



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN - 02

Ref: PSER:SCT: SRG-E1475:TCN-02

Date: 10-07-2013

Sub	Tender change notice (TCN) 02.	
Job	Design, Engineering, Procurement, Supply, Erection , Testing, Commissioning and Operation & Maintenance of construction power system & Temporary illumination system package for 2X660MW Suratgarh Super Critical TPS, Rajasthan.	
Ref	1.0	Tender no PSER:SCT:SRG-E1475:13.
	2.0	BHEL's NIT, vide reference no PSER:SCT:SRG-E1475:3324 Date: 14-06-2013
	3.0	BHEL's TCN-01, vide reference no PSER:SCT: SRG-E1475:TCN-01, dated 03-07-2013.
	4.0	Other references (if any).

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

- 1.0 Extension of due date of submission of offer from 12-07-2013 to **19-07-2013** (15:00 hrs).
- 2.0 The clarifications to bidders queries are attached at **Annexure-A**.
- 3.0 The revised "TENTATIVE LIST OF MAJOR ITEMS TO BE SUPPLIED FOR THE CONSTRUCTION POWER NETWORK" is attached at **Annexure-B**. This supersedes the list furnished at Annexure-1 to Vol-1F,TCC-CML of the tender.
- 4.0 **Revised BOQ cum price schedule format VOL-III- PRICE SCHEDULE, REV-01 superseding VOL-III PRICE SCHEDULE, REV-00 issued earlier along with NIT.**

Bidders are requested to submit their offer as per revised BOQ (Rev-01) only. Offer from bidders in superseded price schedule (Vol-III, REV-00) shall not be considered.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 envelope as per **REVISED price schedule format (VOL-III- PRICE SCHEDULE, REV-01).**

- 5.0 Revised 'No deviation certificate' as per enclosed Annexure-2. Bidder to submit 'No deviation certificate' as per attached format only.
- 6.0 All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,
for BHARAT HEAVY ELECTRICALS LTD

ENGR (SCT)

Encl
As above.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)
POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091
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Sub	ANNEXURE-A to TCN- 02.			
Job	Design, Engineering, Procurement, Supply, Erection , Testing, Commissioning and Operation & Maintenance of construction power system & Temporary illumination system package for 2X660MW Suratgarh Super Critical TPS, Rajasthan.			
Tender no	PSER:SCT:SRG-E1475:13.			
Serial No.	Reference clause of Tender Document	Existing Provision	Bidder's query	BHEL's clarification
1.0	VOLUME-IF- (TECH SPEC) PAGE 1 OF 9 1.0 GENERAL 1.1 Construction Power	The customer (RRVUNL) shall provide 33 KV source (2 no feeders) at the existing switchyard of Suratgarh from a distance of around 2.5 km from proposed 33 KV/11 KV substation inside the new project site of Suratgarh 2 x 660 MW Project	Please Clarify whether the SITC of 2.5 KM cable/ Over Head Line along with its all supporting structure are in Bidder or BHEL scope.	BHEL/RRVUNL will provide only 33 KV source near existing Switchyard. All Civil work like Sub station control room, Foundation for various equipment like Transformers, Poles, Lighting towers etc., Supply of all equipments, cables etc and erection and commissioning complete for the Construction Power work is in the scope of bidder. Bidder is advised to visit site to assess site condition & scope of work.
2.0	VOLUME-IF CML ANNEXURE -I PAGE 14 OF 17	(TENTATIVE LIST OF MAJOR ITEMS TO BE SUPPLIED FOR THE CONSTRUCTION POWER NETWORK)	Please suggest whether we have to consider SLD or tentative list of major items to be supplied for the construction power network As quantities mention in list for most of equipment such as Transformer,L.A,Isoator,Panel,C.T,PFC etc are not matching with the qty as per the SLD provided (DWG NO TCE.5750A-EL-SK-2004).	You have to consider the SLD for designing the system. The total design and engineering is under your scope. However, the list of tentative BOQ as per SLD is revised. Pl. refer Annexure-1, Vol-1F CML, Rev 01, attached at Annexure_b of the TCN-02.
3.0	PRICE SCHEDULE, REV-0 SCH-3: SERVICE PRICE BREAK UP	Running of above DG set under sl no. 7(a) by Supply of fuel, lubricants ,spare parts, consumables required for running the above hired DG set (expected 10 HR/Day for illumination , for AC	Please specify what does Sl no. 7(a) means here as there is no such Colum.	Typographical Error. The same may be read as 'Sl. No. 1.2.3.1' of service price break up. Pl. refer revised Vol-III, Rev 01.

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Serial No.	Reference clause of Tender Document	Existing Provision	Bidder's query	BHEL's clarification
		and other works)		
4.0	DWG NO TCE.5750A-EL-SK-2004.	The area specified in the drawing for example Site office, fabrication yard,civilwork,railway yard, staff colony	Plot Plan drawing no.PE-DG-392-100-M001 provided by you doest show the specified area. Please do provide the plan for the existing area as per Single Line Diagram.	<p>The plot plan drawing is provided to you for general guidance only and is for tender purpose.</p> <p>The locations of various equipments of 'Construction Power System' will be finalized after finalization of design of 'Construction Power System' and as per requirement.</p>
5.0	DWG NO TCE.5750A-EL-SK-2004.	33 kv 1250 A ISOLATOR	Since there is two incomer from the Existing sub station so there should be two no 1250 A Isolator but the SLD shows only one no. Please specify whether we have to consider either one or Two nos. of 1250 A Isolator.	There will be two nos of cable running from customer's existing sub station to the proposed 33/11KV sub station. Two nos. of isolator is to be provided in the incoming end.
6.0	VOLUME IV SECTION : D25 SPEC. NO.TCE.5750A-H-500-001 PART B Clause no. 1.1.	Construction power supply will be given free of charge. Power supply availability is subject to availability of power from Rajasthan TRANSCO and alternative measures shall be taken by the bidders to ensure the continuous availability of power for completion of work as per schedules.	Against this clause , we understand that BHEL shall provide construction Power Supply for construction of the subject project (Construction Power Supply Equipment) free of charge , subject to availability of power from Rajasthan TRANSCO . But the bidder has also to take measure for alternate power supply , in case of non-availability of TRANSCO Power for execution of his work . We assume that supply of total construction power requirement (10 MVA) for construction of RRVUNL 2X660 MW Super	Initially for erection of the 33/11KV sub station, the power has to be arranged from DG set only. Once the sub station is made ready, then only power can be drawn from customer.

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Serial No.	Reference clause of Tender Document	Existing Provision	Bidder's query	BHEL's clarification
			-Critical TPS , Stag -V , Units 7&8 , at Suratgarh , Rajasthan , through alternat means , is not in the scope of the bidder for the present package . Klndly confirm.	
7.0	VOLUME-IF and PAGE 14 OF 17 and DWG NO TCE.5750A-EL-SK-2004	AS per volume-IF and page 14 of 17 , 33kv 1250A, 25KA isolator with earth switch, 33KV breaker, 30KV,10 KA L.A.'s etc.	Please Confirm the Fault Duration of 33 kV Equipment	Since the design is in your scope, fault duration of 33KV equipment is to be derived by Bidder.
8.0	VOLUME-IF and PAGE 14 OF 17 and DWG NO TCE.5750A-EL-SK-2004.	AS per volume-IF and page 14 of 17, 33 kV CT specification is 400-200-5, 2 core 5P20 , 3 nos . And as per tender SLD it's 3 core	As per our designing CT ratio shall be 200-5-5-5 Amps , Core -1 5P20,Core-2 0.5 15 VA, Core -3 PS Class - kindly confirm the same	Since design of 10MVA transformer is in the scope of bidder, the CT ratio can be selected depending upon the 33KV side full load current.
9.0	VOLUME-IF and PAGE 14 OF 17 and DWG NO TCE.5750A-EL-SK-2004.	Creepage Level at site	Kindly confirm creepage level at site.	There is no term like creepage level.
10.0	VOLUME-IF and PAGE 14 OF 17 and DWG NO TCE.5750A-EL-SK-2004.	CT specification	kindly confirm type of CT either live tank or dead tank	System design is in the scope of bidder, subject to approval of BHEL/Customer during execution.
11.0	VOLUME-IF-CML and PAGE 14 OF 17 and DWG NO TCE.5750A-EL-SK-2004.	power factor correction equipment	Please specify power factor correction equipment (capacitor Bank) Rating & Specification	The design for power factor correction equipment is in Bidder's scope to maintain power factor at 0.9.
12.0	VOLUME-IF-CML and PAGE 14 OF 17 and DWG NO TCE.5750A-EL-SK-2004.	LT Switchgear	Please specify nos. of I/C & O/G in LT Switchgear	There will be one incoming of 800 Amp and five nos of out going feeders of 400 Amps, 250 Amps(2 no), 100 Amp(2 nos)

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Tender no	PSER:SCT:SRG-E1475:13.			
Serial No.	Reference clause of Tender Document	Existing Provision	Bidder's query	BHEL's clarification
				in LT distribution board (not LT switchgear). The feeders should be provided with 4 pole MCB for three phase and neutral connection.
13.0	VOLUME-IF-CML and PAGE 14 OF 17 and DWG NO TCE.5750A-EL-SK-2004 and PE-DG-392-100-M001	LT Switchgear	Please specify Location of LT Switchgear for all area's.	The location of LT distribution board (not LT switchgear) will be nearer to respective 11KV/415 V sub station.
14.0	VOLUME-IF-CML and PAGE 14 OF 17 and DWG NO TCE.5750A-EL-SK-2004.	LT Switchgear	Please provide the load list for the designing of the LT switchboard	Kindly refer to the reply in sl no 12 for designing LT distribution board.
15.0	VOLUME-IF-CML PAGE 9 OF 17	Time of Completion The entire scope of the work under this tender shall be completed as per below – Supply - within 3 months from the date of LOI. E&C completion - within 4 months from date of start of work (to be certified by BHEL).	Please do extend the time of completion period as it a supply of Capital Equipment as 10 MVA Transformer, 11 kv HT Board, 11/0.415 kva Transformers etc are not feasible within specified time period. So it is requested you to please extend the time schedule as follow:- Supply - within 6 months from the date of LOI. E&C completion - within 8 months from date of start of work	As per tender.

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16.0	VOLUME-IF-(TECH SPEC) Clause No. 15 b	CIVIL WORK	Please specify whether we have to build 33/11 kV substation control room building if so please specify the location and dimension for the same.	The construction of sub station control building is in your scope (for erection of 11KV switch board, battery and battery charger). The location will be near to the proposed 33/11KV sub station.
17.0	<i>VOLUME-IF-CML and PAGE 14 OF 17 and DWG NO TCE.5750A-EL-SK-2004.</i>	<i>1250 A and other rating ISOLATOR</i>	<i>Please Confirm the type of Isolator.</i>	The type of isolator will be decided by the bidder as part of designing the system. Same shall be approved by BHE/Customer during execution.
19.0	<i>VOLUME-IF-CML and PAGE 14 OF 17 and DWG NO TCE.5750A-EL-SK-2004.</i>	<i>Batter and battery charger</i>	<i>Please do specify the AH value battery along with the DCDB detail.</i>	The load requirement is for breaker operation and relay operation. Depending upon load, the batteries and charger are to be designed.
19.0	<i>Plot Plan. PE-DG-392-100-M001 DWG NO TCE.5750A-EL-SK-2004.</i>	<i>Cable/OH line.</i>	<i>Please provide the cable / OH line route layout of distribution system for the entire plant.</i>	This will be decided at the time of execution of the system.
20.0	TCE.5750A – EL-SK-2004		Drawing reference to show the exact location of the 11KV RMU	Exact location of 11KV RMU can not be given at this stage. Tentative Area of use is given for general guidance only.
21.0	TCE.5750A – EL-SK-2004		33KV Transmission Line Layout is not available	33KV source substation from customer is near to Unit#1. The proposed 33/11KV sub station will be near Unit#7. The transmission line is not possible as there are overhead 220KV and 400KV line. This connection

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				from customer end to the proposed 33/11KV sub-station will be through two length of 33KV XLPE cable of approximately 2.5 kms each.
22.0	Volume-1F-CML Clause 29-Exclusion	Spares are Excluded	In same Specification Document VOLUME-IF- (TECH SPEC), CONSTRUCTION POWER Page (4 of 9) Point No 8 it is given as Mandatory Spares to be include by bidder. Please Clarify if we need to quote rates including the listed items. Also if we required to include the spares in our quoted price, the quantity given for AB Switch is 1 Lot, shall we assume it as 1 No.	All spares required for the operation and maintenance of the subject construction Power system, including top up Transformer Oil, is to be provided by the bidder within the quoted Rate and no separate payment will be released by BHEL. This superceds all other clauses of TCC/Technical Specification/ tender document. The list of mandatory spare given in Technical Spec is tentative and is for general guidance only.
23.0	TCE.5750A – EL-SK-2004	Losses are not given	For HT transformer shall we assume the loses as Standard 12 KW – No load Loss. 65 – KW Load Loss Impedance – 8.35%	Ok.
24.0	TCE.5750A – EL-SK-2004	Not mentioned in SLD but w.r.t Tentative List of Major Equipment it is given as separate items.	Please clarify If we require any separate panel for Metering Cubicle and Control and Relay Circuit. Shall we include both Metering and Control System in 11KV Outdoor Switchgear itself? Please clarify	The metering and control for main switchgear is to be included in the same switchgear. The metering and control for 11KV breakers in the ring main are to be provided in respective breakers.
25.0	Vol-III , Price Schedule.			The Price Schedule is revised to include Erection & Commissioning of various Luminaire. Pl. refer revised Vol-III, Rev 01.
26.0	Vol- 1F- TECH SPEC & Vol-III, Rev 01 – Price schedule	Cl. No. 1.5 . (2) and 1.5.(3) {BRIEF SCOPE OF SUPPLY & SERVICES as per Item rate schedule no. 1.2.2.1 & 1.2.2.2 and 1.2.3.1 & 1.2.3.2}		Use of portable Lighting Tower and portable DG set having capacity 60-65 KVA to be provided by the vendor, beyond scheduled utilised period as per Vol-III, Rev 01 (Price schedule), if required, shall be decided by BHEL/Site Incharge prior to giving extension in writing.

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Tender no	PSER:SCT:SRG-E1475:13.			
Serial No.	Reference clause of Tender Document	Existing Provision	Bidder's query	BHEL's clarification

Tender no PSER:SCT:SRG-E1475:13**ANNEXURE-B TO TCN-02****ANNEXURE-1 to Vol-1F CML, REV 01**

TENTATIVE LIST OF MAJOR ITEMS TO BE SUPPLIED FOR THE CONSTRUCTION POWER NETWORK (2 X660 MW RRVUNL SURATGARH SUPER CRITICAL TPS)PROJECT		
SL NO	DESCRIPTION	QTY
1	10MVA TRANSFORMER,33/11.5KV,ONAN,OCTC +/-5%,Dyn-11,Z=8.35% WITH LV SIDE CABLE BOX AND WITH NEUTRAL CT OF 50/1A RATIO,CL:5P20	1 NO
2	3C X 300 SQ.MM 35KV GRADE XLPE ARMoured CABLE OF SIZE	5 KM
3	33KV END TERMINATION KIT , OUT DOOR TYPE	4 NOS
4	33KV STRAIGHT THROUGH KIT , OUTDOOR TYPE	10 NOS
5	33KV ISOLATOR WITH EARTH SWITCH OF 1250A,25KA TYPE	3 SETS
6	33KV VACUUM CIRCUIT BREAKER OF 1250A,25KA TYPE , OUTDOOR TYPE	1 NO
7	30KV,10KA LIGHTING ARRESTER WITH SURGE COUNTERS (SATATION TYPE)	9 NOS
8	POTENTIAL TRANSFORMER 33/ $\sqrt{3}$ /110/ $\sqrt{3}$	3 NOS
9	33KV SIDE CURRENT TRANSFORMER,200/1A(CORE-1: 5P20,CORE-2:0.5CL)	3 NOS
10	33KV SIDE CURRENT TRANSFORMER,200/1A(PS CLASS)	3 NOS
11	STRUCTURAL MATERIALS FOR 33 KV SUB-STATION, WITH RAIL POLE ETC.	LOT
12	EARTH PIT FOR TRANSFORMER NEUTRAL, LA, BODY GROUNDING.	12 NOS.
13	CONTROL & RELAY PANEL FOR 33KV BREAKER OPERATION WITH IN BUILT NUMERICAL RELAY FOR 50,51,50N,87 PROTECTION AND ELECTROMAGNETIC RELAYS FOR PRV,WTI,OTI,BUCH AND MASTER TRIP (86) WITH MFM OR ENERGY METER,VOLTMETER (0 - 50KV) AND LAMP INDICATIONS FOR AC & DC INDICATIONS FOR BKR ON,OFF,SPRING CHARGED,DC SUPPLY HEALTHY ETC	1 SET
14	220 VOLT LEAD ACID BATTERY SET OF 100AH RATING OF 110NOS	1 SET
15	FLOAT CUM BOOSTER CHARGER FOR CHARGING ABOVE BATTERY SET	2 NOS
16	220V DC DISTRIBUTION BOARD WITH 1NO INCOMER AND 7 NOS OUTGOING OF 10A RATING WITH DC VOLTMETER AND LAMP INDICATION	1 NO
17	LOCAL DC JB FOR DC POWER TO 11KV BREAKERS OF RMU OF 10A RATING	5 NOS
18	2C X 16 SQ.MM AL ARMoured CABLE FOR DC POWER SUPPLY	3 KMS
19	5C X2.5 SQ.MM CU ARMoured CONTROL CABLE CT,PT ETC	1 KM

Tender no PSER:SCT:SRG-E1475:13

ANNEXURE-B TO TCN-02

ANNEXURE-1 to Vol-1F CML, REV 01

TENTATIVE LIST OF MAJOR ITEMS TO BE SUPPLIED FOR THE CONSTRUCTION POWER NETWORK (2 X660 MW RRVUNL SURATGARH SUPER CRITICAL TPS)PROJECT		
20	METAL CLAD SWITCHGEAR (1 INCOMER AND 6 O/G FEEDERS) WITH FOLLOWING MATERIALS IN INCOMER BREAKER . VCB- (630A ,11KV,3Ph, 25KA FOR 3 SEC.)- 1NO. 11KV CURRENT TRANSFORMER 800/1A(CORE-1: 5P20,CORE-2:CL0.5)-3 NOS 11KV CURRENT TRANSFORMER 800/1A(CORE-1:CLASS- PS)-3 NOS POTENTIAL TRANSFORMER 11/√3/110/√3 .-3 NOS BREAKER OPERATION WITH IN BUILT NUMERICAL RELAY FOR 51,51N PROTECTION AND ELECTROMAGNETIC RELAYS FOR MASTER TRIP 86 T (MANUAL RESET) WITH MFM OR ENERGY METER AND LAMP INDICATIONS FOR AC & DC INDICATIONS FOR BKR ON,OFF,SPRING CHARGED,DC SUPPLY HEALTHY ETC AND AC VOLTMETER (0-15KV). O/G FEEDER. VCB-6NO (630A ,11KV,3Ph, 25KA FOR 3 SEC.) WITH BREAKER OPERATION AND DC LAMP INDICATIONS.	1 SET.
21	3CX300sqmm AL ARMOURED XLPE CABLE, 11KV GRADE	2.5 KMS
22	3CX300sqmm,11KV GRADE CABLE END TERMINATION KIT (OUTDOOR TYPE)	30 NOS.
500KVA TRANSFORMER TYPICAL		
23	500KVA TRANSFORMER,11/0.433KV,ONAN,OCTC +/-5%, %Z-4%, Dyn-11, WITH LV SIDE CABLE BOX AND WITH NEUTRAL CT OF 50/1A RATIO,CL:5P20	5 NOS.
24	LIGHTING ARRESTER WITH SURGE COUNTER 12 KV GRADE,10 KA	5 SETS.
25	AB SWITCH 400A ,12 KV GRADE	10 SETS.
26	12KV VACUUM CIRCUIT BREAKER OF 315A,10KA TYPE OUTDOOR	5 NOS.
27	11KV CT ,100/1A(CORE-1: 5P20,CORE-2:0.5 CL) OUTDOOR TYPE	5 SETS.
28	POTENTIAL TRANSFORMER 11/√3/110/√3 OUTDOOR TYPE	5 SETS.
29	OUTDOOR TYPE CONTROL & RELAY PANEL FOR 11KV BREAKER OPERATION WITH IN BUILT NUMERICAL RELAY FOR 50,51,50N,51N, PROTECTION AND ELECTROMAGNETIC RELAYS FOR WTI,OTI,BUCH AND MASTER TRIP WITH MFM OR ENERGY METER,VOLTMETER AND LAMP INDICATIONS FOR AC INCOMING & DC FOR BKR ON,OFF,SPRING CHARGED,DC SUPPLY HEALTHY ETC	5 NOS.
30	OUTDOOR TYPE ACDB WITH METERING AND PROTECTION: INCOMING FEEDER- ACB 800A, CT1-800/1A (5P20),CT2-800/1A (0.5), NUMERICAL RELAY FOR PROTECTION-51,51N,LOCKOUT(86), METERING-MFM OR ENERGY METER AND LAMP INDICATIONS FOR AC & DC INDICATIONS FOR BKR ON,OFF,SPRING CHARGED,DC SUPPLY HEALTHY ETC. OUTGOING MCCB FEEDERS- 400A,400A,200A,200A,100A,63A.	7 NOS.
31	OUTDOOR TYPE APFC PANEL OF 100KVAR FOR PF CORRECTION	7 NOS.
32	3.5CX300sqmm AL ARMOURED PVC CABLE, 1.1KV GRADE	1.5 KM
33	STRUCTURAL MATERIAL FOR 11 KV SUB-STATION, WITH RAIL POLE ETC.	LOT
34	EARTH PIT FOR TRANSFORMER NEUTRAL, LA, BODY GROUNDING.	20 NOS
250 KVA TRANSFORMER TYPICAL		

Tender no PSER:SCT:SRG-E1475:13**ANNEXURE-B TO TCN-02****ANNEXURE-1 to Vol-1F CML, REV 01**

TENTATIVE LIST OF MAJOR ITEMS TO BE SUPPLIED FOR THE CONSTRUCTION POWER NETWORK (2 X660 MW RRVUNL SURATGARH SUPER CRITICAL TPS)PROJECT		
35	250 KVA TRANSFORMER,11/0.433KV,ONAN,OCTC +/-5%, Z = 4% , Dyn-11, WITH LV SIDE CABLE BOX	10 NOS.
36	LA WITH SURGE COUNTER 12 KV GRADE,10 KA	10 SETS.
37	AB SWITCH 400A ,12 KV GRADE	30 SETS.
38	DO FUSE 30A	10 SETS.
39	OUTDOOR TYPE ACDB WITH METERING : INCOMING FEEDER-MCCB 400A, CT1-400-800/1A (0.5CL), METERING-MFM OR ENERGY METER AND LAMP INDICATIONS FOR AC. OUTGOING MCCB FEEDERS- 200A,100A,100A,63A,63A.	10 NOS.
40	OUTDOOR TYPE ACDB WITH METERING IN INCOMING FEEDER-MCCB 400A, CT1-400-800/1A (0.5CL), METERING-MFM OR ENERGY METER AND LAMP INDICATIONS FOR AC. OUTGOING MCCB FEEDERS- 100A,100A,100A,63A,63A,63A.	5 NOS
41	OUTDOOR TYPE APFC PANEL OF 75KVAR	15 NOS.
42	3.5CX150 sqmm AL ARMOURED PVC CABLE, 1.1KV GRADE	1.5KM
43	STRUCTURAL MATERIALS FOR 11 KV SUB-STATION, WITH RAIL POLE ETC.	LOT
44	EARTH PIT FOR TRANSFORMER NEUTRAL, LA, BODY GROUNDING.	40 NOS
	RINGMAIN SYSTEM	
45	OVER HEAD 11 KV LINE WITH - ACSR CONDUCTOR, 11 KV GRADE PIN & DISC INSULATOR, CROSSARM, ANCHOR & STAY SETS, 11M RCC & RAIL POLES ACCE,EARTH SPIKES,EARTHING MATERIALS LIKE GI FLAT ETC.	AS REQUIRED
	GENERAL REQUIRMENT	
46	CONSTRUCTION OF CONTROL ROOM FOR 33/11KV SUB STATION INCLUDING SUPPLY OF MATERIALS LIKE CEMENT,SAND AND STEEL,DOORS,WINDOWS ETC.	AS REQUIRED
47	FENCING INCLUDING SUPPLY OF MATERIALS FOR SUB STATION AND 11KV SUB STATION OF RING MAIN UNIT	AS REQUIRED
48	EARTHING MATERIALS FOR 33KV SUB STATION,SWITCHGEAR,TRANSFORMERS, LIGHTING ARRESTER ,11KV RMU ETC	AS REQUIRED
49	FOUNDATION FOR TRANSFORMER,ACDB,APFC AND POLE GROUTING	AS REQUIRED

NOTE	ABOVE LIST OF ITEMS AND THEIR QUANTITY IS GIVEN FOR GENERAL GUIDANCE OF THE TENDERER. HOWEVER, ADDITIONAL ITEMS/QUANTITY SHAL BE SUPPLIED/ERECTED BY THE SUCCESSFUL VENDOR AS PER DETAIL DESIGN AND ENGINEERING DURING EXECUTION. LIST OF SUCH ITEM WILL BE FURNISHED BY THE SUCCESSFUL VENDOR TO BHEL FOR NECESSARY APPROVAL DURING EXECUTION.
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VOLUME-III PRICE SCHEDULE, REV-1	
DESIGN, ENGINEERING, PROCUREMENT, SUPPLY, ERECTION, COMMISSIONING ETC , OPERATION AND MAINTENANCE OF CONSTRUCTION POWER SYSTEM AND TEMPORARY ILLUMINATION SYSTEM FOR 2x660 MW SURATGARH SUPER CRITICAL TPS	
TENDER DOCUMENT NO - PSER:SCT:SRG-E1475:13	
PREAMBLE	
01	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully in rates for various items. Clauses under this preamble shall be read in conjunction with Volume-IA, Volume-IB, Volume-ID, Volume-IF together with subsequent changes/ modifications etc thereto as applicable as on date of submission of price offer.
02	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions.
03	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
04	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, taxes, 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 tender document and this schedule.
05	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing 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.
06	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.
07	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.
08	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.
09	Bidder's GRAND Total price at sl no 1.0 of SCH-1(MAIN PRICE) will be shall be considered for evaluation.

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PRICE SCHEDULE, REV-1**

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TENDER DOCUMENT NO - PSER:SCT:SRG-E1475:13

SCH-1 : MAIN PRICE

SL NO	DESCRIPTION	TOTAL PRICE (Rs)
1.0	Total prices for supply part & service part together as Specified, Comprising design, engineering, procurement, inspection & Testing at manufacturers works, duly packed for transportation, delivery to site, including freight, unloading, storage & handling at site, erection & commissioning, etc., Operation and maintenance of complete 'Construction Power system and temporary illumination system' as detailed in the SCC and Technical Specification including all taxes, duties etc. for SURATGARH 2x660 MW SUPERCRITICAL TPP	
Note		
1	Bidder to note that total price indicated above at 1.0 shall be considered for evaluation as such, shall be complete in all respect for the full scope defined and considering all terms & conditions.	
2	Bidder shall furnish further break-up of above total price(SCH 1) into supply part, service part and O&M part in SCH-2.Bidder shall furnish further break-up of service part in SCH-3 .Bidder shall shall further break up of operational & maintenance part in SCH 4.	
3	Bidder shall furnish ED (Excise Duty), ST, VAT components in various schedules of Price Schedule as per tender provision only.	
4	Any item as per scope of work if not included in price quoted above & shown separately will not be taken cognizance of and offer shall be liable for rejection.	
5	The bidder shall furnish quote/rates for Optional items separately under SCH 5.Bidder's quoted rates/ prices under SCH 5 for optional items shall not be considered for evaluation of bid and the same shall be valid till contract completion. In case the contract gets extended beyond the contractual completion period, BHEL reserves the right to exercise these optional items .	
6	The quantity of variable items is likely to vary during execution mainly due to actual requirement etc necessitating change in quantities of variable items as above. The unit rates quoted & accepted by BHEL shall be considered and no separate unit rates shall be quoted. Unit rates shall be valid throughout the contract. Bidder to note that BHEL reserve the right to rationalize the rates quoted by L-1 bidder against variable items and optional item with respect to item-wise lowest rates (amongst the participating bidders), before placement of order.	

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AND TEMPORARY ILLUMINATION SYSTEM FOR 2x660 MW SURATGARH SUPER CRITICAL TPS

TENDER DOCUMENT NO - PSER:SCT:SRG-E1475:13

SCH-2: MAIN PRICE BREAK UP

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUOTED PRICE (Rs)					
		BASIC PRICE	ED (If any, as per tender provision)	ST (If any, as per tender provision)	VAT (If any, as per tender provision)	FREIGHT	TOTAL PRICE (RS)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(3+4+5+6+7)
1.1	Lumpsum price for design, engineering, procurement, inspection & Testing, transportation, including freight, delivery to site for complete construction power system and general Illumination system (excluding supply of 12 nos. 30 M high Lighting Mast and Luminaire) as detailed in the SCC and technical specification . <i>(Above price excludes supplies required for operation and maintenance)</i>						
1.2	Total price for receipt, unloading, erection (Including associated civil works), commissioning etc. of entire construction power system and temporary illumination system as detailed in SCC and Technical specification.The break up specified under SCH-3.						
1.3	Total Price for operation and maintenance of entire construction power system and temporary illumination system as detailed in SCC and Technical specification. and erection & commissioning of miscellaneous items as specified under SCH-4						
GRAND TOTAL (RS)							

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SCH-3: SERVICE PRICE BREAK UP

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY	RATE (Rs)	AMOUNT (Rs)
(1)	(2)	(3)	(4)	(5)=(3)x(4)
1.2	PRICE BREAK UP OF SL. NO. 1.2 OF SCH-2			
1.2.1	Lumpsum price for receipt, unloading, erection (Including associated civil works), commissioning of entire construction power system and general illumination system as detailed in SCC and Technical specification.{ except i) Hiring of Portable Lighting Tower with in-built DG set power back up, ii) Portable DG set, iii) luminaire/tube light (covered in Sl. no. 1.2.4 to 1.2.7 below). }	1	Lot	
1.2.2	Hiring charges of portable Lighting Tower with in-built DG set power back up . (These towers shall be of 30 ft. height, noiseless, have 4x1000W metal halide lights, with Fuel tank capacity of 8 hrs. duty cycle, complete with panels, self starter for DG set, manual winch etc.)			
1.2.2.1*	Monthly Hiring charges for each Lighting Tower with DG set. (Total approx. Tower months has been calculated considering 6 nos. towers for 6 months.	36	TOWER - MONTHS	
1.2.2.2*	Fuel, lubricant etc.CHARGES per tower per hour. (Total approx. running Hr. has been calculated considering 6 nos. towers, 6 hrs. per working day of 30 days in a month for 6 Months. Payment shall be made as per actual total running hours of all the towers deployed on monthly basis. For example, say, during first month, Tower1 run for 6 hrs., Tower2 run for 4 hrs., Tower3 run for 8 hrs, Tower4 run for 0 hrs., Tower5 run for 2 hrs., and Tower6 run for 0 hrs., then the total running hour shall be calculated as 6+4+8+0+2+0 = 20 running hours.).	6480	RUNNING HRS.	

SCH-3: SERVICE PRICE BREAK UP

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY	RATE (Rs)	AMOUNT (Rs)
(1)	(2)	(3)	(4)	(5)=(3)x(4)
1.2.3.1	Hiring of portable DG set having capacity 60-65 KVA complete with all electrics/output terminal, operator/manpower for running of DG expected 10 HR/Day for office illumination, AC and other works. After completion of job contractor will take away DG Set alongwith installation and clean the site.(excluding supply of fuel & lubricants)	6	Month	
1.2.3.2	Running of above DG set under sl no. 1.2.3.1 by Supply of fuel, lubricants ,spare parts,consumables required for running the above hired DG set (expected 10 HR/Day for illumination , for AC and other works).	1800	Running Hour of DG set	
1.2.4	Erection of 2 x 400 watts HPSV luminaire with control gear, lamp, etc complete of Bajaj / Philips / Crompton/GE Make for Lighting Tower / elsewhere.	160	Nos.	
1.2.5	Erection of 400 watts HPSV luminaire with control gear, lamp, etc complete of Bajaj / Philips / Crompton /GE Make for Lighting Tower / elsewhere.	40	Nos.	
1.2.6	Erection of 150 watts HPSV luminaire with control gear, lamp, etc complete of Bajaj / Philips / Crompton/GE Make.	100	Nos.	
1.2.7	Erection of 2x40 watts tubelight fixture with control gear, lamp, etc complete of Bajaj / Philips / Crompton/GE Make.	200	Nos.	
TOTAL (in Rs.)				

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TENDER NO - PSER:SCT:SRG-E1475:13

SCH-4: OPERATION & MAINTENANCE BREAK UP

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	UNIT	QUANTITY	RATE (Rs)	AMOUNT (Rs)
(1)	(2)	(3)		(4)	(5)=(3)x(4)
1.3	PRICE BREAK UP OF SL. NO. 1.3 OF SCH-2				
1.3.1	Lumpsum price for operation & maintenance of entire construction power system and temporary illumination as detailed in the SCC and technical specification	Lumpsum	1		
1.3.2	Erection commissioning of following items during O & M period				
1.3.2.1	Laying, Dressing, Termination & commissioning of any HT cable (cable & accessories to be supplied by BHEL)	Meter	1000		
1.3.2.2	Laying, Dressing, Termination & commissioning of any LT cable (cable & accessories to be supplied by BHEL)	Meter	3000		
1.3.2.3	Uprooting , shifting & fixing of installed rail / concrete pole	Each	20		
TOTAL (in Rs.)					
NOTE					
1	The amount quoted and accepted under sl. no. 1.3.1 shall be payable in 36 equal installment after start of operation and maintenance period as O & M charges , upon satisfactory performance and tender terms.				
2	The quantity under sl no. 1.3.2.1 , 1.3.2.2, 1.3.2.3 may vary to any extent as per condition of TCC , Technical specification and tender terms				

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TENDER DOCUMENT NO - PSER:SCT:SRG-E1475:13

SCH5: OPTIONAL PRICE

SL NO	DESCRIPTION	QTY/UNIT	ALL INCLUSIVE PRICE (Rs)
	OPTIONAL ITEM (NOT TO BE CONSIDERED FOR EVALUATION)		
2.0	O&M of Construction Power & temporary Illumination system in extended period beyond contractual completion period		
2.1	Supervisor experienced in 33/ 11KV substation & overhead line maintenance {on lumpsum monthly pay basis, with paid weekly off & 10 + 2 (optional) holidays in a calender year.	1	MAN-MONTH
2.2	Skilled electrician having experience in 33/ 11KV substation & overhead lines (minimum 5 years experience or ITI with one year experience) alongwith necessary tools, insulation tapes as required for the work [8 hrs shift per day, with paid weekly off & 10 + 2 (optional) holidays in a calender year].	1	MAN-MONTH
2.3	Semiskilled electrician/ helper (minimum 3 years experience) alongwith necessary hand tools & miscellaneous consumables like insulation tape/ emery papers/ drill bits etc as required for the work [8 hrs shift per day, with paid weekly off & 10 + 2 (optional) holidays in a calender year].	1	MAN-MONTH
2.4	Unskilled helper alongwith hand tools as required for the work [one shift of 8 hrs per day, with paid weekly off & 10 + 2 (optional) holidays].	1	MAN-MONTH
Note:	1) Bidder's quoted rates/ prices for above optional items shall not be considered for evaluation of bid . In case the contract gets extended beyond the contractual completion period, BHEL reserves the right to excercise these optional items .		

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	Design, Engineering, Procurement, Supply, Erection , Testing, Commissioning and Operation & Maintenance of construction power system & Temporary illumination system package for 2X660MW Suratgarh Super Critical TPS, Rajasthan.	
Ref	1.0	Tender no PSER:SCT:SRG-E1475:13.
	2.0	BHEL's NIT, vide reference no PSER:SCT:SRG-E1475:3324 Date: 14-06-2013
	3.0	BHEL's TCN-01, vide reference no PSER:SCT: SRG-E1475:TCN-01, dated 03-07-2013.
	4.0	BHEL's TCN-02, vide reference no PSER:SCT: SRG-E1475:TCN-02, dated 10-07-2013.
	5.0	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)

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 : 23211691/ 23211798/ 23211796