	Nos.	60	0.0001377
35.0	3.5C-95 sq mm	Nos.	20	0.0000459
36.0	3.5C-120 sq mm	Nos.	6	0.00001377
638.0	3.5C-150 sq mm	Nos.	6	0.00001377
38.0	3.5C-185 sq mm	Nos.	12	0.00008249
39.0	3.5C-300 sq mm	Nos.	4	0.0000275
40.0	4C- 4 sq mm	Nos.	30	0.00005495
41.0	4C-10 sq mm	Nos.	10	0.00006874
42.0	4C-16 sq mm	Nos.	8	0.00005499
43.0	4C-50 sq mm	Nos.	8	0.00005499
G.7	1.1 KV LT COPPER .XLPE POWER CABLE			
1.0	1C-70 sq mm	Nos.	6	0.00001377
2.0	1C-240 sq mm	Nos.	4	0.0000275

**JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW
North Karanpura STPP, Jharkhand.**

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-2: SERVICE PRICE

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
3.0	1C-630 sq mm	Nos.	4	0.0000275
4.0	2C-2.5 sq mm	Nos.	40	0.00007327
5.0	2C-6 sq mm	Nos.	10	0.00001832
6.0	2C-10 sq mm	Nos.	10	0.00001832
7.0	2C-25 sq mm	Nos.	10	0.00001832
8.0	2C-70 sq mm	Nos.	6	0.00001099
9.0	3C-2.5 sq mm	Nos.	1400	0.00256435
10.0	3C-6 sq mm	Nos.	10	0.00001832
11.0	3C-50 sq mm	Nos.	8	0.00001465
12.0	4C-1.5 sq mm	Nos.	10	0.00001832
13.0	4C-35 sq mm	Nos.	8	0.00005499
G.8	LT. COPPER FIRE SURVIVAL CABLE			
1.0	1C-150 sq mm	Nos.	10	0.00006874
2.0	1C-400 sq mm	Nos.	10	0.00006874
3.0	3C-2.5 sq mm	Nos.	10	0.00001832
4.0	5C-2.5 sq mm	Nos.	10	0.00001832
G.9	1.1 KV LT. COPPER PVC FRLS CONTROL CABLE; ARMoured/UNARMoured (for cable sizes 1.5 sqmm and 4.0 sqmm cable termination rate shall be inclusive of supply of Heavy duty Copper lugs suitable to terminal box also).			
1.0	2C-1.5 sq mm	Nos.	260	0.00047624
2.0	2C-2.5 sq mm	Nos.	16	0.00002931
3.0	2C-4 sq mm	Nos.	10	0.00001832
4.0	3C-1.5 sq mm	Nos.	360	0.0006594
5.0	3C-2.5 sq mm	Nos.	26	0.00004762
6.0	4C-1.5 sq mm	Nos.	60	0.0001099
7.0	4C-4 sq mm	Nos.	10	0.00001832
8.0	4C-2.5 sq mm	Nos.	12	0.00002198
9.0	5C - 1.5 sqmm	Nos.	200	0.00073267
10.0	5C - 2.5 sqmm	Nos.	180	0.0006594
11.0	5C - 4 sqmm	Nos.	10	0.00003663
12.0	5C - 10 sqmm	Nos.	8	0.00002931
13.0	7C - 1.5 sqmm	Nos.	180	0.0006594
14.0	7C - 2.5 sqmm	Nos.	24	0.00008792
15.0	10C - 1.5 sqmm	Nos.	280	0.00153861
16.0	10C - 2.5 sqmm	Nos.	24	0.00013188
17.0	12C - 1.5 sqmm	Nos.	140	0.00089752
18.0	12C - 2.5 sqmm	Nos.	490	0.00314133
19.0	14C-1.5 sq mm	Nos.	14	0.00008975
20.0	14C-2.5 sq mm	Nos.	14	0.00008975
21.0	19C-1.5 sq mm	Nos.	8	0.00006594
22.0	19C-2.5 sq mm	Nos.	14	0.0001154
23.0	24C-1.5 sq mm	Nos.	14	0.0001154
24.0	24C-2.5 sq mm	Nos.	14	0.0001154
G.10	1.1 KV SCREENED CABLE			
1.0	Individual & Overall Screened Cable (Type-F) - Unarmoured cable			
	Multi pair (twisted) individual & overall shielded instrumentation cables (Type-F)			
1.1	225V Type-F(IO) 2P-0.5 unarmoured	Nos.	60	0.0001099
1.2	225V Type-F(IO) 4P-0.5 unarmoured	Nos.	240	0.0004396
1.3	225V Type-F(IO) 8P-0.5 unarmoured	Nos.	100	0.00018317
1.4	225V Type-F(IO) 12P-0.5 unarmoured	Nos.	90	0.00016485
1.5	225V Type-F(IO) 20P-0.5 unarmoured	Nos.	30	0.00005495
2.0	Overall Screened cable (Type-G) - Unarmoured cable			
	Multi pair (twisted) overall shielded instrumentation cables (Type-G)			
2.1	225V Type-G(O) 2P-0.5 unarmoured	Nos.	40	0.00007327
2.2	225V Type-G(O) 4P-0.5 unarmoured	Nos.	600	0.00109901
2.3	225V Type-G(O) 8P-0.5 unarmoured	Nos.	200	0.00036634
2.4	225V Type-G(O) 12P-0.5 unarmoured	Nos.	50	0.00009158
3.0	Overall Screened cable (Type-G) - Armoured cable			
	Multi pair (twisted) overall shielded instrumentation cables (Type-G)			

**JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW
North Karanpura STPP, Jharkhand.**

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-2: SERVICE PRICE

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
3.1	225V Type-G(O) 2P-0.5 Armoured	Nos.	20	0.00003663
3.2	225V Type-G(O) 4P-0.5 Armoured	Nos.	30	0.00005495
3.3	225V Type-G(O) 12P-0.5 Armoured	Nos.	24	0.00004396
G.11	CABLE JOINTS (thru jointing kit)			
G.11.1	33/ 19 KV AL CONDUCTOR/ XLPE INSULATED/ ARMoured/ UNEARTHED GRADE POWER CABLE			
1.0	1C-185 SQMM	Nos.	4	0.00020687
G.11.2	11/ 11 KV AL CONDUCTOR/ XLPE INSULATED/ ARMoured/ GRADE POWER CABLE			
1.0	1C-300 SQMM	Nos.	2	0.00007327
2.0	1CX630 SQMM	Nos.	10	0.00045792
3.0	3C-185 SQMM	Nos.	4	0.00018317
G.11.3	11/ 11 KV AL CONDUCTOR/ XLPE INSULATED/ UN-ARMoured/ GRADE POWER CABLE			
1.0	1CX630 SQMM	Nos.	20	0.00091584
2.0	3C-185 SQMM	Nos.	24	0.00109901
G.11.4	3.3/ 3.3 KV AL CONDUCTOR/ XLPE INSULATED/ ARMoured/ UNEARTHED GRADE POWER CABLE			
1.0	1C-630 SQMM	Nos.	2	0.00009158
G.11.5	3.3/ 3.3 KV AL CONDUCTOR/ XLPE INSULATED/ UN-ARMoured/ UNEARTHED GRADE POWER CABLE			
1.0	1C-185 SQMM	Nos.	2	0.00007327
2.0	3C-185 SQMM	Nos.	18	0.00082425
G.11.6	Supply and installation of St. Thru' Jointing Kit for 1.1 KV LT ALUMINIUM .XLPE POWER CABLE			
1.0	1C-6 sq mm	Nos.	14	0.00002323
2.0	1C-10 sq mm	Nos.	14	0.00002549
3.0	1C-25 sq mm	Nos.	14	0.00002549
4.0	1C-35 sq mm	Nos.	14	0.0000267
5.0	1C-50 sq mm	Nos.	14	0.0000267
6.0	1C-70 sq mm	Nos.	14	0.00002776
7.0	1C-95 sq mm	Nos.	14	0.00003017
8.0	1C-120 sq mm	Nos.	14	0.00003017
9.0	1C-185 sq mm	Nos.	14	0.00003017
10.0	1C-400 sq mm	Nos.	14	0.00003243
11.0	1C-630 sq mm	Nos.	14	0.00003711
12.0	2C-2.5 sqmm	Nos.	14	0.00001735
13.0	2C-10 sqmm	Nos.	14	0.00001735
14.0	2C-25 sqmm	Nos.	14	0.00001735
15.0	2C-50 sqmm	Nos.	14	0.00002323
16.0	2C-95 sqmm	Nos.	14	0.00002776
17.0	2C-120 sq mm	Nos.	14	0.00002776
18.0	2C-150 sqmm	Nos.	14	0.00003243
19.0	2C-185 sqmm	Nos.	14	0.00003711
20.0	3C-2.5 sq mm	Nos.	14	0.00002082
21.0	3C-6 sq mm	Nos.	14	0.00002202
22.0	3C-10 sq mm	Nos.	14	0.00002549
23.0	3C-16 sq mm	Nos.	14	0.00002549
24.0	3C-25 sq mm	Nos.	14	0.00002549
25.0	3C-35 sq mm	Nos.	14	0.0000267
26.0	3C-50 sq mm	Nos.	14	0.00002776
27.0	3C-70 sq mm	Nos.	14	0.00002776
28.0	3C-95 sq mm	Nos.	14	0.00002776
29.0	3C-120 sq mm	Nos.	14	0.00003243
30.0	3C-150 sq mm	Nos.	14	0.00003711
31.0	3C-240 sq mm	Nos.	14	0.00003937
32.0	3C-400 sq mm	Nos.	14	0.00004631
33.0	3.5C-25 sq mm	Nos.	14	0.00002323
34.0	3.5C-50 sq mm	Nos.	14	0.00002549
35.0	3.5C-95 sq mm	Nos.	14	0.00002896
36.0	3.5C-120 sq mm	Nos.	14	0.00003243
37.0	3.5C-150 sq mm	Nos.	14	0.00003711
38.0	3.5C-185 sq mm	Nos.	14	0.00003937
39.0	3.5C-300 sq mm	Nos.	14	0.00004163
40.0	4C-4 sq mm	Nos.	14	0.00002323
41.0	4C-10 sq mm	Nos.	14	0.00002549
42.0	4C-16 sq mm	Nos.	14	0.00002776
43.0	4C-50 sq mm	Nos.	14	0.00002776
G.11.7	Supply and installation of St. Thru' Jointing Kit for 1.1 KV LT COPPER .XLPE POWER CABLE			

**JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW
North Karanpura STPP, Jharkhand.**

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-2: SERVICE PRICE

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
1.0	1C-70 sq mm	Nos.	14	0.00003017
2.0	1C-240 sq mm	Nos.	14	0.00003469
3.0	1C-630 sq mm	Nos.	14	0.00004631
4.0	2C-2.5 sq mm	Nos.	14	0.00001735
5.0	2C-6 sq mm	Nos.	14	0.00001855
6.0	2C-10 sq mm	Nos.	14	0.00001961
7.0	2C-25 sq mm	Nos.	14	0.00002323
8.0	2C-70 sq mm	Nos.	14	0.00002776
9.0	3C-2.5 sq mm	Nos.	14	0.00002082
10.0	3C-6 sq mm	Nos.	14	0.00002202
11.0	3C-50 sq mm	Nos.	14	0.00002776
12.0	4C-1.5 sq mm	Nos.	14	0.00002549
13.0	4C-35 sq mm	Nos.	14	0.00003937
G.11.8	Supply and installation of St. Thru' Jointing Kit for LT. COPPER FIRE SURVIVAL CABLE			
1.0	1C-150 sq mm	Nos.	14	0.00004058
2.0	1C-400 sq mm	Nos.	14	0.00005204
3.0	3C-2.5 sq mm	Nos.	14	0.00002082
4.0	2C-95 sq mm	Nos.	14	0.00002776
4.0	5C-2.5 sq mm	Nos.	14	0.0000267
G.11.9	Supply and installation of St. Thru' Jointing Kit for 1.1 KV LT. COPPER PVC FRLS CONTROL CABLE			
1.0	2C-1.5 sq mm	Nos.	14	0.00001508
2.0	2C-2.5 sq mm	Nos.	14	0.00001614
3.0	2C-4 sq mm	Nos.	14	0.00001614
4.0	3C-1.5 sq mm	Nos.	14	0.00001614
5.0	3C-2.5 sq mm	Nos.	14	0.00002082
6.0	4C-1.5 sq mm	Nos.	14	0.00002082
7.0	4C-4 sq mm	Nos.	14	0.00002202
8.0	4C-2.5 sq mm	Nos.	14	0.00001855
9.0	5C - 1.5 sqmm	Nos.	14	0.00001961
10.0	5C - 2.5 sqmm	Nos.	14	0.00002082
11.0	5C - 4 sqmm	Nos.	14	0.00002323
12.0	5C - 10 sqmm	Nos.	14	0.00002323
13.0	7C - 1.5 sqmm	Nos.	14	0.00002549
14.0	7C - 2.5 sqmm	Nos.	14	0.0000267
15.0	10C - 1.5 sqmm	Nos.	14	0.00002776
16.0	10C - 2.5 sqmm	Nos.	14	0.00002776
17.0	12C - 1.5 sqmm	Nos.	14	0.00002896
18.0	12C - 2.5 sqmm	Nos.	14	0.00002896
19.0	14C-1.5 sq mm	Nos.	14	0.00003017
20.0	16C-2.5 sq mm	Nos.	14	0.00003017
21.0	19C-1.5 sq mm	Nos.	14	0.00003017
22.0	19C-2.5 sq mm	Nos.	14	0.00003122
23.0	24C-1.5 sq mm	Nos.	14	0.00003243
24.0	24C-2.5 sq mm	Nos.	14	0.00003469
H	ABOVE GROUND EARTHING AND LIGHTNING PROTECTION MATERIAL			
H.1	INSTALLATION OF VERTICAL AIR TERMINATION (20 MM DIA GALVANISED MS ROD 1000 MM LONG)	Nos.	140	0.00051136
H.2	GALVANISED MS FLAT FOR EARTHING SYSTEM			
1.0	GALVANISED MS/GI FLAT 60 X 8 mm	MT	1	0.00022893
2.0	GALVANISED MS FLAT 70 X 10 mm	MT	1	0.00022893
3.0	GALVANISED MS FLAT 50 X 10	MT	1	0.00022893
4.0	GALVANISED MS FLAT 65 X 8	MT	100	0.02289272
5.0	GALVANISED MS/GI FLAT 50 X 6	MT	63	0.01442242
6.0	GALVANISED MS FLAT 50 X 3	MT	1	0.00022893
7.0	GALVANISED MS FLAT 25 X 6	MT	20	0.00457854
8.0	GALVANISED MS FLAT 25 X 3	MT	4	0.00091571
9.0	GALVANISED MS/GI FLAT 30 X 5	MT	7.2	0.00164828
10.0	GI WIRE 8 SWG	Metres	56000	0.00482701
H.3	FLEXIBLE COPPER BRAID FOR GATE EARTHING	NOS.	10	0.00002435
H.4	GS ROD 20 mm DIA 1000 mm LONG	NOS.	50	0.00018263
H.5	TEST LINK 150x50x6 mm GS FLAT WITH BOX	NOS.	120	0.00043831
H.6	GALVANISED MS PIPE , 3000mm LENGTH, 25 NB/50 NB, 2.5 mm Tthick WITH HOLES BELOW 1000 mm ALONG THE LENGTH WITH SUITABLE CAP FUNNEL & WIRE MESH AT ONE END AND SUITABLE CAP AT OTHER END.	NOS.	80	0.00034048

**JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW
North Karanpura STPP, Jharkhand.**

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-2: SERVICE PRICE

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
I	MINOR CIVIL WORK			
1.0	Minor Civil work (chipping)	SQM	5	0.00003044
2.0	Breaking of concrete wall/ floors including finishing	CU. M	2	0.00001218
3.0	Breaking of brick walls including finishing	SQM	10	0.00006088
4.0	EARTH EXCAVATION & BACK FILLING	CU. M	10	0.00009126
J	HT Switchgear			
1.0	33KV ,630A,Misc. SWGR	NO.OF BOARDS	1	0.00301688
2.0	33KV ,630A,Mine End CHP	NO.OF BOARDS	1	0.00301688
3.0	11KV ,2500A,Unit Switch Board -1BA	NO.OF BOARDS	1	0.00155587
4.0	11KV ,2500A,Unit Switch Board -1BB	NO.OF BOARDS	1	0.00155587
5.0	11KV ,3500A, Station Switch Board -0BA	NO.OF BOARDS	1	0.00178681
6.0	11KV ,3500A, Station Switch Board -0BB	NO.OF BOARDS	1	0.00110613
7.0	11KV ,1250A,Switch Board -0BG	NO.OF BOARDS	1	0.00136139
8.0	11KV ,1000A, Switch Board -0BH	NO.OF BOARDS	1	0.00136139
9.0	11KV ,630A, Misc. SWGR	NO.OF BOARDS	1	0.00136139
10.0	3.3 KV, 3150A, UNIT - 1 SWITCHBOARD (1CA)	NO.OF BOARDS	1	0.00280785
11.0	3.3 KV, 2000A, UNIT - 1 SWITCHBOARD (OCA)	NO.OF BOARDS	1	0.00187191
12.0	3.3 KV, 630A, MUP SWGR	NO.OF BOARDS	1	0.00087214
13.0	3.3 KV, 1600A, Mine End CHP	NO.OF BOARDS	1	0.00087214
14.0	33/11/3.3 KV EARTHING TRUCKS	SET	12	0.00014597
15.0	11 KV BUS TRANSFER PANEL	NO.	2	0.00036627
16.0	HT DATA CONCENTRATOR PANEL WITH ACCESSORIES	NO.	2	0.00036627
K	LT SWBD AND DC DB FOR UNIT # 1			
1.0	EMERGENCY MCC #1DG (3000A)	NO.OF BOARDS	1	0.00246751
2.0	BOILER SERVICE PMCC #1DA (3500A)	NO.OF BOARDS	1	0.0012216
3.0	BLR VALVE & DAMPER ACDB #1HA (250A)	NO.OF BOARDS	1	0.00140393
4.0	BOILER ACDB #1HB (400A)	NO.OF BOARDS	1	0.00155435
5.0	TURBINE SERVICE PMCC #1DB (3500A)	NO.OF BOARDS	1	0.0012763
6.0	SERVICE ACDB #1QA (600A)	NO.OF BOARDS	1	0.00096786
7.0	TURBINE VALVE DB #1KA (250A)	NO.OF BOARDS	1	0.00107802
8.0	STATION SERVICE PMCC #0DA (3500A)	NO.OF BOARDS	1	0.00096786
9.0	AIR CONDITIONING MCC #0TA (250A)	NO.OF BOARDS	1	0.00136746
10.0	VENTILATION MCC #1TA (1000A)	NO.OF BOARDS	1	0.00109397
11.0	MISC SERVICES MCC #0QA (400A)	NO.OF BOARDS	1	0.00096786
12.0	AIR WASHER MCC #0SA (800A)	NO.OF BOARDS	1	0.0007749
13.0	220V MAIN DCDB #1FA (1250A)	NO.OF BOARDS	1	0.00121552
14.0	ESP & ID FAN AREA MCC #1HD (250A)	NO.OF BOARDS	1	0.00113955
15.0	ESP AC & VENT MCC #1TB (400A)	NO.OF BOARDS	1	0.00113955

JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW North Karanpura STPP, Jharkhand.				
TENDER NO: PSER:SCT:NKP-E1890:18				
SCH-2: SERVICE PRICE				
SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
COMMON TO ALL 03 UNITS (Items of SRL. No. 16 to 28)				
16.0	SERVICE BUILDING MCC#0SD (1600A)	NO.OF BOARDS	1	0.00082048
17.0	WATER SYSTEM PMCC #0DE (2500A)	NO.OF BOARDS	1	0.00072932
18.0	DM PLANT MCC #0WB (400A)	NO.OF BOARDS	1	0.00072932
19.0	CPU MCC #0WC (800A)	NO.OF BOARDS	1	0.0007749
20.0	FW WATER PMCC #0DH (1600A)	NO.OF BOARDS	1	0.00159538
21.0	PTP MCC #0WD (400A)	NO.OF BOARDS	1	0.00109397
22.0	ETP/STP MCC #0WE (600A)	NO.OF BOARDS	1	0.00109397
23.0	FUEL OIL SERVICE PMCC #0DF (3000A)	NO.OF BOARDS	1	0.00095722
24.0	AUX. BOILER MCC #0HA (600A)	NO.OF BOARDS	1	0.00075422
25.0	WORKSHOP MCC #0SF (600A)	NO.OF BOARDS	1	0.00072932
26.0	ADMIN PMCC #0DD (3000A)	NO.OF BOARDS	1	0.00075422
27.0	CT, CW TREATMENT PMCC #0DJ (3000A)	NO.OF BOARDS	1	0.00161619
28.0	HYDROGEN PLANT MCC#0SE (600A)	NO.OF BOARDS	1	0.00082048
29.0	415V AC DBs (WALL MOUNTED)	NO.OF BOARDS	20	0.00145866
30.0	220V DC DBs (WALL MOUNTED)	NO.OF BOARDS	6	0.0004376
31.0	SOOT BLOWER MCC	NO.OF	1	0.00164096
32.0	415V ACDB (WALL MOUNTED)	NO.OF BOARDS	15	0.001094
33.0	220V DCDB (WALL MOUNTED)	NO.OF BOARDS	4	0.00029173
34.0	ESP LT MAIN SWITCHBOARD	NO. OF BOARDS	8	0.00725663
35.0	ESP SWITCH GEAR PANEL (17700mm L x 1700mm D X 2450mm H)	NO. OF PANELS	6	0.00544247
36.0	DIGITAL AUTOMATIC VOLTAGE REGULATOR BOARD (COMPRISING OF TRANSFORMER, REGULATION, THYRISTOR & FIELD SUPPRESSION CUBICLE - INCLUDING FITTINGS OF LOOSE ITEMS LIKE PC MONITOR AND OTHER ITEMS)	SET	1	0.00091355
37.0	LT DATA CONCENTRATOR PANEL WITH ACCESSORIES	SET	1	0.00009157
FOR ACC SYSTEM				
38.0	LT MCC Switch Board	SET	15	0.01435835
39.0	DATA CONCENTRATOR AND COMMUNICATIONS SYSTEM ACBINET.	SET	1	0.00009157
L	GENERATOR RELAY PANEL AND UNIT CONTROL & AUX CONTROL BOARD , VARIOUS CONTROL PANELS AND OTHER PANELS			
1.0	Generator Relay Panel (GEN/GT/UT PROT. PANELS)	SET	1	0.00045784
2.0	Electrical Control Panel (ERECTION IS EXCLUDED, COMMISSIONING RATE INCL. MOUNTING OF LOOSE COMPONENTS)	SET	1	0.00045784
3.0	Electrical Control Panel for outside Power House area	SET	5	0.00228922
4.0	Only Commissioning of 'Electrical Control Panel for outside PH area' (in case erected by other vendor) (COMMISSIONING RATE INCL. MOUNTING OF LOOSE COMPONENTS)	SET	5	0.00053873
5.0	MASTER CLOCK SYSTEM PANEL	Nos.	1	0.00008509
6.0	HART MANAGEMENT SYSTEM	Nos.	2	0.00017017
M	MISCELLANEOUS ITEMS OF ESP & ACC			
1.0	Electronic Control Panel (with ARECA-II CONTROLLER) (Including internal wirings with ACP and other associated panels).	No. Of Panel	120	0.01098877
2.0	DATA LOGGER PC WITH COLOR MONITOR	Set	1	0.00001216
3.0	IOS PC WITH COLOUR MONITOR	Set	1	0.00001216
4.0	COLOUR LASER PRINTER (INKJET)	Nos	1	0.00001216

**JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW
North Karanpura STPP, Jharkhand.**

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-2: SERVICE PRICE

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
5.0	SAFETY INTERLOCKS	Set	6	0.00007299
6.0	IOS PANEL	NO	1	0.00001216
7.0	DUST DENCITY MONITER (OPM)	Set	6	0.00032324
8.0	ELECTRICAL OPEARTION AND CONTROL SYSTEM OF FANS FOR ACC SYSTEM (BROAD LIST OF ITEMS INVOLVED ARE: DUAL SPEED SWITCH BOX, 1 SET SAFE SLIDE WIRE AND IT'S ACCESSOPRIES, LOCAL OPEARTION BOX ETC.)	Set	90	0.00054789
	(ONLY COMMISSIONING RATE TO BE QUOTED FOR ITEMS SL. NO. 9 TO 37 BELOW) - ERECTION IS EXCLUDED			
9.0	HEATING ELEMENTS FOR HOPPER- (PANEL TYPE HOPPER HEATER)	SET	240	0.00116883
10.0	HEATING ELEMENTS FOR SUPPORT INSULATOR HEATER	Nos	480	0.00233765
11.0	HEATING ELEMENTS FOR SHAFT INSULATOR HEATERS	Nos	120	0.00065682
12.0	THERMOSTAT FOR HOPPER	Nos	240	0.00131364
13.0	THERMOSTAT FOR SUPPORT INSULATOR HOUSING	Nos	12	0.00006568
14.0	ASH LEVEL INDICATOR (HIGH / LOW)	Nos	240	0.00073181
15.0	OPACITY MONITOR	Nos	6	0.00032324
16.0	DISCONNECTING SWITCH ASSY 95KV (VAR-05)	Nos	120	0.0003659
17.0	ELECTRICALLY OPERATED HOIST 3T (EOH)	SETS	6	0.00025529
18.0	GEARED MOTOR FOR COLLECTING ELECTRODE RAPPING, 0.5 HP, 1.1 RPM (CERM)	Nos	120	0.00218896
19.0	GEARED MOTOR FOR GD SCREEN RAPPING MOTOR 0.5HP, 1.1 RPM (GDRM)	Nos	12	0.0002189
20.0	GEARED MOTOR FOR EMITTING ELECTRODE RAPPING MOTOR 0.5HP, 2.5 RPM (EERM)	Nos	120	0.00218896
21.0	LINK CHAIN FOR INSULATOR HOUSING	Nos	960	0.00041374
22.0	GALVANIZED ADAPTOR 1/2" (HALF INCH) FEMALE CONDUIT	Nos	5760	0.00049649
23.0	GALVANIZED MALE CONDUIT WITH CCHK NUT 1/2" (HALF INCH)	Nos	5760	0.00049649
24.0	1/2" (HALF INCH) GALVANIZED FLEXIBLE METALIC CONDUIT	MTR.	28800	0.01303292
25.0	GALVANIZED CLAMP SET FOR 1/2" (HALF INCH) GI CONDUIT	SET	28800	0.00093092
26.0	SHAFT INSULATOR 95KV	Nos	120	0.00015515
27.0	BUSHINGS INSULATORS 95KV	Nos	120	0.00015515
28.0	SUPPORT INSULATOR	Nos	480	0.00062062
29.0	REFRIGERATION GAS DRYER	Nos	2	0.00009158
30.0	STROBOSCOPE	Nos	1	0.00001293
31.0	3 PH UPS FOR GENERATOR	SET	1	0.00003879
32.0	ROTOR FLUX PROBE DATA ACQUISITION SYSTEM	SET	1	0.00004579
33.0	MOTORISED TEMP CONTROL VALVE	Nos	1	0.00001832
34.0	GROUNDING BRUSH MONITOR SYSTEM	Nos	1	0.00004579
35.0	BRUSHLESS EXCITER	SET	1	0.00004579
36.0	ILLUMIONATION, SPACE HEATER AND BLOWER COMMNG. OF PMG ENCLOSURE	SET	1	0.0000862
37.0	CO2 VAPORIZER SYSTEM	SET	1	0.00004579
N	DC Strater Panel/ STARTING CABINET/ Local Motor Starter			
1.0	STARTER CABINET FOR DC JACKING OIL MOTOR WITH RESISTANCE BOX	SET	1	0.00004579
2.0	STARTER CABINET FOR DC EMERGENCY LUB .OIL MOTOR WITH RESISTANCE BOX	SET	1	0.00004579
3.0	STARTER CABINET FOR DC SEAL OIL MOTOR WITH RESISTANCE BOX	SET	1	0.00004579
4.0	FURNACE TEMPERATURE PROBE STARTER BOX	Nos	2	0.00009158
5.0	STARTER CABINET FOR DC SCANNER AIR MOTOR WITH RESISTANCE BOX	Nos	1	0.00004579
6.0	LOCAL MOTOR STARTER UPTO 3.7 KW	Nos	75	0.00045657

JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW North Karanpura STPP, Jharkhand.				
TENDER NO: PSER:SCT:NKP-E1890:18				
SCH-2: SERVICE PRICE				
SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
7.0	DC STARTER CONTROL PANEL OF TDBFP WITH RESISTANCE BOX	Nos	2	0.00009158
8.0	LOCAL MOTOR STARTER	Nos	450	0.00273943
O	JUNCTION BOX, PUSH BUTTON ETC.			
O.1	JUNCTION BOX			
1.0	JUNCTION BOX -6 WAY	NO	5	0.00002128
2.0	JUNCTION BOX -12 WAY	NO	5	0.00002128
3.0	JUNCTION BOX -24 WAY	NO	10	0.00004256
4.0	JUNCTION BOX -36 WAY	NO	10	0.00004256
5.0	JUNCTION BOX -48 WAY	NO	8	0.00003405
6.0	JUNCTION BOX -75 WAY	Nos.	10	0.00004256
7.0	JUNCTION BOX -96 WAY	Nos.	10	0.00004256
8.0	FRP JUNCTION BOX : 24/48/72 WAY	Nos.	250	0.00106399
	(CONTROL BOX / JUNCTION BOX FOR ESP)			
9.0	LOCAL CONTROL BOX FOR PANEL TYPE HOPPER	SETS	240	0.00116883
10.0	FRB POWER JB VARIANT- P3	Nos	26	0.00012662
11.0	FRB POWER JB VARIANT- P1	Nos	14	0.00006818
12.0	FRB CONTROL JB VARIANT- C2	Nos	130	0.00063311
13.0	FRB CONTROL JB VARIANT- C2 FOR FD, ID	Nos	10	0.0000487
14.0	LOCAL FRP JUNCTION BOX FOR ASH LEVEL INDICATOR (HIGH)- VAR-C2 FOR NTPC USE	Nos	24	0.00011688
15.0	FRB JB VAR-C4 FOR GATES AND DAMPER.	Nos	18	0.00008766
O.2	PUSH BUTTONS			
1.0	LOCAL START STOP PUSH BUTTON FOR RAPPING MOTOR	Nos.	252	0.00137932
2.0	Local Push Button Stations (TYPE A)	Nos.	1600	0.00875757
3.0	Local Push Button Stations (TYPE C)	Nos.	25	0.00013684
4.0	FIRE PROTECTION EMERGENCY PUSH BUTTON	Nos.	7	0.00004261
P	DC System (Including fittings of loose items, like thyristors, transformer etc. with necessary internal wirings)			
1.0	220V Battery (Ni-Cd)	Set	2	0.00337459
2.0	220V Battery Rack	Set	4	0.00018317
3.0	220V DC BATTERY HEALTH MONITORING SYSTEM	Set	2	0.00025859
4.0	Float cum Boost Battery Charger	Set	6	0.00191447
5.0	220V DC ISOLATION BOX	Nos	6	0.00021883
6.0	Battery Fuse Box	Nos	2	0.00007294
X	MISCELLANEOUS			
X.1	MOTORS & ACTUATORS (EXCLUDING ERECTION)(TO BE ERECTED BY OTHER VENDORS)			
1.0	DRYING OUT /TESTING OF HT MOTORS	No.	150	0.00686879
2.0	DRYING OUT /TESTING OF LT MOTORS	No.	100	0.00183168
3.0	Actuators /Limit switches setting, position feedback calibration and operation/commissioning for motor operated valves/dampers / probe (actuator not to be erected)	No.	540	0.00989105
X.2	COMMISSIONING OF SOOT BLOWER (EXCLUDING ERECTION) (TO BE ERECTED BY OTHER VENDORS)	No.	130	0.00357177
X.3	COMMISSIONING OF ELECTRICAL OPERATED HOIST (EXCLUDING ERECTION) (TO BE ERECTED BY OTHER VENDORS)	No.	30	0.00137376
X.4	COMMISSIONING OF CONTROL PANEL OF CENTRAL OIL PURIFICATION UNIT (EXCLUDING ERECTION) (TO BE ERECTED BY OTHER VENDORS)	No.	1	0.00004579
X.5	Commissioning of Skid based Lub Oil system for different HT Motors	No.	20	0.00091584
X.6	Commissioning of different types of Dosing Panels (NAOH/ NH3/Hydrazine/O2 etc.)	No.	8	0.00036634
X.7	Self Cleaning Strainer	No.	4	0.00018317
X.8	Sump Pump/ Submersible Pump (Commissioning only)	No.	4	0.00018317
X.9	Commissioning of Electric Hoist	No.	15	0.00068688
X.10	Assistance in installation of Electrical Lab. Equipment	Set	1	0.00012929

JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW North Karanpura STPP, Jharkhand.				
TENDER NO: PSER:SCT:NKP-E1890:18				
SCH-2: SERVICE PRICE				
SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
X.11	Commissioning of Misc. AC Electrical Control Panel (TO BE ERECTED BY OTHER VENDORS)	No.	10	0.00045792
X.12	FABRICATION AND ERECTION (SUPPLY OF MATL BY BHEL FREE OF COST)			
1.0	Fabrication & erection of foundation/ base frames for switchgear ,Control Panel,LCC/LPB/Starter ,Fuse Board etc.,crosschannel etc from MS Structural items (Angle ,Starter ,Fuse Board etc., cross channel etc.from MS Structural items (Angle, Channel, flat, plate etc.for)including providing of all required consumables, paints etc.	MT	15	0.00291738
X.13	CHEQUERED PLATES			
1.0	Fabrication & Installation of Chequered Plates 6 to 8 mm thick (Material by BHEL as free issue) for covering up leftover floor cutout / trench around switchgear / panels (inclusive of all consumables , paints).	MT	1.5	0.00029174
X.14	INSERT PLATES /ANCHOR FASTENERS			
1.0	Fabrication of Insert Plates by gas cutting/grinding ,from 6-8 mm thick MS plates,Angle /Flats etc.(MS materials by BHEL as free issue)and its installation on wall /floor/ceiling.	MT	0.25	0.00004862
2.0	Installation of heavy duty galvanised friction anchor fasteners of Hilti/Bosch make of dia 16mm and 100 mm length in concrete (minimum grade M20)including supply of anchor fasteners material ,consumables and providing tollws,scaffolding etc.	Set	50	0.00011583
3.0	Supply and installation of Fasteners like nut, bolts, washer of all varriants	KG	25	0.00013791
X.15	CANOPIES			
1.0	Fabrication and installation of canopies from 2mm thick GI sheet (free issue by BHEL)for protection of outdoor LPBs /starters etc.(inclusive of supply of all consumables /paints)	Square Metre	25	0.00030411
X.16	Installation of MS HOT DIP GALVANISED THREADED & HEXAGONAL HEAD CABLE GLAND ADAPTORS/GLAND HOLE PLUGS AS PER REQUIRED SIZE AND SHAPES	KG.	125	0.00060876
X.17	Application of Moisture Sealing compounds for wall, floor, panel openings for all variants	Sq. Mtr.	50	0.00032324
Y	GENERATOR CIRCUIT BREAKER			
1	Generator Circuit Breaker (21KV, 24000A) complete set	Set	1	0.00001939
Z	TRANSFORMERS			
Z.1	<u>OIL FILLED TRANSFORMERS</u> (SCOPE OF WORK: a) SHIFTING OF TRANSFORMER FOR ERECTION PURPOSE (Job involving Loading from storage location at about maximum 500 Mtr. periphery inside the plant premises, Transportation through multi axle low bed trailer and unloading for erection purpose) b) Erection, Testing and commissioning of Transformer and associated Equipments / accessories.)			
1.0	265 MVA, 420/√3/21 Kv, OFAF or ODAF, YNd11, Z=15% ON 265 MVA BASE, OCTC +/- 5% IN STEPS OF 2.5% ON HV SIDE			
1.0 (a)	SHIFTING OF TRANSFORMER FOR ERECTION PURPOSE	Sets	3	0.00775769
1.0 (b)	Erection, Testing and commissioning of Transformer and associated Equipments / accessories.)	Sets	3	0.03187117
2.0	Spare GT 1X1 Phase 265MVA, {(420/√3)/21KV)} alongwith all accessories complete			
2.0 (a)	SHIFTING OF TRANSFORMER FOR ERECTION PURPOSE	Sets	1	0.0025859
2.0 (b)	Erection, Testing and commissioning of Transformer and associated Equipments / accessories.)	Sets	1	0.01062372

JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW North Karanpura STPP, Jharkhand.				
TENDER NO: PSER:SCT:NKP-E1890:18				
SCH-2: SERVICE PRICE				
SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
3.0	120/60/60 MVA, 400/11.5/11.5 kV, ONAN/ONAF, YNyn0yn0, OLTC +/-10% IN STEPS OF 1.25% ON HV SIDE, ZHV-LV1 = Z HV-LV2 = 28%, Z LV1-LV2 = 51% AT 120 MVA BASE WITH 02 NOS NGR (11.06 OHM, 600A FOR 10 SECS)			
3.0 (a)	SHIFTING OF TRANSFORMER FOR ERECTION PURPOSE	NOS	1	0.00161619
3.0 (b)	Erection, Testing and commissioning of Transformer and associated Equipments / accessories.)	NOS	1	0.00646474
4.0	45 MVA, 21/11.5 kV, ONAN/ONAF, Dyn1, Z=11.5% ON 45 MVA BASE, OLTC +/- 10%IN STEPS OF 1.25% ON HV SIDE WITH NGR (11.06 OHM, 600A FOR 10 SECS)			
4.0 (a)	SHIFTING OF TRANSFORMER FOR ERECTION PURPOSE	NOS	2	0.00129295
4.0 (b)	Erection, Testing and commissioning of Transformer and associated Equipments / accessories.)	NOS	2	0.00560277
5.0	16 MVA, 11/3.45 KV, ONAN, Dyn1, Z= 12.5% UAT and CHP Transformer with NGR (3.32OHM, 600A, 10Secs)and accessories complete. (UAT-02 Nos, CHP Transformer - 3 nos)			
5.0 (a)	SHIFTING OF TRANSFORMER FOR ERECTION PURPOSE	NOS	5	0.00215491
5.0 (b)	Erection, Testing and commissioning of Transformer and associated Equipments / accessories.)	NOS	5	0.00538728
6.0	10 MVA, 11/3.45 KV, ONAN, Dyn1, Z= 9% TRANSFORMER FOR AHP with NGR (3.32OHM, 600A, 10Secs)and accessories complete			
6.0 (a)	SHIFTING OF TRANSFORMER FOR ERECTION PURPOSE	NOS	3	0.00129295
6.0 (b)	Erection, Testing and commissioning of Transformer and associated Equipments / accessories.)	NOS	3	0.00290913
7.0	16 MVA, 11/34.5 KV, ONAN, YnD11, Z= 10%, OCTC +/- 5% (in step of 2.5%) Misc. SWGR with accessories complete.			
7.0a	SHIFTING OF TRANSFORMER FOR ERECTION PURPOSE	NOS	2	0.00086197
7.0b	Erection, Testing and commissioning of Transformer and associated Equipments / accessories.)	NOS	2	0.00215491
8.0	95 KV/900 mA HVR TRANSFORMER(ERECTION IS EXCLUDED , RATE TO BE QUOTED FOR OIL FILTRATION & COMMISSIONING ONLY)	NOS	120	0.01098877
Z.2	OIL FILLED SERVICE TRANSFORMER			
1.0	1000kVA, 11kV/0.433kV, 3 phase, 2 winding, outdoor, ONAN, Z=6.25%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV and with solidly grounded LVN termination)	NOS	2	0.0011852
2.0	1600kVA, 11kV/0.433kV, 3 phase, 2 winding, outdoor, ONAN, Z=8.0%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV and with solidly grounded LVN termination)	NOS	2	0.00140069
3.0	2000kVA, 11kV/0.433kV, 3 phase, 2 winding, outdoor, ONAN, Z=10.0%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV and with solidly grounded LVN termination)	NOS	14	0.00980486
4.0	1000kVA, 3.3kV/0.433kV, 3 phase, 2 winding, outdoor, ONAN, Z=6.25%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, LV and with solidly grounded LVN termination)	NOS	2	0.0011852
5.0	5000kVA, 33kV/11.5kV, 3 phase, 2 winding, outdoor, ONAN, Z=8%, Dyn11, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, LV and with solidly grounded LVN termination)	NOS	2	0.00204717
6.0	2000kVA, 33kV/3.45kV, 3 phase, 2 winding, outdoor, ONAN, Z=6%, Dyn11, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, LV and LVN termination)	NOS	2	0.00140069
7.0	7500kVA, 33kV/3.45kV, 3 phase, 2 winding, outdoor, ONAN, Z=7%, Dyn11, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, LV and LVN termination)	NOS	2	0.00247815

JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW North Karanpura STPP, Jharkhand.				
TENDER NO: PSER:SCT:NKP-E1890:18				
SCH-2: SERVICE PRICE				
SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
8.0	5000kVA/2000KVA, 11kV/3.45kV, 3 phase, 2 winding, outdoor, ONAN, Z=7%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV and with cable box type LVN termination)	NOS	3	0.00307075
9.0	2500kVA, 11kV/0.433kV, 3 phase, 2 winding, outdoor, ONAN, Z=13.0%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV and with solidly grounded LVN termination)	NOS	19	0.01330659
Z3	Dry Type Transformer:			
1.0	11 / 0.433KV Dry Type Transformer (DTT), above 2 MVA	NOS	4	0.00280139
ZA	BUSDUCTS			
ZA.1	IP BUSDUCT(24KV)			
a)	Bus Duct of Rating 24000A (Weight 500Kg/Mtr.)	MTR	190	0.01330659
b)	Bus Duct of Rating 14000A (Weight 380Kg/Mtr.)	MTR	150	0.0105052
c)	Bus Duct of Rating 2800A (Weight 220Kg/Mtr.)	MTR	90	0.0043637
d)	Top Chamber	NO	2	0.00051718
e)	NGR (0.628 Ohm with TAPs at 0.534, 0.471 & 0.094 Ohm, 240V, 400A for 5 Min) with Neutral Grounding Transformer(Rating: 13.5 KV/240V, Volt Class 22/1.1KV, AN, 1Ph, 50HZ, 65 KVA) (including assembly of loose components alongwith internal wiring, mounting of neutral CT etc.)	NO	1	0.00025859
f)	LAVT Cubicle (including assembly of loose components alongwith internal wiring, mounting of VT etc.)	SET	1	0.00025859
g)	SPVT Cubicle (including assembly of loose components alongwith internal wiring, mounting of VT etc.)	SET	1	0.00025859
h)	Hot Air Blowing Equip. with piping and pipe support including air drying and compressing unit	SET	1	0.00172393
ZA.2	SP BUSDUCT(11KV & 3.3KV)			
1.0	11KV Bus Duct of Rating 3500A (Weight 180Kg/Mtr.)	MTR	155	0.00350712
2.0	11KV Bus Duct of Rating 2500A (Weight 100Kg/Mtr.)	MTR	170	0.00384652
3.0	3.3KV Bus Duct of Rating 3150A (Weight 150Kg/Mtr.)	MTR	120	0.00271519
4.0	11KV Bus Duct of Rating 3500A (Weight 180Kg/Mtr.) for Interconnecting	MTR	760	0.01719621
5.0	3.3KV Bus Duct of Rating 3150A (Weight 150Kg/Mtr.) for CHP	MTR	30	0.0006788
6.0	3.3KV Bus Duct of Rating 2000A (Weight 100Kg/Mtr.) for AHP	MTR	30	0.0006788
ZA.3	LT BUSDUCTS (each set comprising tentatively of following : Straight Run, 90 degree bend, Flexible Copper at Transformer end, Flexible at Switchgear end , Adapter, Expansion joint, Phase cross over, hardware at Transformer & SWBD end)			
1.0	SANDWICH TYPE BUSDUCT FOR EMERGENCY MCC FROM MAIN DG #1DG (3000A)	SET	1	0.00646474
2.0	SANDWICH TYPE BUSDUCT FOR EMERGENCY MCC FROM STAND BY DG #1DG (3000A)	SET	1	0.00646474
3.0	BUS DUCT FOR BOILER SERVICE PMCC #1DA (2500A)	SET	1	0.00012929
4.0	BUS DUCT FOR TURBINE SERVICE PMCC #1DB (3500A)	SET	1	0.00012929
5.0	BUS DUCT FOR STATION SERVICE PMCC #0DA (3500A)	SET	1	0.00012929
6.0	BUS DUCT FOR STATION SERVICE PMCC #0DB (3000A)	SET	1	0.00012929
7.0	BUS DUCT FOR STATION SERVICES PMCC #0DC (3000A)	SET	1	0.00012929
8.0	BUS DUCT FOR WATER SYSTEM PMCC #0DE (2500A)	SET	1	0.00012929
9.0	BUS DUCT FOR FW WATER PMCC#0DH (1600A)	SET	1	0.00012929
10.0	BUS DUCT FOR FUEL OIL SERVICE PMCC#0DF (3000A)	SET	1	0.00012929
11.0	BUS DUCT FOR ADMIN PMCC#0DD (3000A)	SET	1	0.00012929
12.0	BUS DUCT FOR CT. CW TREATMENT PMCC#0DJ (3000A)	SET	1	0.00012929
13.0	BUSDUCT FOR LTMSB INCOMER-1 #1DC (3000A)	SET	1	0.00012929
14.0	BUSDUCT FOR LTMSB INCOMER-2 #1DC (3000A)	SET	1	0.00012929
15.0	BUSDUCT FOR LTMSB INCOMER-1 #1DD (3000A)	SET	1	0.00012929
16.0	BUSDUCT FOR LTMSB INCOMER-2 #1DD (3000A)	SET	1	0.00012929
17.0	BUSDUCT FOR LTMSB INCOMER-1 #1DE (3000A)	SET	1	0.00012929
18.0	BUSDUCT FOR LTMSB INCOMER-2 #1DE (3000A)	SET	1	0.00012929
19.0	BUSDUCT FOR LTMSB INCOMER-1 #1DF (3000A)	SET	1	0.00012929
20.0	BUSDUCT FOR LTMSB INCOMER-2 #1DF (3000A)	SET	1	0.00012929
21.0	BUSDUCT FOR LTMSB INCOMER-1 #1DH (3000A)	SET	1	0.00012929

JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW North Karanpura STPP, Jharkhand.				
TENDER NO: PSER:SCT:NKP-E1890:18				
SCH-2: SERVICE PRICE				
SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
22.0	BUSDUCT FOR LTMSB INCOMER-2 #1DH (3000A)	SET	1	0.00012929
23.0	BUSDUCT FOR LTMSB INCOMER-1 #1DJ (3000A)	SET	1	0.00012929
24.0	BUSDUCT FOR LTMSB INCOMER-2 #1DJ (3000A)	SET	1	0.00012929
25.0	BUSDUCT FOR ACC-LTMSB INCOMER (4000A)	SET	15	0.00193942
ZB)	DG SETS			
ZB.1	1750 KVA DG SETs along with Accoustic enclosure, Fuel tank(day tank, bulk oil tank), accoustic enclosure, fuel oil piping, exhaust piping,DG set stack Installation of Generator terminal adaptor/box, Current transformer, instruments, Power JB, Control JB, cleaning of radiator tubes (cleaning agent to be supplied by BHEL), replacement of engine oil and its filter, lub. oil filter, radiator coolant (Diesel for commissioning, engine oil & its filter, lub. oil filter, coolant being supplied by BHEL) Cabling, earthing, etc. complete.	SETS	2	0.00729311
ZB.2	PANELS, BATTERY ETC			
1.0	AMF PANEL	SET	2	0.00014587
2.0	DG Auxiliary Panel	No.	1	0.0002735
3.0	Battery charger Panel	Nos.	2	0.00017017
4.0	NGR Panel	No.	2	0.00017017
5.0	Single Breaker Panel	Nos.	2	0.00025859
6.0	3 Breaker Panel	No.	1	0.00025859
7.0	DC BATTERY for Engine Starting	SET	2	0.00002586
8.0	ELECTRONIC CONTROL PANEL	NO	2	0.00007294
9.0	INSULATION AND CLADDING	MT	4	0.00063208
10.0	FUEL TRANSFER PUMP	SET	4	0.00007297
11.0	PRE-LUB OIL PUMP	NO	2	0.00002433
ZC	SUPPORT STRUCTURE (FOR BUS DUCT, DG SET ETC) INCLUDING FABRICATION OF DG STRUCTURE (supply of materials is by BHEL Units free of cost)	MT	100	0.01580198
ZD	PA SYSTEM (Erection and Commissioning Assistance Services)			
1.0	Central exchange for unit & common area with integrated MDF/MJB* Microprocessor controlled, digital, programmable central control unit (CCU) equiped for 176 stations and ability to interconnect atleast 10 more zones for future expansion.	NOS	1	0.00053873
2.0	Central exchange for CHP area with integrated MDF/MJB* Microprocessor controlled, digital, programmable central control unit (CCU) equiped for 80 stations.	NOS	1	0.00053873
3.0	Master Control Station (MCS) Built-in mic & speaker, handset	NOS	6	0.00032324
4.0	Flush mounted station (FMS) Built-in mic & speaker, handset	NOS	10	0.00032324
5.0	Desktop Station Built-in mic & speaker, handset	NOS	32	0.00051718
6.0	Extension amplifier for FMS and desktop station	NOS	42	0.00045253
	Wall/column mounted, weatherproof field call station with handset and built-in power amplifier with 15W (RMS) and provided with Enclosure with transparent glass door which can be opened through number padlock only**			
7.0	For main plant area with DOP IP-55	NOS	110	0.00094816
8.0	For CHP area with DOP IP-65	NOS	60	0.00051718
9.0	Sub-distribution frame (SDF) 24 pairs *	NOS	32	0.00027583

JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW North Karanpura STPP, Jharkhand.				
TENDER NO: PSER:SCT:NKP-E1890:18				
SCH-2: SERVICE PRICE				
SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
10.0	Portable handset station with multi-pin plug	NOS	6	0.00005172
11.0	Socket box for Portable handset station	NOS	30	0.00025859
12.0	Wall/ column mounted 4W Cone type loudspeaker	NOS	42	0.00036203
13.0	Wall/ column mounted 15W Horn type loudspeaker For main plant area with DOP IP -55	NOS	110	0.00094816
14.0	Wall/ column mounted 15W Horn type loudspeaker For	NOS	60	0.00051718
15.0	Power junction box For indoor area with DOP IP 55	NOS	43	0.00037065
16.0	Power junction box For outdoor area with DOP IP 65	NOS	172	0.00148258
17.0	Signal junction box	NOS	48	0.00041374
18.0	Weather protecting canopy for field call station	NOS	6	0.00005172
19.0	Sound protecting floor mounted Acoustic hood	NOS	24	0.00020687
20.0	Power distribution box	NOS	2	0.00001724
21.0	Signal Line Booster*	NOS	15	0.00012929
ZE	LIGHTING AND MAINTENANCE SYSTEM OF ACC (Erection and Commissioning Assistance Services)			
1.0	Lighting Panel	Set	2	0.00012929
2.0	Maintenance Box	Set	4	0.00003448
3.0	Metal Halide Lighting Fixture with Lamps	Set	150	0.00064647
4.0	Main Lighting Distribution Board	Set	1	0.00012423
5.0	Street Lighting Pole with lighting fixtures and accessories	Set	25	0.00062115
ZF	ELECTRICAL AND ASSOCIATED WORKS FOR PLANT FIRE PROTECTION SYSTEM (Erection and Commissioning Assistance Services)			
1.0	Electric Motors (3.3 KV, 220 KW, Unidirectional Starter) for Hydrant Pump and accessory	Set	3	0.00058183
2.0	DG Set for operating above Hydrant Pump and accessory.	Set	1	0.00086197
3.0	Electric Motors (3.3 KV, 220 KW, Unidirectional Starter) for Spray Pump and accessory	Set	2	0.00038788
4.0	DG Set for operating above Spray Pump and accessory.	Set	1	0.00086197
5.0	Electric Motors (415V, 45KW, Unidirectional Starter) for Jockey Pump and accessory	Set	2	0.00017239
6.0	Electric Motors (415V, 45KW, Unidirectional Starter) for Hydrant Booster Pump and accessory	Set	1	0.0000862
7.0	DG Set for operating above Hydrant Booster Pump and accessory.	Set	1	0.00064647
8.0	Electric Motors (415V, 110KW, Unidirectional Starter) for Spray Booster Pump and accessory	Set	1	0.00010775
9.0	DG Set for operating above Spray Booster Pump and accessory.	Set	2	0.00129295
10.0	Control Panel for Fire Water Pumps	Set	1	0.00019394
11.0	Control Panel for Booster Pumps	Set	2	0.00038788
12.0	Deluge valve Control Panel and other similar types of control Panel	No	250	0.01144798
13.0	Cable laying and Termination of 2C-1.5 sq. mm armoured control cable	KM	8	0.00068957
TOTAL				0.9745863

**VOLUME-III
PRICE SCHEDULE, REV-01
(PACAKGE-1)**

JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW North Karanpura STPP, Jharkhand.

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-3: SUPPLY PRICE

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 2 of SCH-1
A	RUBBER MAT			
1.0	Supply of 6mm thick black chequered rubber mat of appropriate voltage class Size for laying in front of switchgears upto 3.3KV. (as required under IE Rule).	Pieces	250	0.01373757
B	DISPLAY BOARD			
1.0	Supply of Electric Shock Treatment Display board as per IE Rules, Laminated on hardboard material (size : 2.5 ft x 3.5 ft) and mounted on wooden frame) for switchgear rooms / substations	Pieces	200	
2.0	Supply of 33KV/11 KV/3.3 KV/415V DANGER PLATE	Pieces	50	0.00022896
C	Supply of MS HOT DIP GALVANISED THREADED & HEXAGONAL HEAD CABLE GLAND ADAPTORS/GLAND HOLE PLUGS AS PER REQUIRED SIZE AND SHAPES	KG.	125	0.00057240
D	Supply of Moisture Sealing compounds for wall, floor, panel openings for all variants	Sq. Mtr.	450	0.00290913
E	CABLE GLANDS & LUGS			
E.1	Supply of DOUBLE COMPRESSION HEAVY DUTY CABLE GLANDS (Use upto 11KV level)			
	ABOVE (MM) UP TO (MM)			
1.0	-- 15	Nos.	25	0.00011448
2.0	15 18	Nos.	25	0.00013738
3.0	18 21	Nos.	25	0.00016027
4.0	21 24	Nos.	25	0.00018317
5.0	24 27	Nos.	25	0.00020606
6.0	27 30	Nos.	25	0.00022896
7.0	30 33	Nos.	25	0.00025186
8.0	33 36	Nos.	25	0.00027475
9.0	36 39	Nos.	25	0.00029765
10.0	39 42	Nos.	25	0.00032054
11.0	42 46	Nos.	25	0.00034344
12.0	46 50	Nos.	25	0.00036634
13.0	54 58	Nos.	25	0.00041213
14.0	58 62	Nos.	25	0.00041213
15.0	62 70	Nos.	25	0.00041213
16.0	70 78	Nos.	25	0.00045792
E.2	Supply of AL./CU. LUGS (HEAVY DUTY TYPE) - SOLDERLESS CRIMPING TYPE (Use upto 11KV level)			
1.0	4 sq mm	Nos.	25	0.00000242
2.0	6 sq mm	Nos.	25	0.00000458
3.0	10 sq mm	Nos.	25	0.00000458
4.0	16 sq mm	Nos.	25	0.00000593
5.0	25 sq mm	Nos.	25	0.00000700
6.0	35 sq mm	Nos.	25	0.00000700
7.0	50 sq mm	Nos.	25	0.00001158
8.0	70 sq mm	Nos.	25	0.00001158
9.0	95 sq mm	Nos.	25	0.00001832
10.0	120 sq mm	Nos.	25	0.00002290
11.0	150 sq mm	Nos.	25	0.00002748
12.0	185 sq mm	Nos.	25	0.00004579
13.0	240 sq mm	Nos.	25	0.00005737

JOB: PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW North Karanpura STPP, Jharkhand.				
TENDER NO: PSER:SCT:NKP-E1890:18				
SCH-3: SUPPLY PRICE				
SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 2 of SCH-1
14.0	300 sq mm	Nos.	25	0.00008027
15.0	400 sq mm	Nos.	25	0.00012606
16.0	630 sq mm	Nos.	25	0.00020606
TOTAL				0.0254137

**VOLUME-III
PRICE SCHEDULE, REV-01
(PACAKGE-2)**

JOB: PACKAGE-2: Erection, Testing & Commissioning of Electrical System for Unit # 2 of 3x660 MW North Karanpura STPP, Jharkhand.

TENDER NO PSER:SCT:NKP-E1890:18

PREAMBLE

SL NO	DESCRIPTION
1	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 any where in this document.
2	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 tender purposes and giving some idea of the work involved. The work is to be executed as per drawings & documents, which shall be furnished during execution.
3	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
4	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	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. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra items, if any but excluding any price variation remains, within plus minus fifteen percent ($\pm 15\%$) of the awarded price as per LOI .
6	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	In case Sealed /Paper Price Bids are opened for finalisation of the tender, for any Item Rate/BOQ based contract, possibility of variation of quantity/ addition/deletion of items can not be ruled out. Under such circumstances, after execution of work, if it is observed that standing as L-1 is changed based on actual quantity executed, the bidder shall give suitable rebate to maintain your standing as L-1. Since this aspect can be assessed at the end of execution, necessary adjustment will be effected at the end of execution in final bill. This condition shall not be applicable where the tender is finalised through Reverse Auction.
8	BHEL reserve the right to rationalize the rates, quoted by L-1 bidder against unit rate items and/ or other optional items with respect to item-wise lowest rates (amongst the participating bidders), before placement of order.
9	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.
10	Rates shall be quoted in figures and in words in clear legible writing. No overwriting is allowed. All scoring and cancellations should be countersigned and in case of illegibility the interpretation of engineer shall be final. All entries shall be in English language.
11	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.
12	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.
13	No splitting of the job is envisaged. Decision of BHEL in this regard shall be final and binding to the bidders.
14	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/ altered 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.
15	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."
16	For Lumpsum Service Contract : The items/components indicated in the tender is indicative and may vary to any extent. No compensation shall be payable in case of any variation in the items/components listed in the bill of quantities if the executed weight remains within the variation limit. However, in case of deletion of any item or addition of new items over and above the items listed or variation of existing quantity beyond variation limit specified, adjustment (i.e. Payment or recovery as the case may be) shall be done on pro-rata basis based on the Rate per MT worked out from the quoted lump-sum Price and the total weight of components listed /indicated in price schedule plus 15% weight variation limit.
17	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.
18	In case of tender for Civil and/or Structural works, if the Non-schedule items are not quoted by the bidder, it will be treated at par with rate of corresponding item of CPWD/PWD/DSR schedule as prescribed in the tender/BOQ cum Rate Schedule.
19	No interest, whatsoever, shall be payable by BHEL on the security deposit, any bank guarantee submitted or any amount due to successful bidder/contractor.
20	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.
21	Bidder's Total price will be considered for evaluation unless stated otherwise.
22	In case of BOP packages, if Bidder does not quote/indicate the price for freight charges against indicated rate schedule, the same shall be considered as 2% of basic price and adjusted with the total quoted price against each item keeping the total quoted price unaltered.

**VOLUME-III
PRICE SCHEDULE, REV-01
(PACAKGE-2)**

JOB: PACKAGE-2: Erection, Testing & Commissioning of Electrical System for Unit # 2 of 3x660 MW North Karanpura STPP, Jharkhand.

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-1 MAIN PRICE

SL NO	ITEM/SCHEDULE	ALLOCATED %AGE FOR DERIVING THE JOB VALUE	QUOTED PRICE (RS.) (IN FIGURES AND WORDS)
1	TOTAL PRICE FOR SERVICE PART AS PER SCH-2	0.97140102	
2	TOTAL PRICE FOR SUPPLY PART AS PER SCH-3	0.02859898	
3	GRAND TOTAL (SL. NO.1+ SL.NO.2)	1.00000000	
NOTE:			
A)	BIDDER'S QUOTED GRAND TOTAL PRICE AT SL NO 3 ABOVE SHALL BE TAKEN INTO ACCOUNT FOR EVALUATION AND AWARDING AND HENCE, SHALL BE COMPLETE IN ALL RESPECT FOR THE FULL SCOPE DEFINED IN SPECIFICATION AND IN ACCORDANCE WITH ALL TERMS & CONDITIONS OF TENDER.		
B)	BIDDER SHALL QUOTE THE TOTAL PRICE AT SRL. NO 3 AND THE CORRESPONDING VALUES FOR SERVICE AND SUPPLY SCOPE SHALL BE DERIVED ACCORDING TO THE ALLOCATED PERCENTAGE.		
C)	INDIVIDUAL ITEM RATES FOR THE SERVICE AND SUPPLY SCOPE AS PER SCH-2 AND SCH-3 SHALL BE CALCULATED W.R.T THE QUOTED PRICES AT SRL. NO. 1 & 2 RESPECTIVELY.		
D)	PRICE FORMAT SHALL NOT BE CHANGED BY BIDDER IN ANY CASE, SINCE IT MAY LEAD TO CANCELLATION OF OFFER.		

VOLUME-III PRICE SCHEDULE, REV-01 (PACAKGE-2)				
JOB: PACKAGE-2: Erection, Testing & Commissioning of Electrical System for Unit # 2 of 3x660 MW North Karanpura STPP, Jharkhand.				
TENDER NO: PSER:SCT:NKP-E1890:18				
SCH-2: SERVICE PRICE				
SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
A	CABLE TRAYS (complete with Coupler plate, Fastners, clamp, and fixing hardware etc.) (including site modifications required for 'A', 'B', 'C' & 'D' types of bends / turns as required to suit site layout)			
A.1	GALVANISED MS LADDER TYPE CABLE TRAY			
1.0	600mm wide	Metres	22855.00	0.023555
2.0	450mm wide	Metres	3966.67	0.00327053
3.0	300mm wide	Metres	8852.20	0.00643999
4.0	150mm wide	Metres	4200.00	0.00259718
5.0	100mm wide	Metres	166.67	0.00010306
A.2	GALVANISED MS PERFORATED TYPE CABLE TRAY			
1.0	600mm wide	Metres	6300.00	0.00779155
2.0	450mm wide	Metres	840.00	0.00086573
3.0	300mm wide	Metres	1050.00	0.00086573
4.0	150mm wide	Metres	1700.00	0.00123675
5.0	100mm wide	Metres	4200.00	0.00305551
6.0	50mm wide (ladder/ perforated/solid bottom)	Metres	500.00	0.00030919
A.3	CABLE TROUGH			
1.0	CABLE TROUGH 2 MM THICK 50 MM WIDTH	Metres	200.00	0.00012368
2.0	CABLE TROUGH 2 MM THICK 75 MM WIDTH	Metres	200.00	0.00012368
B	CABLE TRAY ACCESSORIES			
B.1	(LADDER TYPE)			
B.1.1	HORIZONTAL 90 DEG. BEND 600 MM RADIUS			
1.0	600mm wide	Nos.	220	0.00113369
2.0	450mm wide	Nos.	20	0.00010306
3.0	300mm wide	Nos.	45	0.00018551
B.1.2	VERTICAL 90 DEG. BEND 600 MM RADIUS (INSIDE)			
1.0	600mm wide	Nos.	65	0.00033495
2.0	450mm wide	Nos.	20	0.00010306
3.0	300mm wide	Nos.	30	0.00012368
B.1.3	VERTICAL 90 DEG. BEND 600 MM RADIUS (OUTSIDE)			
1.0	600mm wide	Nos.	100	0.00072144
2.0	450mm wide	Nos.	20	0.00014429
3.0	300mm wide	Nos.	40	0.00028858
B.1.4	TEES 600 MM RADIUS			
1.0	600mm wide	Nos.	400	0.00288576
2.0	450mm wide	Nos.	20	0.00014429
3.0	300mm wide	Nos.	35	0.0002525
B.1.5	CROSSES 600 MM RADIUS			

JOB: PACKAGE-2: Erection, Testing & Commissioning of Electrical System for Unit # 2 of 3x660 MW North Karanpura STPP, Jharkhand.

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-2: SERVICE PRICE

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
1.0	600mm wide	Nos.	25	0.00018036
2.0	450mm wide	Nos.	20	0.00014429
3.0	300mm wide	Nos.	4	0.00002886
B.1.6	REDUCERS LHS /RHS			
1.0	600mm wide - 450mm wide	Nos.	7	0.00003607
2.0	600mm wide - 300mm wide	Nos.	18	0.00009276
3.0	450mm wide - 300mm wide	Nos.	4	0.00002061
B.2	(PERFORATED TYPE)			
B.2.1	HORIZONTAL 90 DEG. BEND 600 MM RADIUS			
1.0	600mm wide	Nos.	196	0.00101002
2.0	450mm wide	Nos.	7	0.00003607
3.0	300mm wide	Nos.	28	0.00011543
4.0	150mm wide	Nos.	7	0.00002886
B.2.2	VERTICAL 90 DEG. BEND 600 MM RADIUS (INSIDE)			
1.0	600mm wide	Nos.	15	0.0000773
2.0	450mm wide	Nos.	7	0.00003607
3.0	300mm wide	Nos.	14	0.00005772
B.2.3	VERTICAL 90 DEG. BEND 600 MM RADIUS (OUTSIDE)			
1.0	600mm wide	Nos.	25	0.00018036
2.0	450mm wide	Nos.	7	0.0000505
3.0	300mm wide	Nos.	42	0.00021643
B.2.4	TEES 600 MM RADIUS			
1.0	600mm wide	Nos.	266	0.00191903
2.0	450mm wide	Nos.	7	0.0000505
3.0	300mm wide	Nos.	14	0.000101
B.2.5	CROSSES 600 MM RADIUS			
1.0	600mm wide	Nos.	300	0.00216432
2.0	450mm wide	Nos.	7	0.0000505
3.0	300mm wide	Nos.	4	0.00002886
B.2.6	REDUCERS LHS /RHS			
1.0	600mm wide - 450mm wide	Nos.	7	0.00003607
2.0	600mm wide - 300mm wide	Nos.	7	0.00003607
3.0	450mm wide - 300mm wide	Nos.	4	0.00002061
C	GALVANISED CABLE TRAY COVER COMPLETE WITH ACCESSORIES			
1.0	600mm wide	Metres	1400	0.00432864
2.0	450mm wide	Metres	500	0.00154594
3.0	300mm wide	Metres	850	0.00175207
4.0	150mm wide	Metres	200	0.0003104

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
D	CABLE TRAY SUPPORT MATERIAL (INCLUDING FABRICATION OF BASE FRAME OF SWITCHGEAR, PANEL,LPB. STARTER ETC.) (Angles, Channels, beams etc.)	MT	100	0.03091398
DA	CABLE TRAY SUPPORT MATERIAL (BOLTABLE TYPE)			
1.0	CABLE TRAY SUPPORT SYSTEM, WITH ANGLE FITTING, CLAMP, CHANNEL, ETC (BOLTABLE TYPE)			
1.1	SINGLE CHANNEL SC1	Mtr.	15000	0.02334008
1.2	DOUBLE CHANNEL DC1	Mtr.	4000	0.00726095
2.0	CANTILEVER ARM WITH HEX BOLT & WASHER, SPRING NUT, PAN HEAD SCREW & WASHER, ETC			
2.1	CANTILEVER ARM 750 MM FOR 600MM WIDE CABLE TRAY	No	400	0.00029047
2.2	CANTILEVER ARM 620/650 MM FOR 600 MM WIDE CABLE TRAY	No	23000	0.01670187
2.3	CANTILEVER ARM 500 MM FOR 450 MM WIDE CABLE TRAY	No	250	0.00015887
2.4	CANTILEVER ARM 320 MM FOR 300MM WIDE CABLE TRAY	No	8000	0.00377622
2.5	CANTILEVER ARM 170 MM FOR 150MM WIDE CABLE TRAY	No	1200	0.00034862
AE.1	FABRICATION OF IRREGULAR BEND TO BE DONE FROM THE EXISTING LADDER TYPE CABLE TRAY AS PER SITE REQUIREMENT (cable tray material will be issued by BHEL free of cost) (CONSUMABLES etc. TO BE PROVIDED BY VENDOR) (Applicable for BEND TYPE 'E', 'F' & G)			
1.0	IRREGULAR BEND FOR LADDER 600 MM WIDE TRAYS	NOS	350	0.0018036
2.0	IRREGULAR BEND FOR LADDER 450 MM WIDE TRAYS	NOS	280	0.0011543
3.0	IRREGULAR BEND FOR LADDER 300 MM WIDE TRAYS	NOS	280	0.00086573
4.0	IRREGULAR BEND FOR LADDER 150 MM WIDE TRAYS	NOS	500	0.00103063
AE.2	FABRICATION OF IRREGULAR BEND TO BE DONE FROM THE EXISTING PERFORATED TYPE CABLE TRAY AS PER SITE REQUIREMENT (cable tray material will be issued by BHEL free of cost) (CONSUMABLES etc. TO BE PROVIDED BY VENDOR) (Applicable for BEND TYPE 'E', 'F' & G)			
2.0	IRREGULAR BEND FOR PERF 600 MM WIDE TRAYS	NOS	170	0.00122645
3.0	IRREGULAR BEND FOR PERF 450 MM WIDE TRAYS	NOS	200	0.00123675
4.0	IRREGULAR BEND FOR PERF 300 MM WIDE TRAYS	NOS	200	0.00103063
5.0	IRREGULAR BEND FOR PERF 150 MM WIDE TRAYS	NOS	260	0.00107185
E	GALVANISED MS CONDUIT/ PIPE WITH COUPLER, BEND, CLAMP, ETC			
E.1	GALVANISED MS RIGID CONDUITS			
1.0	20-30 mm diameter	Metres	500	0.00038194
2.0	50 mm diameter	Metres	100	0.00009336
3.0	75 mm diameter	Metres	300	0.00030919
4.0	100-125 mm diameter	Metres	300	0.00045833
E.2	FLEXIBLE CONDUIT (MADE OF COLD ROLLED ANNEALED ELECTRO GALVANISED MS STRIP, CLAMP, ETC)			
1.0	20-25 mm diameter	Metres	300	0.00015278
2.0	40-50 mm diameter	Metres	150	0.0001164
3.0	75-100 mm diameter	Metres	70	0.00007214

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
F	CABLE LAYING (INCLUDES SUPPLY & INSTALLATION OF REQUIRED CLAMP, AL STRIP, SADDLE, ETC FOR CABLE DRESSING, CLAMPING, ETC. TREFOIL CLAMP FOR SINGLE CORE CABLE OF OD 30 MM TO 50 MM, WILL BE SUPPLIED BY BHEL FREE OF COST)			
F.1	33/ 19 KV AL CONDUCTOR/ XLPE INSULATED/ ARMOURED/ UNEARTHED GRADE POWER CABLE	DELETED		
F.2	11/ 11 KV AL CONDUCTOR/ XLPE INSULATED/ ARMOURED/ GRADE POWER CABLE			
1.0	1C-300 SQMM	KM	0.5	0.00030919
2.0	1CX630 SQMM	KM	5	0.00363751
3.0	3C-185 SQMM	KM	1	0.0008245
F.3	11/ 11 KV AL CONDUCTOR/ XLPE INSULATED/ UN-ARMOURED/ GRADE POWER CABLE			
1.0	1CX630 SQMM	KM	7	0.00509251
2.0	3C-185 SQMM	KM	9	0.00742052
F.4	3.3/ 3.3 KV AL CONDUCTOR/ XLPE INSULATED/ ARMOURED/ UNEARTHED GRADE POWER CABLE			
1.0	1C-630 SQMM	KM	1	0.00061838
F.5	3.3/ 3.3 KV AL CONDUCTOR/ XLPE INSULATED/ UN-ARMOURED/ UNEARTHED GRADE POWER CABLE			
1.0	1C-185 SQMM	KM	1	0.00052138
2.0	3C-185 SQMM	KM	8	0.00582002
F.6	1.1 KV LT ALUMINIUM .XLPE POWER CABLE (ARMOURED/UNARMOURED)			
1.0	1C-6 sq mm	KM	0.5	0.00005471
2.0	1C-10 sq mm	KM	0.5	0.00005471
3.0	1C-25 sq mm	KM	0.5	0.00005471
4.0	1C-35 sq mm	KM	15	0.00309188
5.0	1C-50 sq mm	KM	0.5	0.00010306
6.0	1C-70 sq mm	KM	13	0.00346776
7.0	1C-95 sq mm	KM	0.5	0.00013338
8.0	1C-120 sq mm	KM	4	0.001649
9.0	1C-185 sq mm	KM	0.5	0.00020613
10.0	1C-400 sq mm	KM	6	0.00371026
11.0	1C-630 sq mm	KM	20	0.01236753
12.0	2C-2.5 sqmm	KM	42	0.00407401
13.0	2C-10 sqmm	KM	4	0.000485
14.0	2C-25 sqmm	KM	1	0.00020613
15.0	2C-50 sqmm	KM	0.5	0.00013338
16.0	2C-95 sqmm	KM	8	0.00252201
17.0	2C-120 sq mm	KM	80	0.03298009
18.0	2C-150 sqmm	KM	0.5	0.00020613
19.0	2C-185 sqmm	KM	0.5	0.00020613
20.0	3C-2.5 sq mm	KM	180	0.01746005
21.0	3C-6 sq mm	KM	0.5	0.00006063
22.0	3C-10 sq mm	KM	18	0.00218251
23.0	3C-16 sq mm	KM	10	0.0012125
24.0	3C-25 sq mm	KM	40	0.00485001
25.0	3C-35 sq mm	KM	0.5	0.00006063
26.0	3C-50 sq mm	KM	10	0.00206126
27.0	3C-70 sq mm	KM	3	0.00061838
28.0	3C-95 sq mm	KM	6	0.0016005
29.0	3C-120 sq mm	KM	0.5	0.00013338
30.0	3C-150 sq mm	KM	4	0.00247351

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
31.0	3C-240 sq mm	KM	18	0.01113078
32.0	3C-400 sq mm	KM	0.5	0.00036375
33.0	3.5C-25 sq mm	KM	12	0.0018915
34.0	3.5C-50 sq mm	KM	20	0.00533501
35.0	3.5C-95 sq mm	KM	8	0.00252201
36.0	3.5C-120 sq mm	KM	0.5	0.00015763
37.0	3.5C-150 sq mm	KM	0.5	0.00015763
38.0	3.5C-185 sq mm	KM	4	0.00247351
39.0	3.5C-300 sq mm	KM	0.5	0.00030919
40.0	4C- 4 sq mm	KM	10	0.0012125
41.0	4C-10 sq mm	KM	0.5	0.00006063
42.0	4C-16 sq mm	KM	0.5	0.00006063
43.0	4C-50 sq mm	KM	1.5	0.00030919
F.7	1.1 KV LT COPPER XLPE POWER CABLE			
1.0	1C-70 sq mm	KM	0.5	0.00013338
2.0	1C-240 sq mm	KM	0.5	0.00020613
3.0	1C-630 sq mm	KM	0.5	0.00030919
4.0	2C-2.5 sq mm	KM	12	0.001164
5.0	2C-6 sq mm	KM	0.5	0.00006063
6.0	2C-10 sq mm	KM	0.5	0.00006063
7.0	2C-25 sq mm	KM	0.5	0.00010306
8.0	2C-70 sq mm	KM	0.5	0.00013338
9.0	3C-2.5 sq mm	KM	73	0.00708102
10.0	3C-6 sq mm	KM	0.5	0.00006063
11.0	3C-50 sq mm	KM	0.5	0.00010306
12.0	4C-1.5 sq mm	KM	0.5	0.0000485
13.0	4C-35 sq mm	KM	0.5	0.00007881
F.8	LT. COPPER FIRE SURVIVAL CABLE			
1.0	1C-150 sq mm	KM	0.5	0.00020613
2.0	1C-400 sq mm	KM	0.5	0.00030919
3.0	2C-95 sq mm	KM	0.5	0.00015763
4.0	3C-2.5 sq mm	KM	0.5	0.0000485
5.0	5C-2.5 sq mm	KM	0.5	0.00006063
F.9	1.1 KV LT. COPPER CONTROL CABLE (AROUDED/UNARMoured)			
1.0	2C-1.5 sq mm	KM	72	0.00698402
2.0	2C-2.5 sq mm	KM	1	0.000097
3.0	2C-4 sq mm	KM	0.5	0.00006063
4.0	3C-1.5 sq mm	KM	90	0.00873002
5.0	3C-2.5 sq mm	KM	5	0.000485
6.0	4C-1.5 sq mm	KM	15	0.00181875
7.0	4C-4 sq mm	KM	0.5	0.00006063
8.0	4C-2.5 sq mm	KM	0.5	0.00006063
9.0	5C - 1.5 sqmm	KM	52	0.00630502
10.0	5C - 2.5 sqmm	KM	30	0.00363751
11.0	5C - 4 sqmm	KM	0.5	0.00007881
12.0	5C - 10 sqmm	KM	0.5	0.00007881
13.0	7C - 1.5 sqmm	KM	41	0.00596552
14.0	7C - 2.5 sqmm	KM	5	0.0007275
15.0	10C - 1.5 sqmm	KM	40	0.00582002

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
16.0	10C - 2.5 sqmm	KM	10	0.001455
17.0	12C - 1.5 sqmm	KM	46	0.00669302
18.0	12C - 2.5 sqmm	KM	0.5	0.00007275
19.0	14C-1.5 sq mm	KM	0.5	0.00009094
20.0	16C-2.5 sq mm	KM	3	0.00054563
21.0	19C-1.5 sq mm	KM	2	0.00036375
22.0	19C-2.5 sq mm	KM	0.5	0.00009094
23.0	24C-1.5 sq mm	KM	1.5	0.00030777
24.0	24C-2.5 sq mm	KM	1	0.00020518
25.0	1C-2.5 sq mm COPPER Wire for ACC system (including termination)	KM	8	0.000776
F.10	1.1 KV SCREENED CABLE			
1.0	Individual & Overall Screened Cable (Type-F) - Unarmoured cable			
	Multi pair (twisted) individual & overall shielded instrumentation cables (Type-F)			
1.1	225V Type-F(IO) 2P-0.5 unarmoured	KM	16	0.001552
1.2	225V Type-F(IO) 4P-0.5 unarmoured	KM	68	0.00824502
1.3	225V Type-F(IO) 8P-0.5 unarmoured	KM	26	0.00378301
1.4	225V Type-F(IO) 12P-0.5 unarmoured	KM	18	0.00305551
1.5	225V Type-F(IO) 20P-0.5 unarmoured	KM	7	0.00178238
2.0	Overall Screened cable (Type-G) - Unarmoured cable			
	Multi pair (twisted) overall shielded instrumentation cables (Type-G)			
2.1	225V Type-G(O) 2P-0.5 unarmoured	KM	12	0.001164
2.2	225V Type-G(O) 4P-0.5 unarmoured	KM	160	0.01940005
2.3	225V Type-G(O) 8P-0.5 unarmoured	KM	40	0.00582002
2.4	225V Type-G(O) 12P-0.5 unarmoured	KM	12	0.00203701
3.0	Overall Screened cable (Type-G) - Armoured cable			
	Multi pair (twisted) overall shielded instrumentation cables (Type-G)			
3.1	225V Type-G(O) 2P-0.5 Armoured	KM	1	0.000097
3.2	225V Type-G(O) 4P-0.5 Armoured	KM	4	0.000485
3.3	225V Type-G(O) 12P-0.5 Armoured	KM	2.5	0.00042438
F.11	OTHER CABLES (including termination)			
1.0	CAT - 5e COMMUNICATION CABLE WITHOUT CONDUIT	KM	1	0.0000684
2.0	CAT - 5e COMMUNICATION CABLE WITH CONDUIT	KM	1	0.0001455
3.0	OPTICAL FIBRE CABLE WITHOUT CONDUIT	KM	1.5	0.00016414
4.0	OPTICAL FIBRE CABLE WITH CONDUIT	KM	1.5	0.0003283
5.0	PTFE signal cable, earthing cable alongwith flexible GI conduit for Hopper Ash level indicator system.	KM	3	0.0004365
6.0	LT SCREENED CU UNARMoured CABLE - 4C x 1.5 SQ. MM FOR ESP	KM	59	0.00715377
G	CABLE TERMINATION & JOINT KITS			

SCH-2: SERVICE PRICE

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
G.1	FOR 11/11 KV GRADE, XLPE INSULATED, ALUMINIUM CONDUCTOR CABLES FOR THE FOLLOWING SIZES			
1.0	1CX630 Unarmoured (Indoor type)	Nos	80	0.00329801
2.0	1CX630 Armoured (Indoor type)	Nos	12	0.0004947
3.0	03C X 185 SQ. MM Unarmoured (Indoor type)	Nos	80	0.00329801
4.0	03C X 185 SQ. MM Armoured (Indoor type)	Nos	4	0.0001649
G.2	FOR 3.3/3.3 KV GRADE, XLPE INSULATED, ALUMINIUM CONDUCTOR CABLES FOR THE FOLLOWING SIZES			
1.0	1C X 185 SQ. MM Unarmoured (Indoor type)	Nos.	10	0.00036375
2.0	3C X 185 SQ. MM Unarmoured (Indoor type)	Nos.	70	0.00288576
3.0	1C X 630 Armoured (Indoor type)	Nos.	15	0.00061838
4.0	1C X 400 SQ. MM Unarmoured (Indoor type)	Nos.	6	0.00024735
G.3	19/33kV,XLPE INSULATED ARMOURED AL CABLE FOR THE FOLLOWING SIZES	DELETED		
	STRAIGHT THROUGH JOINTING KITS			
G.4	FOR 11/11 KV GRADE, XLPE INSULATED, ALUMINIUM CONDUCTOR CABLES FOR THE FOLLOWING SIZES			
1.0	1CX630 Unarmoured (Indoor type)	Nos.	1	0.00005153
2.0	1CX630 Armoured (Indoor type)	Nos.	6	0.00030919
3.0	03C X 185 SQ. MM Unarmoured (Indoor type)	Nos.	2	0.00010306
4.0	03C X 185 SQ. MM Armoured (Indoor type)	Nos.	1	0.00005153
G.5	FOR 3.3/3.3 KV GRADE, XLPE INSULATED, ALUMINIUM CONDUCTOR CABLES FOR THE FOLLOWING SIZES			
1.0	3C X 185 SQ. MM Unarmoured (Indoor type)	Nos.	1	0.00005153
G.6	1.1 KV LT ALUMINIUM .XLPE POWER CABLE			
1.0	1C-6 sq mm	Nos.	10	0.00001867
2.0	1C-10 sq mm	Nos.	10	0.00002049
3.0	1C-25 sq mm	Nos.	10	0.00002049
4.0	1C-35 sq mm	Nos.	40	0.00010331
5.0	1C-50 sq mm	Nos.	10	0.00002583
6.0	1C-70 sq mm	Nos.	30	0.00007748
7.0	1C-95 sq mm	Nos.	10	0.00002583
8.0	1C-120 sq mm	Nos.	10	0.00007736
9.0	1C-185 sq mm	Nos.	4	0.00003094
10.0	1C-400 sq mm	Nos.	20	0.00015472
11.0	1C-630 sq mm	Nos.	60	0.00046415
12.0	2C-2.5 sqmm	Nos.	150	0.00030919
13.0	2C-10 sqmm	Nos.	16	0.00004132
14.0	2C-25 sqmm	Nos.	6	0.0000155
15.0	2C-50 sqmm	Nos.	6	0.0000155
16.0	2C-95 sqmm	Nos.	26	0.00006715
17.0	2C-120 sq mm	Nos.	240	0.00185658
18.0	2C-150 sqmm	Nos.	10	0.00007736
19.0	2C-185 sqmm	Nos.	10	0.00007736
20.0	3C-2.5 sq mm	Nos.	600	0.00123675
21.0	3C-6 sq mm	Nos.	30	0.00006184
22.0	3C-10 sq mm	Nos.	80	0.00020661
23.0	3C-16 sq mm	Nos.	60	0.00015496
24.0	3C-25 sq mm	Nos.	120	0.00030992
25.0	3C-35 sq mm	Nos.	10	0.00002583
26.0	3C-50 sq mm	Nos.	40	0.00010331
27.0	3C-70 sq mm	Nos.	12	0.00003099
28.0	3C-95 sq mm	Nos.	26	0.00006715
29.0	3C-120 sq mm	Nos.	6	0.0000155
30.0	3C-150 sq mm	Nos.	12	0.00009283

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
31.0	3C-240 sq mm	Nos.	62	0.00047962
32.0	3C-400 sq mm	Nos.	6	0.00004641
33.0	3.5C-25 sq mm	Nos.	46	0.0001188
34.0	3.5C-50 sq mm	Nos.	60	0.00015496
35.0	3.5C-95 sq mm	Nos.	20	0.00005165
36.0	3.5C-120 sq mm	Nos.	6	0.0000155
37.0	3.5C-150 sq mm	Nos.	6	0.0000155
38.0	3.5C-185 sq mm	Nos.	12	0.00009283
39.0	3.5C-300 sq mm	Nos.	4	0.00003094
40.0	4C- 4 sq mm	Nos.	30	0.00006184
41.0	4C-10 sq mm	Nos.	10	0.00007736
42.0	4C-16 sq mm	Nos.	8	0.00006189
43.0	4C-50 sq mm	Nos.	8	0.00006189
G.7	1.1 KV LT COPPER .XLPE POWER CABLE			
1.0	1C-70 sq mm	Nos.	6	0.0000155
2.0	1C-240 sq mm	Nos.	4	0.00003094
3.0	1C-630 sq mm	Nos.	4	0.00003094
4.0	2C-2.5 sq mm	Nos.	40	0.00008245
5.0	2C-6 sq mm	Nos.	10	0.00002061
6.0	2C-10 sq mm	Nos.	10	0.00002061
7.0	2C-25 sq mm	Nos.	10	0.00002061
8.0	2C-70 sq mm	Nos.	6	0.00001237
9.0	3C-2.5 sq mm	Nos.	1400	0.00288576
10.0	3C-6 sq mm	Nos.	10	0.00002061
11.0	3C-50 sq mm	Nos.	8	0.00001649
12.0	4C-1.5 sq mm	Nos.	10	0.00002061
13.0	4C-35 sq mm	Nos.	8	0.00006189
G.8	LT. COPPER FIRE SURVIVAL CABLE			
1.0	1C-150 sq mm	Nos.	10	0.00007736
2.0	1C-400 sq mm	Nos.	10	0.00007736
3.0	3C-2.5 sq mm	Nos.	10	0.00002061
4.0	5C-2.5 sq mm	Nos.	10	0.00002061
G.9	1.1 KV LT. COPPER PVC FRLS CONTROL CABLE; ARMoured/UNARMoured (for cable sizes 1.5 sqmm and 4.0 sqmm cable termination rate shall be inclusive of supply of Heavy duty Copper lugs suitable to terminal box also).			
1.0	2C-1.5 sq mm	Nos.	260	0.00053593
2.0	2C-2.5 sq mm	Nos.	16	0.00003298
3.0	2C-4 sq mm	Nos.	10	0.00002061
4.0	3C-1.5 sq mm	Nos.	360	0.00074205
5.0	3C-2.5 sq mm	Nos.	26	0.00005359
6.0	4C-1.5 sq mm	Nos.	60	0.00012368
7.0	4C-4 sq mm	Nos.	10	0.00002061

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
8.0	4C-2.5 sq mm	Nos.	12	0.00002474
9.0	5C - 1.5 sqmm	Nos.	200	0.0008245
10.0	5C - 2.5 sqmm	Nos.	180	0.00074205
11.0	5C - 4 sqmm	Nos.	10	0.00004123
12.0	5C - 10 sqmm	Nos.	8	0.00003298
13.0	7C - 1.5 sqmm	Nos.	180	0.00074205
14.0	7C - 2.5 sqmm	Nos.	24	0.00009894
15.0	10C - 1.5 sqmm	Nos.	280	0.00173145
16.0	10C - 2.5 sqmm	Nos.	24	0.00014841
17.0	12C - 1.5 sqmm	Nos.	140	0.00101002
18.0	12C - 2.5 sqmm	Nos.	490	0.00353505
19.0	14C-1.5 sq mm	Nos.	14	0.000101
20.0	14C-2.5 sq mm	Nos.	14	0.000101
21.0	19C-1.5 sq mm	Nos.	8	0.00007421
22.0	19C-2.5 sq mm	Nos.	14	0.00012986
23.0	24C-1.5 sq mm	Nos.	14	0.00012986
24.0	24C-2.5 sq mm	Nos.	14	0.00012986

G.10	1.1 KV SCREENED CABLE			
1.0	Individual & Overall Screened Cable (Type-F) - Unarmoured cable			
	Multi pair (twisted) individual & overall shielded instrumentation cables (Type-F)			
1.1	225V Type-F(IO) 2P-0.5 unarmoured	Nos.	60	0.00012368
1.2	225V Type-F(IO) 4P-0.5 unarmoured	Nos.	240	0.0004947
1.3	225V Type-F(IO) 8P-0.5 unarmoured	Nos.	100	0.00020613
1.4	225V Type-F(IO) 12P-0.5 unarmoured	Nos.	90	0.00018551
1.5	225V Type-F(IO) 20P-0.5 unarmoured	Nos.	30	0.00006184
2.0	Overall Screened cable (Type-G) - Unarmoured cable			
	Multi pair (twisted) overall shielded instrumentation cables (Type-G)			
2.1	225V Type-G(O) 2P-0.5 unarmoured	Nos.	40	0.00008245
2.2	225V Type-G(O) 4P-0.5 unarmoured	Nos.	600	0.00123675
2.3	225V Type-G(O) 8P-0.5 unarmoured	Nos.	200	0.00041225
2.4	225V Type-G(O) 12P-0.5 unarmoured	Nos.	50	0.00010306
3.0	Overall Screened cable (Type-G) - Armoured cable			
	Multi pair (twisted) overall shielded instrumentation cables (Type-G)			
3.1	225V Type-G(O) 2P-0.5 Armoured	Nos.	20	0.00004123
3.2	225V Type-G(O) 4P-0.5 Armoured	Nos.	30	0.00006184
3.3	225V Type-G(O) 12P-0.5 Armoured	Nos.	24	0.00004947
G.11	CABLE JOINTS (thru jointing kit)			

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
G.11.1	DELETED			
G.11.2	11/ 11 KV AL CONDUCTOR/ XLPE INSULATED/ ARMOURED/ GRADE POWER CABLE			
1.0	1C-300 SQMM	Nos.	2	0.00008245
2.0	1CX630 SQMM	Nos.	10	0.00051531
3.0	3C-185 SQMM	Nos.	4	0.00020613
G.11.3	11/ 11 KV AL CONDUCTOR/ XLPE INSULATED/ UN-ARMOURED/ GRADE POWER CABLE			
1.0	1CX630 SQMM	Nos.	20	0.00103063
2.0	3C-185 SQMM	Nos.	24	0.00123675
G.11.4	3.3/ 3.3 KV AL CONDUCTOR/ XLPE INSULATED/ ARMOURED/ UNEARTHED GRADE POWER CABLE			
1.0	1C-630 SQMM	Nos.	2	0.00010306
G.11.5	3.3/ 3.3 KV AL CONDUCTOR/ XLPE INSULATED/ UN-ARMOURED/ UNEARTHED GRADE POWER CABLE			
1.0	1C-185 SQMM	Nos.	2	0.00008245
2.0	3C-185 SQMM	Nos.	18	0.00092756
G.11.6	Supply and installation of St. Thru' Jointing Kit for 1.1 KV LT ALUMINIUM .XLPE POWER CABLE			
1.0	1C-6 sq mm	Nos.	14	0.00002614
2.0	1C-10 sq mm	Nos.	14	0.00002869
3.0	1C-25 sq mm	Nos.	14	0.00002869
4.0	1C-35 sq mm	Nos.	14	0.00003005
5.0	1C-50 sq mm	Nos.	14	0.00003005
6.0	1C-70 sq mm	Nos.	14	0.00003123
7.0	1C-95 sq mm	Nos.	14	0.00003395
8.0	1C-120 sq mm	Nos.	14	0.00003395
9.0	1C-185 sq mm	Nos.	14	0.00003395
10.0	1C-400 sq mm	Nos.	14	0.0000365
11.0	1C-630 sq mm	Nos.	14	0.00004176
12.0	2C-2.5 sqmm	Nos.	14	0.00001952
13.0	2C-10 sqmm	Nos.	14	0.00001952
14.0	2C-25 sqmm	Nos.	14	0.00001952
15.0	2C-50 sqmm	Nos.	14	0.00002614
16.0	2C-95 sqmm	Nos.	14	0.00003123
17.0	2C-120 sq mm	Nos.	14	0.00003123
18.0	2C-150 sqmm	Nos.	14	0.0000365
19.0	2C-185 sqmm	Nos.	14	0.00004176
20.0	3C-2.5 sq mm	Nos.	14	0.00002343
21.0	3C-6 sq mm	Nos.	14	0.00002478
22.0	3C-10 sq mm	Nos.	14	0.00002869
23.0	3C-16 sq mm	Nos.	14	0.00002869
24.0	3C-25 sq mm	Nos.	14	0.00002869

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
25.0	3C-35 sq mm	Nos.	14	0.00003005
26.0	3C-50 sq mm	Nos.	14	0.00003123
27.0	3C-70 sq mm	Nos.	14	0.00003123
28.0	3C-95 sq mm	Nos.	14	0.00003123
29.0	3C-120 sq mm	Nos.	14	0.0000365
30.0	3C-150 sq mm	Nos.	14	0.00004176
31.0	3C-240 sq mm	Nos.	14	0.0000443
32.0	3C-400 sq mm	Nos.	14	0.00005211
33.0	3.5C-25 sq mm	Nos.	14	0.00002614
34.0	3.5C-50 sq mm	Nos.	14	0.00002869
35.0	3.5C-95 sq mm	Nos.	14	0.00003259
36.0	3.5C-120 sq mm	Nos.	14	0.0000365
37.0	3.5C-150 sq mm	Nos.	14	0.00004176
38.0	3.5C-185 sq mm	Nos.	14	0.0000443
39.0	3.5C-300 sq mm	Nos.	14	0.00004685
40.0	4C-4 sq mm	Nos.	14	0.00002614
41.0	4C-10 sq mm	Nos.	14	0.00002869
42.0	4C-16 sq mm	Nos.	14	0.00003123
43.0	4C-50 sq mm	Nos.	14	0.00003123
G.11.7	Supply and installation of St. Thru' Jointing Kit for 1.1 KV LT COPPER XLPE POWER CABLE			
1.0	1C-70 sq mm	Nos.	14	0.00003395
2.0	1C-240 sq mm	Nos.	14	0.00003904
3.0	1C-630 sq mm	Nos.	14	0.00005211
4.0	2C-2.5 sq mm	Nos.	14	0.00001952
5.0	2C-6 sq mm	Nos.	14	0.00002088
6.0	2C-10 sq mm	Nos.	14	0.00002207
7.0	2C-25 sq mm	Nos.	14	0.00002614
8.0	2C-70 sq mm	Nos.	14	0.00003123
9.0	3C-2.5 sq mm	Nos.	14	0.00002343
10.0	3C-6 sq mm	Nos.	14	0.00002478
11.0	3C-50 sq mm	Nos.	14	0.00003123
12.0	4C-1.5 sq mm	Nos.	14	0.00002869
13.0	4C-35 sq mm	Nos.	14	0.0000443
G.11.8	Supply and installation of St. Thru' Jointing Kit for LT. COPPER FIRE SURVIVAL CABLE			
1.0	1C-150 sq mm	Nos.	14	0.00004566
2.0	1C-400 sq mm	Nos.	14	0.00005856
3.0	3C-2.5 sq mm	Nos.	14	0.00002343
4.0	2C-95 sq mm	Nos.	14	0.00003123
4.0	5C-2.5 sq mm	Nos.	14	0.00003005

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
G.11.9	Supply and installation of St. Thru' Jointing Kit for 1.1 KV LT. COPPER PVC FRLS CONTROL CABLE			
1.0	2C-1.5 sq mm	Nos.	14	0.00001698
2.0	2C-2.5 sq mm	Nos.	14	0.00001816
3.0	2C-4 sq mm	Nos.	14	0.00001816
4.0	3C-1.5 sq mm	Nos.	14	0.00001816
5.0	3C-2.5 sq mm	Nos.	14	0.00002343
6.0	4C-1.5 sq mm	Nos.	14	0.00002343
7.0	4C-4 sq mm	Nos.	14	0.00002478
8.0	4C-2.5 sq mm	Nos.	14	0.00002088
9.0	5C - 1.5 sqmm	Nos.	14	0.00002207
10.0	5C - 2.5 sqmm	Nos.	14	0.00002343
11.0	5C - 4 sqmm	Nos.	14	0.00002614
12.0	5C - 10 sqmm	Nos.	14	0.00002614
13.0	7C - 1.5 sqmm	Nos.	14	0.00002869
14.0	7C - 2.5 sqmm	Nos.	14	0.00003005
15.0	10C - 1.5 sqmm	Nos.	14	0.00003123
16.0	10C - 2.5 sqmm	Nos.	14	0.00003123
17.0	12C - 1.5 sqmm	Nos.	14	0.00003259
18.0	12C - 2.5 sqmm	Nos.	14	0.00003259
19.0	14C-1.5 sq mm	Nos.	14	0.00003395
20.0	16C-2.5 sq mm	Nos.	14	0.00003395
21.0	19C-1.5 sq mm	Nos.	14	0.00003395
22.0	19C-2.5 sq mm	Nos.	14	0.00003514
23.0	24C-1.5 sq mm	Nos.	14	0.0000365
24.0	24C-2.5 sq mm	Nos.	14	0.00003904
H	ABOVE GROUND EARTHING AND LIGHTNING PROTECTION MATERIAL			
H.1	INSTALLATION OF VERTICAL AIR TERMINATION (20 MM DIA GALVANISED MS ROD 1000 MM LONG)	Nos.	140	0.00057545
H.2	GALVANISED MS FLAT FOR EARTHING SYSTEM			
1.0	GALVANISED MS/GI FLAT 60 X 8 mm	MT	1	0.00025762
2.0	GALVANISED MS FLAT 70 X 10 mm	MT	1	0.00025762
3.0	GALVANISED MS FLAT 50 X 10	MT	1	0.00025762
4.0	GALVANISED MS FLAT 65 X 8	MT	100	0.02576205
5.0	GALVANISED MS/GI FLAT 50 X 6	MT	63	0.01623009
6.0	GALVANISED MS FLAT 50 X 3	MT	1	0.00025762
7.0	GALVANISED MS FLAT 25 X 6	MT	20	0.00515241
8.0	GALVANISED MS FLAT 25 X 3	MT	4	0.00103048
9.0	GALVANISED MS/GI FLAT 30 X 5	MT	7.2	0.00185487
10.0	GI WIRE 8 SWG	Metres	56000	0.00543201

JOB: PACKAGE-2: Erection, Testing & Commissioning of Electrical System for Unit # 2 of 3x660 MW North Karanpura STPP, Jharkhand.

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-2: SERVICE PRICE

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
H.3	FLEXIBLE COPPER BRAID FOR GATE EARTHING	NOS.	10	0.0000274
H.4	GS ROD 20 mm DIA 1000 mm LONG	NOS.	50	0.00020552
H.5	TEST LINK 150x50x6 mm GS FLAT WITH BOX	NOS.	120	0.00049325
H.6	GALVANISED MS PIPE , 3000mm LENGTH, 25 NB/50 NB, 2.5 mm Thick WITH HOLES BELOW 1000 mm ALONG THE LENGTH WITH SUITABLE CAP FUNNEL & WIRE MESH AT ONE END AND SUITABLE CAP AT OTHER END.	NOS.	80	0.00038315
I	MINOR CIVIL WORK			
1.0	Minor Civil work (chipping)	SQM	5	0.00003425
2.0	Breaking of concrete wall/ floors including finishing	CU. M	2	0.0000137
3.0	Breaking of brick walls including finishing	SQM	10	0.00006851
4.0	EARTH EXCAVATION & BACK FILLING	CU. M	10	0.0001027
J	HT Switchgear			
1.0	11KV ,2500A,Unit Switch Board -1BA	NO.OF BOARDS	1	0.00315978
2.0	11KV ,2500A,Unit Switch Board -1BB	NO.OF BOARDS	1	0.00315978
3.0	11KV ,3500A, Station Switch Board -0BA	NO.OF BOARDS	1	0.00175088
4.0	11KV ,3500A, Station Switch Board -0BB	NO.OF BOARDS	1	0.00175088
5.0	11KV ,1250A,Switch Board -0BG	NO.OF BOARDS	1	0.00201077
6.0	11KV ,1000A, Switch Board -0BH	NO.OF BOARDS	1	0.00124477
7.0	3.3 KV, 3150A, UNIT - 1 SWITCHBOARD (1CA)	NO.OF BOARDS	1	0.00153202
8.0	3.3 KV, 2000A, UNIT - 1 SWITCHBOARD (OCA)	NO.OF BOARDS	1	0.00153202
9.0	33/11/3.3 KV EARTHING TRUCKS	SET	12	0.00016427
10.0	11 KV BUS TRANSFER PANEL	NO.	2	0.00041218
11.0	HT DATA CONCENTRATOR PANEL WITH ACCESSORIES	NO.	2	0.00041218
K	LT SWBD AND DC DB FOR UNIT # 1			
1.0	EMERGENCY MCC #1DG (3000A)	NO.OF BOARDS	1	0.00277678
2.0	BOILER SERVICE PMCC #1DA (3500A)	NO.OF BOARDS	1	0.00137471
3.0	BLR VALVE & DAMPER ACDB #1HA (250A)	NO.OF BOARDS	1	0.00157989
4.0	BOILER ACDB #1HB (400A)	NO.OF BOARDS	1	0.00174917
5.0	TURBINE SERVICE PMCC #1DB (3500A)	NO.OF BOARDS	1	0.00143627
6.0	SERVICE ACDB #1QA (600A)	NO.OF BOARDS	1	0.00108917
7.0	TURBINE VALVE DB #1KA (250A)	NO.OF BOARDS	1	0.00121313
8.0	STATION SERVICE PMCC #0DA (3500A)	NO.OF BOARDS	1	0.00108917
9.0	AIR CONDITIONING MCC #0TA (250A)	NO.OF BOARDS	1	0.00153886
10.0	VENTILATION MCC #1TA (1000A)	NO.OF BOARDS	1	0.00123109
11.0	MISC SERVICES MCC #0QA (400A)	NO.OF BOARDS	1	0.00108917
12.0	AIR WASHER MCC #0SA (800A)	NO.OF BOARDS	1	0.00087202
13.0	220V MAIN DCDB #1FA (1250A)	NO.OF BOARDS	1	0.00136787

JOB: PACKAGE-2: Erection, Testing & Commissioning of Electrical System for Unit # 2 of 3x660 MW North Karanpura STPP, Jharkhand.

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-2: SERVICE PRICE

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
14.0	ESP & ID FAN AREA MCC #1HD (250A)	NO.OF BOARDS	1	0.00128238
15.0	ESP AC & VENT MCC #1TB (400A)	NO.OF BOARDS	1	0.00128238
29.0	415V AC DBs (WALL MOUNTED)	NO.OF BOARDS	20	0.00164149
30.0	220V DC DBs (WALL MOUNTED)	NO.OF BOARDS	6	0.00049245
31.0	SOOT BLOWER MCC	NO.OF BOARDS	1	0.00184663
32.0	415V ACDB (WALL MOUNTED)	NO.OF BOARDS	15	0.00123112
33.0	220V DCDB (WALL MOUNTED)	NO.OF BOARDS	4	0.0003283
34.0	ESP LT MAIN SWITCHBOARD	NO. OF BOARDS	8	0.00816616
35.0	ESP SWITCH GEAR PANEL (17700mm L x 1700mm D X 2450mm H)	NO. OF PANELS	6	0.00612462
36.0	DIGITAL AUTOMATIC VOLTAGE REGULATOR BOARD (COMPRISING OF TRANSFORMER, REGULATION, THYRISTOR & FIELD SUPPRESSION CUBICLE - INCLUDING FITTINGS OF LOOSE ITEMS LIKE PC MONITOR AND OTHER ITEMS)	SET	1	0.00102806
37.0	LT DATA CONCENTRATOR PANEL WITH ACCESSORIES	SET	1	0.00010305
	FOR ACC SYSTEM			
38.0	LT MCC Switch Board	SET	15	0.016158
39.0	DATA CONCENTRATOR AND COMMUNICATIONS SYSTEM ACBINET.	SET	1	0.00010305
L	GENERATOR RELAY PANEL AND UNIT CONTROL & AUX CONTROL BOARD , VARIOUS CONTROL PANELS AND OTHER PANELS			
1.0	Generator Relay Panel (GEN/GT/UT PROT. PANELS)	SET	1	0.00051523
2.0	Electrical Control Panel (ERECTION IS EXCLUDED, COMMISSIONING RATE INCL. MOUNTING OF LOOSE COMPONENTS)	SET	1	0.00051523
3.0	Electrical Control Panel for outside Power House area	SET	5	0.00257614
4.0	Only Commissioning of 'Electrical Control Panel for outside PH area' (in case erected by other vendor) (COMMISSIONING RATE INCL. MOUNTING OF LOOSE COMPONENTS)	SET	5	0.00060625
5.0	MASTER CLOCK SYSTEM PANEL	Nos.	1	0.00009575
6.0	HART MANAGEMENT SYSTEM	Nos.	2	0.0001915
M	MISCELLANEOUS ITEMS OF ESP & ACC			
1.0	Electronic Control Panel (with ARECA-II CONTROLLER) (Including internal wirings with ACP and other associated panels).	No. Of Panel	120	0.01236608
2.0	DATA LOGGER PC WITH COLOR MONITOR	Set	1	0.00001369
3.0	IOS PC WITH COLOUR MONITOR	Set	1	0.00001369
4.0	COLOUR LASER PRINTER (INKJET)	Nos	1	0.00001369
5.0	SAFETY INTERLOCKS	Set	6	0.00008213
6.0	IOS PANEL	NO	1	0.00001369
7.0	DUST DENCITY MONITER (OPM)	Set	6	0.00036375
8.0	ELECTRICAL OPEARTION AND CONTROL SYSTEM OF FANS FOR ACC SYSTEM (BROAD LIST OF ITEMS INVOLVED ARE: DUAL SPEED SWITCH BOX, 1 SET SAFE SLIDE WIRE AND IT'S ACCESSOPRIES, LOCAL OPEARTION BOX ETC.)	Set	90	0.00061656

JOB: PACKAGE-2: Erection, Testing & Commissioning of Electrical System for Unit # 2 of 3x660 MW North Karanpura STPP, Jharkhand.

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-2: SERVICE PRICE

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
	(ONLY COMMISSIONING RATE TO BE QUOTED FOR ITEMS SL. NO. 9 TO 37 BELOW) - ERECTION IS EXCLUDED			
9.0	HEATING ELEMENTS FOR HOPPER- (PANEL TYPE HOPPER HEATER)	SET	240	0.00131532
10.0	HEATING ELEMENTS FOR SUPPORT INSULATOR HEATER	Nos	480	0.00263065
11.0	HEATING ELEMENTS FOR SHAFT INSULATOR HEATERS	Nos	120	0.00073914
12.0	THERMOSTAT FOR HOPPER	Nos	240	0.00147828
13.0	THERMOSTAT FOR SUPPORT INSULATOR HOUSING	Nos	12	0.00007391
14.0	ASH LEVEL INDICATOR (HIGH / LOW)	Nos	240	0.00082353
15.0	OPACITY MONITOR	Nos	6	0.00036375
16.0	DISCONNECTING SWITCH ASSY 95KV (VAR-05)	Nos	120	0.00041177
17.0	ELECTRICALLY OPERATED HOIST 3T (EOH)	SETS	6	0.00028729
18.0	GEARED MOTOR FOR COLLECTING ELECTRODE RAPPING, 0.5 HP, 1.1 RPM (CERM)	Nos	120	0.00246332
19.0	GEARED MOTOR FOR GD SCREEN RAPPING MOTOR 0.5HP, 1.1 RPM (GDRM)	Nos	12	0.00024633
20.0	GEARED MOTOR FOR EMITTING ELECTRODE RAPPING MOTOR 0.5HP, 2.5 RPM (EERM)	Nos	120	0.00246332
21.0	LINK CHAIN FOR INSULATOR HOUSING	Nos	960	0.0004656
22.0	GALVANIZED ADAPTOR 1/2" (HALF INCH) FEMALE CONDUIT	Nos	5760	0.00055872
23.0	GALVANIZED MALE CONDUIT WITH CCHK NUT 1/2" (HALF INCH)	Nos	5760	0.00055872
24.0	1/2" (HALF INCH) GALVANIZED FLEXIBLE METALIC CONDUIT	MTR.	28800	0.01466644
25.0	GALVANIZED CLAMP SET FOR 1/2" (HALF INCH) GI CONDUIT	SET	28800	0.0010476
26.0	SHAFT INSULATOR 95KV	Nos	120	0.0001746
27.0	BUSHINGS INSULATORS 95KV	Nos	120	0.0001746
28.0	SUPPORT INSULATOR	Nos	480	0.0006984
29.0	REFRIGERATION GAS DRYER	Nos	2	0.00010306
30.0	STROBOSCOPE	Nos	1	0.00001455
31.0	3 PH UPS FOR GENERATOR	SET	1	0.00004365
32.0	ROTOR FLUX PROBE DATA ACQUISITION SYSTEM	SET	1	0.00005153
33.0	MOTORISED TEMP CONTROL VALVE	Nos	1	0.00002061
34.0	GROUNDING BRUSH MONITOR SYSTEM	Nos	1	0.00005153
35.0	BRUSHLESS EXCITER	SET	1	0.00005153
36.0	ILLUMINATION, SPACE HEATER AND BLOWER COMMNG. OF PMG ENCLOSURE	SET	1	0.000097
37.0	CO2 VAPORIZER SYSTEM	SET	1	0.00005153
N	DC Strater Panel/ STARTING CABINET/ Local Motor Starter			
1.0	STARTER CABINET FOR DC JACKING OIL MOTOR WITH RESISTANCE BOX	SET	1	0.00005153
2.0	STARTER CABINET FOR DC EMERGENCY LUB .OIL MOTOR WITH RESISTANCE BOX	SET	1	0.00005153
3.0	STARTER CABINET FOR DC SEAL OIL MOTOR WITH RESISTANCE BOX	SET	1	0.00005153
4.0	FURNACE TEMPERATURE PROBE STARTER BOX	Nos	2	0.00010306

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
5.0	STARTER CABINET FOR DC SCANNER AIR MOTOR WITH RESISTANCE BOX	Nos	1	0.00005153
6.0	LOCAL MOTOR STARTER UPTO 3.7 KW	Nos	75	0.0005138
7.0	DC STARTER CONTROL PANEL OF TDBFP WITH RESISTANCE BOX	Nos	2	0.00010306
8.0	LOCAL MOTOR STARTER	Nos	450	0.00308279
O	JUNCTION BOX, PUSH BUTTON ETC.			
O.1	JUNCTION BOX			
1.0	JUNCTION BOX -6 WAY	NO	5	0.00002395
2.0	JUNCTION BOX -12 WAY	NO	5	0.00002395
3.0	JUNCTION BOX -24 WAY	NO	10	0.00004789
4.0	JUNCTION BOX -36 WAY	NO	10	0.00004789
5.0	JUNCTION BOX -48 WAY	NO	8	0.00003832
6.0	JUNCTION BOX -75 WAY	Nos.	10	0.00004789
7.0	JUNCTION BOX -96 WAY	Nos.	10	0.00004789
8.0	FRP JUNCTION BOX : 24/48/72 WAY	Nos.	250	0.00119735
	(CONTROL BOX / JUNCTION BOX FOR ESP)			
9.0	LOCAL CONTROL BOX FOR PANEL TYPE HOPPER HEATERS	SETS	240	0.00131532
10.0	FRB POWER JB VARIANT- P3	Nos	26	0.00014249
11.0	FRB POWER JB VARIANT- P1	Nos	14	0.00007673
12.0	FRB CONTROL JB VARIANT- C2	Nos	130	0.00071247
13.0	FRB CONTROL JB VARIANT- C2 FOR FD, ID	Nos	10	0.00005481
14.0	LOCAL FRP JUNCTION BOX FOR ASH LEVEL INDICATOR (HIGH)- VAR-C2 FOR NTPC USE	Nos	24	0.00013153
15.0	FRB JB VAR-C4 FOR GATES AND DAMPER.	Nos	18	0.00009865
O.2	PUSH BUTTONS			
1.0	LOCAL START STOP PUSH BUTTON FOR RAPPING MOTOR	Nos.	252	0.0015522
2.0	Local Push Button Stations (TYPE A)	Nos.	1600	0.00985523
3.0	Local Push Button Stations (TYPE C)	Nos.	25	0.00015399
4.0	FIRE PROTECTION EMERGENCY PUSH BUTTON	Nos.	7	0.00004795
P	DC System (Including fittings of loose items, like thyristors, transformer etc. with necessary internal wirings)			
1.0	220V Battery (Ni-Cd)	Set	2	0.00379756
2.0	220V Battery Rack	Set	4	0.00020613
3.0	220V DC BATTERY HEALTH MONITORING SYSTEM	Set	2	0.000291
4.0	Float cum Boost Battery Charger	Set	6	0.00215442
5.0	220V DC ISOLATION BOX	Nos	6	0.00024626
6.0	Battery Fuse Box	Nos	2	0.00008209
Q	MISCELLANEOUS			
Q.1	MOTORS & ACTUATORS (EXCLUDING ERECTION)(TO BE ERECTED BY OTHER VENDORS)			
1.0	DRYING OUT /TESTING OF HT MOTORS	No.	150	0.00772971

JOB: PACKAGE-2: Erection, Testing & Commissioning of Electrical System for Unit # 2 of 3x660 MW North Karanpura STPP, Jharkhand.				
TENDER NO: PSER:SCT:NKP-E1890:18				
SCH-2: SERVICE PRICE				
SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
2.0	DRYING OUT /TESTING OF LT MOTORS	No.	100	0.00206126
3.0	Actuators /Limit switches setting, position feedback calibration and operation/commissioning for motor operated valves/dampers / probe (actuator not to be erected)	No.	540	0.01113078
Q.2	COMMISSIONING OF SOOT BLOWER (EXCLUDING ERECTION) (TO BE ERECTED BY OTHER VENDORS)	No.	130	0.00401945
Q.3	COMMISSIONING OF ELECTRICAL OPERATED HOIST (EXCLUDING ERECTION) (TO BE ERECTED BY OTHER VENDORS)	No.	30	0.00154594
Q.4	COMMISSIONING OF CONTROL PANEL OF CENTRAL OIL PURIFICATION UNIT (EXCLUDING ERECTION) (TO BE ERECTED BY OTHER VENDORS)	No.	1	0.00005153
Q.5	Commissioning of Skid based Lub Oil system for different HT Motors	No.	20	0.00103063
Q.6	Commissioning of different types of Dosing Panels (NAOH/ NH3/Hydrazine/O2 etc.)	No.	8	0.00041225
Q.7	Self Cleaning Strainer	No.	4	0.00020613
Q.8	Sump Pump/ Submersible Pump (Commissioning only)	No.	4	0.00020613
Q.9	Commissioning of Electric Hoist	No.	15	0.00077297
Q.10	Assistance in installation of Electrical Lab. Equipment	Set	1	0.0001455
Q.11	Commissioning of Misc. AC Electrical Control Panel (TO BE ERECTED BY OTHER VENDORS)	No.	10	0.00051531
Q.12	FABRICATION AND ERECTION (SUPPLY OF MATL BY BHEL FREE OF COST)			
1.0	Fabrication & erection of foundation/ base frames for switchgear ,Control Panel,LCC/LPB/Starter ,Fuse Board etc.crosschannel etc from MS Structural items (Angle ,Starter ,Fuse Board etc., cross channel etc.from MS Structural items (Angle, Channel, flat, plate etc.for including providing of all required consumables, paints etc.	MT	15	0.00328303
Q.13	CHEQUERED PLATES			
1.0	Fabrication & Installation of Chequered Plates 6 to 8 mm thick (Material by BHEL as free issue) for covering up leftover floor cutout / trench around switchgear / panels (inclusive of all consumables , paints).	MT	1.5	0.0003283
Q.14	INSERT PLATES /ANCHOR FASTENERS			
1.0	Fabrication of Insert Plates by gas cutting/grinding ,from 6-8 mm thick MS plates,Angle /Flats etc.(MS materials by BHEL as free issue)and its installation on wall /floor/ceiling.	MT	0.25	0.00005472
2.0	Installation of heavy duty galvanised friction anchor fasteners of Hilti/Bosch make of dia 16mm and 100 mm length in concrete (minimum grade M20)including supply of anchor fasteners material ,consumables and providing tollws,scaffolding etc.	Set	50	0.00013034
3.0	Supply and installation of Fasteners like nut, bolts, washer of all varriants	KG	25	0.0001552
Q.15	CANOPIES			
1.0	Fabrication and installation of canopies from 2mm thick GI sheet (free issue by BHEL)for protection of outdoor LPBs /starters etc.(inclusive of supply of all consumables /paints)	Square Metre	25	0.00034223
Q.16	Installation of MS HOT DIP GALVANISED THREADED & HEXAGONAL HEAD CABLE GLAND ADAPTORS/GLAND HOLE PLUGS AS PER REQUIRED SIZE AND SHAPES	KG.	125	0.00068506
Q.17	Application of Moisture Sealing compounds for wall, floor, panel openings for all variants	Sq. Mtr.	50	0.00036375
R	GENERATOR CIRCUIT BREAKER			

JOB: PACKAGE-2: Erection, Testing & Commissioning of Electrical System for Unit # 2 of 3x660 MW North Karanpura STPP, Jharkhand.				
TENDER NO: PSER:SCT:NKP-E1890:18				
SCH-2: SERVICE PRICE				
SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
1	Generator Circuit Breaker (21KV, 24000A) complete set	Set	1	0.00002183
S	TRANSFORMERS			
S.1	<u>OIL FILLED TRANSFORMERS</u> (SCOPE OF WORK: a) SHIFTING OF TRANSFORMER FOR ERECTION PURPOSE (Job involving Loading from storage location at about maximum 500 Mtr. periphery inside the plant premises, Transportation through multi axle low bed trailer and unloading for erection purpose) b) Erection, Testing and commissioning of Transformer and associated Equipments / accessories.)			
1.0	265 MVA, 420/√3/21 Kv, OFAF or ODAF, YNd11, Z=15% ON 265 MVA BASE, OCTC +/- 5% IN STEPS OF 2.5% ON HV SIDE			
1.0 (a)	SHIFTING OF TRANSFORMER FOR ERECTION PURPOSE	Sets	3	0.00873002
1.0 (b)	Erection, Testing and commissioning of Transformer and associated Equipments / accessories.)	Sets	3	0.03586569
2.0	120/60/60 MVA, 400/11.5/11.5 kV, ONAN/ONAF, YNyn0yn0, OLTC +/-10% IN STEPS OF 1.25% ON HV SIDE, ZHV-LV1 = Z HV-LV2 = 28%, Z LV1-LV2 = 51% AT 120 MVA BASE WITH 02 NOS NGR (11.06 OHM, 600A FOR 10 SECS)			
2.0 (a)	SHIFTING OF TRANSFORMER FOR ERECTION PURPOSE	NOS	1	0.00291001
2.0 (b)	Erection, Testing and commissioning of Transformer and associated Equipments / accessories.)	NOS	1	0.01195528
3.0	45 MVA, 21/11.5 kV, ONAN/ONAF, Dyn1, Z=11.5% ON 45 MVA BASE, OLTC +/- 10% IN STEPS OF 1.25% ON HV SIDE WITH NGR (11.06 OHM, 600A FOR 10 SECS)			
3.0 (a)	SHIFTING OF TRANSFORMER FOR ERECTION PURPOSE	NOS	2	0.001455
3.0 (b)	Erection, Testing and commissioning of Transformer and associated Equipments / accessories.)	NOS	2	0.00630502
4.0	16 MVA, 11/3.45 KV, ONAN, DyN1, Z= 12.5% UAT and CHP Transformer with NGR (3.32OHM, 600A, 10Secs)and accessories complete. (UAT-02 Nos, CHP Transformer - 3 nos)			
4.0 (a)	SHIFTING OF TRANSFORMER FOR ERECTION PURPOSE	NOS	5	0.00242501
4.0 (b)	Erection, Testing and commissioning of Transformer and associated Equipments / accessories.)	NOS	5	0.00606252
5.0	95 KV/900 mA HVR TRANSFORMER(ERECTION IS EXCLUDED , RATE TO BE QUOTED FOR OIL FILTRATION & COMMISSIOING ONLY)	NOS	120	0.01236608
S.2	OIL FILLED SERVICE TRANSFORMER			
1.0	1600kVA, 11kV/0.433kV, 3 phase, 2 winding, outdoor, ONAN, Z=8.0%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV and with solidly grounded LVN termination)	NOS	2	0.00157625
2.0	2000kVA, 11kV/0.433kV, 3 phase, 2 winding, outdoor, ONAN, Z=10.0%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV and with solidly grounded LVN termination)	NOS	10	0.00788127
3.0	2000 KVA, 11kV/3.45kV, 3 phase, 2 winding, outdoor, ONAN, Z=7%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV and with cable box type LVN termination)	NOS	1	0.00090938

JOB: PACKAGE-2: Erection, Testing & Commissioning of Electrical System for Unit # 2 of 3x660 MW North Karanpura STPP, Jharkhand.

TENDER NO: PSER:SCT:NKP-E1890:18

SCH-2: SERVICE PRICE

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
4.0	2500kVA, 11kV/0.433kV, 3 phase, 2 winding, outdoor, ONAN, Z=13.0%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV and with solidly grounded LVN termination)	NOS	15	0.01182191
S.3	Dry Type Type Transformer:			
1.0	11 / 0.433KV Dry Type Transformer (DTT), above 2 MVA	NOS	4	0.00315251
ZA	BUSDUCTS			
ZA.1	IP BUSDUCT(24KV)			
a)	Bus Duct of Rating 24000A (Weight 500Kg/Mtr.)	MTR	190	0.01497441
b)	Bus Duct of Rating 14000A (Weight 380Kg/Mtr.)	MTR	150	0.01182191
c)	Bus Duct of Rating 2800A (Weight 220Kg/Mtr.)	MTR	90	0.00491064
d)	Top Chamber	NO	2	0.000582
e)	NGR (0.628 Ohm with TAPs at 0.534, 0.471 & 0.094 Ohm, 240V, 400A for 5 Min) with Neutral Grounding Transformer(Rating: 13.5 KV/240V, Volt Class 22/1.1KV, AN, 1Ph, 50HZ, 65 KVA) (including assembly of loose components alongwith internal wiring, mounting of neutral CT etc.)	NO	1	0.000291
f)	LAVT Cubicle (including assembly of loose components alongwith internal wiring, mounting of VT etc.)	SET	1	0.000291
g)	SPVT Cubicle (including assembly of loose components alongwith internal wiring, mounting of VT etc.)	SET	1	0.000291
h)	Hot Air Blowing Equip. with piping and pipe support including air drying and compressing unit	SET	1	0.00194001
ZA.2	SP BUSDUCT(11KV & 3.3KV)			
1.0	11KV Bus Duct of Rating 3500A (Weight 180Kg/Mtr.)	MTR	155	0.0039467
2.0	11KV Bus Duct of Rating 2500A (Weight 100Kg/Mtr.)	MTR	170	0.00432864
3.0	3.3KV Bus Duct of Rating 3150A (Weight 150Kg/Mtr.)	MTR	120	0.00305551
4.0	11KV Bus Duct of Rating 3500A (Weight 180Kg/Mtr.) for Interconnecting	MTR	760	0.01935155
5.0	3.3KV Bus Duct of Rating 3150A (Weight 150Kg/Mtr.) for CHP	MTR	30	0.00076388
6.0	3.3KV Bus Duct of Rating 2000A (Weight 100Kg/Mtr.) for AHP	MTR	30	0.00076388
ZA.3	LT BUSDUCTS (each set comprising tentatively of following : Straight Run, 90 degree bend, Flexible Copper at Transformer end, Flexible at Switchgear end , Adapter, Expansion joint, Phase cross over, hardware at Transformer & SWBD end)			
1.0	SANDWICH TYPE BUSDUCT FOR EMERGENCY MCC FROM MAIN DG #1DG (3000A)	SET	1	0.00727502
2.0	SANDWICH TYPE BUSDUCT FOR EMERGENCY MCC FROM STAND BY DG #1DG (3000A)	SET	1	0.00727502
3.0	BUS DUCT FOR BOILER SERVICE PMCC #1DA (2500A)	SET	1	0.0001455
4.0	BUS DUCT FOR TURBINE SERVICE PMCC #1DB (3500A)	SET	1	0.0001455
5.0	BUS DUCT FOR STATION SERVICE PMCC #0DA (3500A)	SET	1	0.0001455
6.0	BUS DUCT FOR STATION SERVICE PMCC #0DB (3000A)	SET	1	0.0001455
7.0	BUS DUCT FOR STATION SERVICES PMCC #0DC (3000A)	SET	1	0.0001455
8.0	BUS DUCT FOR WATER SYSTEM PMCC #0DE (2500A)	SET	1	0.0001455
9.0	BUS DUCT FOR FW WATER PMCC#0DH (1600A)	SET	1	0.0001455
10.0	BUS DUCT FOR FUEL OIL SERVICE PMCC#0DF (3000A)	SET	1	0.0001455
11.0	BUS DUCT FOR ADMIN PMCC#0DD (3000A)	SET	1	0.0001455

SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
12.0	BUS DUCT FOR CT, CW TREATMENT PMCC#0DJ (3000A)	SET	1	0.0001455
13.0	BUSDUCT FOR LTMSB INCOMER-1 #1DC (3000A)	SET	1	0.0001455
14.0	BUSDUCT FOR LTMSB INCOMER-2 #1DC (3000A)	SET	1	0.0001455
15.0	BUSDUCT FOR LTMSB INCOMER-1 #1DD (3000A)	SET	1	0.0001455
16.0	BUSDUCT FOR LTMSB INCOMER-2 #1DD (3000A)	SET	1	0.0001455
17.0	BUSDUCT FOR LTMSB INCOMER-1 #1DE (3000A)	SET	1	0.0001455
18.0	BUSDUCT FOR LTMSB INCOMER-2 #1DE (3000A)	SET	1	0.0001455
19.0	BUSDUCT FOR LTMSB INCOMER-1 #1DF (3000A)	SET	1	0.0001455
20.0	BUSDUCT FOR LTMSB INCOMER-2 #1DF (3000A)	SET	1	0.0001455
21.0	BUSDUCT FOR LTMSB INCOMER-1 #1DH (3000A)	SET	1	0.0001455
22.0	BUSDUCT FOR LTMSB INCOMER-2 #1DH (3000A)	SET	1	0.0001455
23.0	BUSDUCT FOR LTMSB INCOMER-1 #1DJ (3000A)	SET	1	0.0001455
24.0	BUSDUCT FOR LTMSB INCOMER-2 #1DJ (3000A)	SET	1	0.0001455
25.0	BUSDUCT FOR ACC-LTMSB INCOMER (4000A)	SET	15	0.00218251
ZB)	DG SETS			
ZB.1	1750 KVA DG SETS along with Accoustic enclosure, Fuel tank(day tank, bulk oil tank), accoustic enclosure, fuel oil piping, exhaust piping,DG set stack Installation of Generator terminal adaptor/box, Current transformer, instruments, Power JB, Control JB, cleaning of radiator tubes (cleaning agent to be supplied by BHEL), replacement of engine oil and its filter, lub. oil filter, radiator coolant (Diesel for commissioning, engine oil & its filter, lub. oil filter, coolant being supplied by BHEL) Cabling, earthing, etc. complete.	SETS	2	0.00820722
ZB.2	PANELS. BATTERY ETC			
1.0	AMF PANEL	SET	2	0.00016415
2.0	DG Auxiliary Panel	No.	1	0.00030778
3.0	Battery charger Panel	Nos.	2	0.0001915
4.0	NGR Panel	No.	2	0.0001915
5.0	Single Breaker Panel	Nos.	2	0.000291
6.0	3 Breaker Panel	No.	1	0.000291
7.0	DC BATTERY for Engine Starting	SET	2	0.0000291
8.0	ELECTRONIC CONTROL PANEL	NO	2	0.00008209
9.0	INSULATION AND CLADDING	MT	4	0.0007113
10.0	FUEL TRANSFER PUMP	SET	4	0.00008211
11.0	PRE-LUB OIL PUMP	NO	2	0.00002738
ZC	SUPPORT STRUCTURE (FOR BUS DUCT, DG SET ETC) INCLUDING FABRICATION OF DG STRUCTURE (supply of materials is by BHEL Units free of cost)	MT	100	0.01778257
ZD	LIGHTING AND MAINTENANCE SYSTEM OF ACC (Erection and Commissioning Assistance Services)			
1.0	Lighting Panel	Set	2	0.0001455
2.0	Maintenance Box	Set	4	0.0000388
3.0	Metal Halide Lighting Fixture with Lamps	Set	150	0.0007275
4.0	Main Lighting Distribution Board	Set	1	0.0001398
5.0	Street Lighting Pole with lifighting fixtures and accessories	Set	25	0.00069901

JOB: PACKAGE-2: Erection, Testing & Commissioning of Electrical System for Unit # 2 of 3x660 MW North Karanpura STPP, Jharkhand.				
TENDER NO: PSER:SCT:NKP-E1890:18				
SCH-2: SERVICE PRICE				
SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 1 of SCH-1
ZF	ELECTRICAL AND ASSOCIATED WORKS FOR PLANT FIRE PROTECTION SYSTEM (Erection and Commissioning Assistance Services)			
1.0	Electric Motors (3.3 KV, 220 KW, Unidirectional Starter) for Hydrant Pump and accessory	Set	3	0.00065475
2.0	DG Set for opearting above Hydrant Pump and accessory.	Set	1	0.00097
3.0	Electric Motors (3.3 KV, 220 KW, Unidirectional Starter) for Spray Pump and accessory	Set	2	0.0004365
4.0	DG Set for opearting above Spray Pump and accessory.	Set	1	0.00097
5.0	Electric Motors (415V, 45KW, Unidirectional Starter) for Jockey Pump and accessory	Set	2	0.000194
6.0	Electric Motors (415V, 45KW, Unidirectional Starter) for Hydrant Booster Pump and accessory	Set	1	0.000097
7.0	DG Set for opearting above Hydrant Booster Pump and accessory.	Set	1	0.0007275
8.0	Electric Motors (415V, 110KW, Unidirectional Starter) for Spray Booster Pump and accessory	Set	1	0.00012125
9.0	DG Set for opearting above Spray Booster Pump and accessory.	Set	2	0.001455
10.0	Control Panel for Fire Water Pumps	Set	1	0.00021825
11.0	Control Panel for Booster Pumps	Set	2	0.0004365
12.0	Deluge valve Control Panel and other similar types of control Panel	No	250	0.01288285
13.0	Cable laying and Termination of 2C-1.5 sq. mm armoured control cable	KM	8	0.000776
TOTAL				0.97140102

VOLUME-III PRICE SCHEDULE, REV-01 (PACAKGE-2)					
JOB: PACKAGE-2: Erection, Testing & Commissioning of Electrical System for Unit # 2 of 3x660 MW North Karanpura STPP, Jharkhand.					
TENDER NO: PSER:SCT:NKP-E1890:18					
SCH-3: SUPPLY PRICE					
SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 2 of SCH-1	
A	RUBBER MAT				
1.0	Supply of 6mm thick black chequered rubber mat of appropriate voltage class Size for laying in front of switchgears upto 3.3KV. (as required under IE Rule).	Pieces	250		0.01545941
B	DISPLAY BOARD				
1.0	Supply of Electric Shock Treatment Display board as per IE Rules, Laminated on hardboard material (size : 2.5 ft x 3.5 ft) and mounted on wooden frame) for switchgear rooms / substations	Pieces	200		0.00309188
2.0	Supply of 33KV/11 KV/3.3 KV/415V DANGER PLATE	Pieces	50		0.00025766
C	Supply of MS HOT DIP GALVANISED THREADED & HEXAGONAL HEAD CABLE GLAND ADAPTORS/GLAND HOLE PLUGS AS PER REQUIRED SIZE AND SHAPES	KG.	125		0.00064414
D	Supply of Moisture Sealing compounds for wall, floor, panel openings for all variants	Sq. Mtr.	450		0.00327376
E	CABLE GLANDS & LUGS				
E.1	Supply of DOUBLE COMPRESSION HEAVY DUTY CABLE GLANDS (Use upto 11KV level)				
	ABOVE (MM) UP TO (MM)				
1.0	-- 15	Nos.	25		0.00012883
2.0	15 18	Nos.	25		0.00015459
3.0	18 21	Nos.	25		0.00018036
4.0	21 24	Nos.	25		0.00020613
5.0	24 27	Nos.	25		0.00023189
6.0	27 30	Nos.	25		0.00025766
7.0	30 33	Nos.	25		0.00028342
8.0	33 36	Nos.	25		0.00030919
9.0	36 39	Nos.	25		0.00033495
10.0	39 42	Nos.	25		0.00036072
11.0	42 46	Nos.	25		0.00038649
12.0	46 50	Nos.	25		0.00041225
13.0	54 58	Nos.	25		0.00046378
14.0	58 62	Nos.	25		0.00046378
15.0	62 70	Nos.	25		0.00046378
16.0	70 78	Nos.	25		0.00051531
E.2	Supply of AL./CU. LUGS (HEAVY DUTY TYPE) - SOLDERLESS CRIMPING TYPE (Use upto 11KV level)				
1.0	4 sq mm	Nos.	25		0.00000273
2.0	6 sq mm	Nos.	25		0.00000515
3.0	10 sq mm	Nos.	25		0.00000515
4.0	16 sq mm	Nos.	25		0.00000667

JOB: PACKAGE-2: Erection, Testing & Commissioning of Electrical System for Unit # 2 of 3x660 MW North Karanpura STPP, Jharkhand.				
TENDER NO: PSER:SCT:NKP-E1890:18				
SCH-3: SUPPLY PRICE				
SI No	ITEM DESCRIPTION	Unit	Quantity	Allocated %age for deriving the job value w.r.t. the Quoted price at Srl. No. 2 of SCH-1
5.0	25 sq mm	Nos.	25	0.00000788
6.0	35 sq mm	Nos.	25	0.00000788
7.0	50 sq mm	Nos.	25	0.00001303
8.0	70 sq mm	Nos.	25	0.00001303
9.0	95 sq mm	Nos.	25	0.00002061
10.0	120 sq mm	Nos.	25	0.00002577
11.0	150 sq mm	Nos.	25	0.00003092
12.0	185 sq mm	Nos.	25	0.00005153
13.0	240 sq mm	Nos.	25	0.00006457
14.0	300 sq mm	Nos.	25	0.00009033
15.0	400 sq mm	Nos.	25	0.00014186
16.0	630 sq mm	Nos.	25	0.00023189
TOTAL				0.02859898

FORMAT FOR NO DEVIATION CERTIFICATE
(To be submitted in the bidder's letter head)

BHARAT HEAVY ELECTRICALS LIMITED,
Power Sector - Eastern Region,
Plot no 9/1, DJ Block, Sector – II, Salt Lake City,
Kolkata – 700 091

Sub	No Deviation Certificate.	
Job	PACKAGE-1: Erection, Testing & Commissioning of Electrical System for Unit # 1 and Common System of 3x660 MW North Karanpura STPP, Jharkhand. PACKAGE-2: Erection, Testing & Commissioning of Electrical System for Unit # 2 of 3x660 MW North Karanpura STPP, Jharkhand.	
Ref	1.0	Tender no: PSER:SCT:NKP-E1890:18.
	2.0	BHEL's NIT, vide reference no: PSER:SCT:NKP-E1890:6609 Date: 16-03-2018.
	3.0	BHEL's TCN-01, vide reference no: PSER:SCT:NKP-E1890:18:TCN-01, Date: 23-03-2018.
	4.0	All other pertinent issues till date.

Dear Sirs,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/ modified the tender documents as appeared in the website/ issued by you and in case of such observance at any stage, it shall be treated as null and void.

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT. We hereby confirm our unqualified acceptance to all terms & conditions, unqualified compliance to technical specification, integrity pact (if applicable) and acceptance to reverse auctioning process.

In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized
representative of the bidder)