



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN - 01

Ref: PSER:SCT:BNP-E1593-TCN-01

Date: 18-09-2014

Sub	Tender change notice (TCN) 01.	
Job	Design/ engineering (33 KV system), procurement, supply ,erection, testing, commissioning, operation & maintenance (O&M), etc of construction power network for 2x660 MW units at IB TPS, OPGCL, Banharpalli, Odisha.	
Ref	1.0	Tender no PSER:SCT:BNP- E1593:14
	2.0	BHEL's NIT, vide reference no PSER:SCT::BNP-E1593 :3930 Date: 05-09-2014
	3.0	All other pertinent issues till date.

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

- 1.0 Due date of submission of offer is extended from 18/09/2014 to 25/09/2014 at 1500 Hrs.
- 2.0 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 Offer from bidders in superseded price schedule (Vol-III, REV-00) shall not be considered.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).

- 3.0 Revised 'No deviation certificate' as per enclosed Annexure-2. Bidder to submit 'No deviation certificate' as per attached format only.

- 4.0 All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,
for BHARAT HEAVY ELECTRICALS LTD

DY MGR (SCT)

Encl

As above.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

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

फैक्स/Fax : (033) 23211960

फोन/Phone : बोर्ड/EPABX : 23211798/ 1691

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 (33 KV system), procurement, supply ,erection, testing, commissioning, operation & maintenance (O&M), etc of construction power network for 2x660 MW units at IB TPS, OPGCL, Banharpalli, Odisha.	
Ref	1.0	Tender no PSER:SCT:BNP- E1593:14
	2.0	BHEL's NIT, vide reference no PSER:SCT::BNP-E1593 :3930 Date: 05-09-2014
	3.0	BHEL's TCN-01, vide reference no PSER:SCT: BNP-E1593-TCN-01 Date: 18-09-2014
	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)

VOLUME-III, REV-01 PRICE SCHEDULE	
Design/ engineering (33 KV system), procurement, supply (Except those which BHEL will provide as per tender terms), erection, testing, commissioning, operation & maintenance (O&M), etc of construction power network for 2x660 MW units at IB TPS, OPGCL, Banharpalli, Odisha.	
TENDER NO - PSER:SCT:BNP-E1593:14	
PREAMBLE	
1	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-IB, ID, IE , Volume – IF and other tender sections as applicable.
2	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions.
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, taxes(except service tax), 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 thirty 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.
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/alterd by them.
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	In case of Lumpsum contracts, addition or deletion of the scope beyond the variation limit specified shall be derived from the quoted Lumpsum price and the tendered scope of work considering the allowable 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 , 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	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.
20	Bidder's GRAND Total price will be shall be considered for evaluation unless stated otherwise.
21	In case of BOP packages, if Bidder does not quote/indicate the price for freight chagses 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**

Design/ engineering (33 KV system), procurement, supply (Except those which BHEL will provide as per tender terms), erection, testing, commissioning, operation & maintenance (O&M), etc of construction power network for 2x660 MW units at IB TPS, OPGCL, Banharpalli, Odisha.

TENDER NO - PSER:SCT:BNP-E1593:14

SCH-1 - TOTAL PRICE

SL NO	DESCRIPTION OF ITEMS	AMOUNT (Rs)
1.0	Total price for supply, service and operation & maintenance (O&M) covering design/ engineering (33 KV system), procurement, supply (Except those which BHEL will provide as per tender terms), erection, testing, commissioning, handing over to BHEL, operation & maintenance (O&M), etc of construction power network (33KV & 11KV system).	

NOTE

1.0	Bidder to note that total price at sl no 1.0 above shall be considered for evaluation & awarding. As such total price at sl no 1.0 should be complete in all respect for the full scope defined and considering all terms and conditions.
2.0	Bidder shall note that Service Tax along with Educational Cess (On service part) shall be paid extra at actual as per tender provision. As such, bidder's price shall be exclusive of these components and evaluation of bidders total price will be done on this basis.
3.0	Bidder to furnish break-up of total price (1.0 above) and others in the following schedules. Separate orders will be placed by BHEL for supply part, service part and O&M part based on subsequent components of prices in sl no 1.1, 1.2 & 1.3 respectively of SCH-2.
3.1	SCH-2 - Total price break-up.
3.2	SCH-3 - Supply price break-up of item rate part.
3.3	SCH-4 - Service (Erection, testing, commissioning, etc) price break-up of item rate part.
3.4	SCH-5 - Operation & maintenance (O&M) price break-up.
4.0	Total price of 1.1, 1.2 & 1.3 of SCH-2 should match with 1.0 of SCH-1.
5.0	Subsequent break-up prices shall match with corresponding previous prices.
6.0	BHEL reserve the right to rationalize the rates, quoted by L-1 bidder against all items with respect to item-wise lowest rates (amongst the participating bidders), before placement of order.
7.0	Successful bidder shall submit item-wise billing break-up for supply part and service part of lumpsum price for 33 KV system (Sl no 1.1.1 & 1.2.1 of SCH-2).
8.0	Successful bidder shall obtain prior approval of BHEL for 'equivalent' make of any item and obtain BHEL's clearance in writing before procurement & supply of items to site. For this, successful bidder, within 20 days from date of LOI, shall carry out site survey to work out quantities of various items, specially which are site layout oriented and submit the list along with proposed suppliers (For supply) to BHEL for acceptance. However, this list might undergo revision due to change in layout or some other ground to meet the project requirement and successful bidder shall comply with this modification together with revision in quantities to complete the job.
10.0	Any item as per scope of work, if not included in the price quoted above and shown separately will not be taken cognizance of and the offer shall be liable for rejection.
11.0	Price format shall not be changed by bidder in any case and it may lead to cancellation of their offer.

VOLUME-III PRICE SCHEDULE, REV-01		
Design/ engineering (33 KV system), procurement, supply (Except those which BHEL will provide as per tender terms), erection, testing, commissioning, operation & maintenance (O&M), etc of construction power network for 2x660 MW units at IB TPS, OPGCL, Banharpalli, Odisha.		
TENDER NO - PSER:SCT:BNP-E1593:14		
SCH-2 - TOTAL PRICE BREAK-UP		
SL NO	DESCRIPTION OF ITEMS	AMOUNT (Rs)
PRICE BREAK-UP OF 1.0 OF SCH-1.		
1.1	SUPPLY PART	
1.1.1	Total lumpsum price for supply part for design, engineering, procurement, inspection & testing, painting, supply/ delivery duly packed at project site including freight, etc in line with drawings/ documents/ test procedures approved by BHEL/ customer, for the total scope defined in the tender and terms & conditions of tender, taking into account all amendment/ addendum, clarifications, confirmations and agreements till date of 33 KV system.	
1.1.2	Total price for supply part in SCH-3 (11 KV system).	
1.2	SERVICE PART	
1.2.1	Total lumpsum price for service part for erection, testing, commissioning, etc in line with drawings/ documents/ test procedures approved by BHEL/ customer, for the total scope defined in the tender and terms & conditions of tender, taking into account all amendment/ addendum, clarifications, confirmations and agreements till date of 33 KV system.	
1.2.2	Total price for service part in SCH-4 (11 KV system).	
1.3	OPERATION & MAINTENANCE (O&M)	
1.3.1	Total price for O&M part in SCH-5.	
TOTAL		

VOLUME-III PRICE SCHEDULE, REV-01				
Design/ engineering (33 KV system), procurement, supply (Except those which BHEL will provide as per tender terms), erection, testing, commissioning, operation & maintenance (O&M), etc of construction power network for 2x660 MW units at IB TPS, OPGCL, Banharpalli, Odisha.				
TENDER NO - PSER:SCT:BNP-E1593:14				
SCH-3 - SUPPLY PRICE BREAK-UP FOR 11 KV NETWORK				
SL NO	DESCRIPTION OF ITEM	QUANTITY	UNIT RATE (Rs)	AMOUNT (Rs)
SUPPLY PRICE BREAK-UP OF 1.1.2 OF SCH-2.				
1.0	POLE			
1.1	PCC pole 9 m long (W/L - 200 kg) as per REC specification.	100	NO	
1.2	Rail pole (45 kg/ m), 12.8 m long.	8	NO	
2.0	7/ 4 mm stay set, 11 KV with turn buckle/ BOW tightener/ BOW set with turn buckle: Stay set complete galvanised with 19/ 20 mm dia, 1.8 m long stay rod, anchor plate size 45 cm x 45 cm x 7.5 mm thick, thimble, stay clamp, turn buckle, (20 x 60 mm)/ bow tightener, 7/ 4.00 mm dia. GI stay wire and strain insulator, clamps, hardware, etc, as required.	30	SET	
3.0	11 KV pin type insulator (10 KN) & fittings as per relevant IS specification (IS:731, IS:3188, IS:2486 (Part-I), complete with large steel head GI pins, nuts, washer, etc, as required. Make: BHEL/ Bangalore, WSI/ Chennai, Jayashree Insulator/ Halol/ Calcutta. Modern Insulator/ Abu Road.	170	NO	
4.0	11 KV disc insulator (70 KN) for 11 KV overhead line as per relevant IS specification (IS:731, IS:3188, IS:2486 (Part-I), with galvanised insulator fitting, ball & socket type, complete with galvanised strain clamps, bolts, nuts, washers, etc, as required. Make: BHEL/ Bangalore, WSI/ Chennai, Jayashree Insulator/ Halol/ Calcutta, Modern Insulator/ Abu Road.	70	NO	
5.0	Lightning arrester distribution class type non-linear resistor as per IS: 3070 type, suitable for 11 KV over head lines with rated voltage of 9 KV (RMS) with nominal discharge current rating of 5 KA and complete with galvanised bolts, nuts, washers, fitting, etc, as required.	40	NO	
6.0	11 KV, rated current 100 A, DO fuse assembly as per relevant IS specification, complete with mounting base, hardware, clamps, insulators, operating rod, terminal connector including fuse rating suitable for 500 KVA, 1000 KVA, etc.	12	SET	
7.0	11 KV out door type gang operated AB switch tripple pole 800 A, with 3 post pin insulators per phase, bimetallic connector, suitable for horizontal or vertical position mounting with adequate length of GI pipe for operating handle erected on extended square shaft, with necessary clamps, hardware, etc.	1	SET	
8.0	11 KV out door type gang operated AB switch tripple pole 400 A, with 3 post pin insulators per phase, bimetallic connector, suitable for horizontal or vertical position mounting with adequate length of GI pipe for operating handle erected on extended square shaft, with necessary clamps, hardware, etc.	12	SET	
9.0	11 KV breaker (VCB), outdoor type compact switchgear, tyoe ABB Safelink CB or equivalent, for 1000 KVA transformer.	1	NO	
10.0	15 mm GI pipe (Gr B) for protection of earth wire.	210	MTR	
11.0	Earth wire size 6.09 mm dia GI wire.	625	MTR	
12.0	GI earth spike, 1822 x 20 mm.	70	NO	
13.0	GI strip size 50 x 6 mm for earthing.	550	MTR	
14.0	GI strip size 25 x 3 mm mm for earthing.	100	MTR	
15.0	Earth electrode, 40 mm dia, 3 m long, GI pipe (Grade-B).	24	NO	
16.0	Overhead ACSR conductor 'Rabbit' as per specification (6/ 3.35 mm Al + 1/ 3.35 mm steel).	11000	MTR	
17.0	11 KV heat shrinkable XLPE cable joint (Outdoor): Outdoor cable end termination with heat shrinkable jointing kit, complete with accessories including lugs suitable for cable size 3Cx120 sqmm, Al conductor. Make: Raychem or equivalent.	10	NO	

SL NO	DESCRIPTION OF ITEM	QUANTITY		UNIT RATE (Rs)	AMOUNT (Rs)
18.0	11 KV heat shrinkable XLPE cable joint (Indoor): Indoor cable end termination with heat shrinkable jointing kit, complete with accessories including lugs suitable for cable size 3Cx120 sqmm, Al conductor. Make: Raychem or equivalent.	2	NO		
19.0	11 KV heat shrinkable XLPE straight through joint: Heat shrinkable straight through jointing kit, complete with accessories including lugs suitable for cable size 3Cx120 sqmm, Al conductor. Make: Raychem or equivalent.	2	NO		
20.0	11 KV XLPE 3Cx120 sqmm HT cable.	1000	MTR		
21.0	CC spun pipe of 300 mm dia.	10	MTR		
22.0	GI pipe (Gr-B) 50 mm dia.	20	MTR		
23.0	GI pipe (Gr-B) 75 mm dia.	20	MTR		
24.0	HT danger notice plate of size 250 x 200 x 2 mm thick, made of MS plate painted with vitreous enamelled white on both side and inscription in red colour on front side as required.	70	NO		
25.0	Structural steel (IS) for fabrication.	8	MT		
26.0	30 m high lighting mast (Refer tender for list of supplier) or equivalent. Equivalent make shall be got approved by BHEL prior to procurement).	5	NO		
27.0	PVC insulated LT cable, 3.5Cx240 sqmm.	800	MTR		
28.0	PVC insulated cable, 3.5Cx300 sqmm.	500	MTR		
29.0	PVC insulated cable, 3.5Cx185 sqmm.	500	MTR		
30.0	PVC insulated cable, 3.5Cx120 sqmm.	750	MTR		
31.0	PVC insulated cable, 4Cx25 sqmm.	750	MTR		
32.0	LT kiosk, 800 A.	12	NO		
TOTAL					

VOLUME-III				
PRICE SCHEDULE, REV-01				
Design/ engineering (33 KV system), procurement, supply (Except those which BHEL will provide as per tender terms), erection, testing, commissioing, operation & maintenance (O&M), etc of construction power network for 2x660 MW units at IB TPS, OPGCL, Banharpalli, Odisha.				
TENDER NO - PSER:SCT:BNP-E1593:14				
SCH-4 - SERVICE PRICE BREAK-UP FOR 11 KV NETWORK				
SL NO	DESCRIPTION OF ITEM	QUANTITY	UNIT RATE (Rs)	AMOUNT (Rs)
SERVICE PRICE BREAK-UP OF 1.2.2 OF SCH-2.				
1.0	POLE			
1.1	PCC pole: Excavation (in all types of soil) including disposal of excess earth as per direction of engineer, for poles pit size 60 cms x 60 cms x 1.5/1.8 m deep, erection of PCC poles (including supply & erection of anticlimbing devices) in true plumb, back filling the pit after erection with jhama brick bats of size 63 mm to 40 mm and down including watering, if necessary duly compacted in layers. The rate inclusive of excavation including disposal, supply of jhama bricks, labour, tools & tackles, etc, all complete in the	100	NO	
1.2	Rail pole: Providing cement concrete foundation including excavation (In all types of soil) for poles pit size 60 cm x 60 cms x 1.8/ 2 m deep in 1:3:6 cement concrete (1 cement, 3 coarse sand, 6 graded stone aggregate 40 mm nominal size) including form work, concrete foundation of 20 mm thick all around the pole foundation and upto 20 cm above ground level and tapered suitably into collar, hieght plinth duly plastered and with necessary curing and fishing, back filling, etc, in the approved manner.	8	NO	
2.0	Stay set complete with turn buckle, stay rod, anchor plate, thimble, staty clamp, bow tightener, staty wire and strain insulator, clamps, hardware, etc as required in cement concrete 1:3:6 (1 cement:3 coarse sand; 6 graded stone aggregate 40 mm nominal size) in foundation including excavation in all type of soil and back filling, etc, as required, including supply of cement & all other civil materials.	30	SET	
3.0	11 KV pin type insulators complete with large steel head GI pins, nuts, washer, etc, as required.	170	NO	
4.0	11 KV disc insulators for 11 KV overhead line with galvanised insulator fitting, ball and socket type and complete with galvanised strain clamps, bolts, nuts, washers, etc, as required.	70	NO	
5.0	Lightning arrester distribution class type, suitable for 11 KV overhead lines complete with galvanised bolts, nuts, washers, fitting, etc, as required.	40	NO	
6.0	11 KV DO fuse assembly complete with mounting base, harware, clamp insulators, operating rod, terminal connector, etc.	12	SET	
7.0	11 KV out door type gang operated AB switch tripple pole 400/ 800 A with 3 post pin insulators per phase, bimetallic connector mounted horizontal or vertical position on provided cross arm with adequate length of GI pipe for operating handle erected on extended square shaft. The operating handle provided with lock & key at suitable height from ground level with necessary clamps, hardware, etc.	13	SET	

SL NO	DESCRIPTION OF ITEM	QUANTITY	UNIT	RATE (Rs)	AMOUNT (Rs)
8.0	11 KV breaker (VCB), outdoor type compact switchgear, type ABB Safelink CB or equivalent, for 1000 KVA transformer.	1	NO		
9.0	15 mm GI pipe for protection of earth wire lead to earth electrode with suitable clamping arrangement and hardware.	210	MTR		
10.0	Earthwire, 6.09 mm dia, including supply of clamps, cleats,	625	MTR		
11.0	Earth spike.	70	NO		
12.0	GI strip, size 50 x 6 mm (including welding, etc & supply of matching hardware like nut, bolts, washers, etc) for interconnecting the earth pits in sub station, transformer neutral earthing etc.	550	MTR		
13.0	GI strip size 25 x 3 mm (including welding, etc & supply of matching hardware like nut, bolts, washers, etc) for earthing AB switch, DO fuse assembly, etc.	100	MTR		
14.0	Earth electrode 40 mm dia, 3 m long, GI pipe directly driven into earth including earth excavation, if required.	24	NO		
15.0	Stringing ACSR conductor of size 'Rabbit' conductor (6/ 3.35 mm Al + 1/ 3.35 mm steel) for overhead line with stringing binding with proper size of Al conductor, jumpering and suitable size of PG clamps for jumpering from overhead lines to lightning arrestors/ AB switch/ DO fuse assembly and transformer HT terminal as per the arrangement, etc, as required (Rate shall be inclusive of supply of accessories).	11000	MTR		
16.0	11 KV heat shrinkable XLPE cable joint (Outdoor): Making cable end termination with heat shrinkable jointing kit complete with accessories including lugs suitable for cable size 3Cx 120 sqmm, Al conductor.	10	NO		
17.0	11 KV heat shrinkable XLPE cable joint (Indoor): Indoor cable end termination with heat shrinkable jointing kit, complete with accessories including lugs suitable for cable size 3Cx120 sqmm, Al conductor.	2	NO		
18.0	11 KV heat shrinkable XLPE straight through joint: Heat shrinkable straight through jointing kit, complete with accessories including lugs suitable for cable size 3Cx120 sqmm, Al conductor.	2	NO		
19.0	Laying of 3C x 120 sqmm, 11 KV grade XLPE HT cable, which includes excavation of trench upto 1000 mm depth in all kind of soil, laying of cable below ground providing sand layer below/ above the cable, brick lining both side & above the cable, back filling and cable marker, as per specification.	500	MTR		
20.0	Laying of 3C x 120 sqmm, 11 KV grade XLPE HT cable, which includes excavation of trench upto 1000 mm depth in all kind of soil, laying of cable below ground in PVC conduit having occupancy of 70% & back filling and cable marker, as per specification.	500	MTR		
21.0	Laying of 3.5C x 240/ 300 sqmm, 1.1 KV grade, PVC LT cable, which includes excavation of trench in all kind of soil, laying of cable below ground in PVC conduit having occupancy of 70% & back filling, cable marker, as per	650	MTR		

SL NO	DESCRIPTION OF ITEM	QUANTITY	UNIT	UNIT RATE (Rs)	AMOUNT (Rs)
22.0	Laying of 3.5C x 240/ 300 sqmm, 1.1 KV grade PVC LT cable, which includes excavation of trench in all kind of soil, laying below ground providing sand layer below/ above the cable, brick lining both side & above the cable, back filling, cable marker, as per specification.	650	MTR		
23.0	Laying of 3.5C x 120/ 185 sqmm, 1.1 KV grade PVC LT cable which includes excavation of trench in all kind of soil, laying of cable below ground in PVC conduit having occupancy of 70%, back filling and cable marker, as per specification.	600	MTR		
23.0	Laying of 3.5C x 120/ 185 sqmm, 1.1 KV grade PVC LT cable, which includes excavation of trench in all kind of soil, laying below ground providing sand layer below/ above the cable, brick lining both side & above the cable, back filling and cable marker, as per specification.	650	MTR		
24.0	Laying of 4C x 25 sqmm 1.1 KV grade PVC LT cable, which includes excavation of trench in all kind of soil, laying of cable below ground in PVC conduit having occupancy of 70% & back filling, cable marker, as per specification.	400	MTR		
25.0	Laying of 4C x 25 sqmm 1.1 KV grade PVC LT cable, which includes excavation of trench in all kind of soil, laying below ground providing sand layer below/ above the cable, brick lining both side & above the cable, back filling and cable marker, as per specification.	350	MTR		
26.0	Termination of 3.5C x 240/ 300 sqmm Al armoured cable including glanding, drilling the hole in gland plate & making termination with double compression cable gland and copper lugs for 3.5C x 240/ 300 sqmm Al armoured cable (Both the end of cable shall be treated as one termination).	30	NO		
27.0	Termination of 3.5C x 120/ 185 sqmm Al armoured cable including glanding, drilling the hole in gland plate & making termination with double compression cable gland and copper lugs for 3.5C x 240/ 300 sqmm Al armoured cable (Both the end of cable shall be treated as one termination).	30	NO		
28.0	Termination of 4C x 25 sqmm Al armoured cable including glanding, drilling the hole in gland plate & making termination with double compression cable gland and copper lugs for 3.5Ce x 240/ 300 sqmm Al armoured cable (Both the end of cable shall be treated as one termination).	10	NO		
29.0	Laying below ground in excavated trench (as per specification) of CC spun pipe of 300 mm dia, wherever cable laid through pipe for road crossing purpose.	10	MTR		
30.0	GI pipe 50 mm dia, including clamps, hardware, etc.	20	MTR		
31.0	GI pipe 75 mm dia, including clamps, hardware, etc.	20	MTR		
32.0	Fixing of HT danger notice plate on tubulat pole/ DP structure of size 250 x 200 x 2 mm thick, made of MS plate painted with vitreous enamelled white on both side and inscription in red colour on front side as required.	70	NO		

SL NO	DESCRIPTION OF ITEM	QUANTITY	UNIT	UNIT RATE (Rs)	AMOUNT (Rs)
33.0	Fabrication, installation of various structural members, such as cross arms, top adaptors, etc, for poles, straight line DP structure/ sub-station DP structure/ DP structure for line tap-offs, bracings member, clamps, bracket for gaurd wire or any other fabrication if required and not specified elsewhere in the tender specification, etc, including supply of required matching hardwares and painting of one coat of red oxide & two coats of Al paint. This also includes the fabrication of other items, as required.	8	MT		
34.0	Erection of 30 m high lighting mast with associated civil	5	NO		
35.0	Supply & installation of cradle type cage gauard (along/ across the road for 11 KV single circuit) shall run along the line made out of 6 SWG GI wire confirming to IS 2633 including netting, stretching and joining of cage including lacing by 10/12 SWG GI wire, binding by 14/16 SWG GI	100	MTR		
36.0	Supply & making the earth pit as per IS:3043 including earth/massonary work (size of electrode 50 mm dia, GI pipe, 3 m long, class 'B'). Pit shall be filled with alternative layer of charcoal & salt. GI pipe shall be with funnel with wire mesh for watering, mansonry block CI cover coplete as per IS. All the earth pits are to be inter connectecd with GI strip of size 50 x 6 mm including supply of all material.	24	NO		
37.0	Installation, testing and commissioning of 11/ 0.433 KV transformer including assembly of loose supplied accessories, oil filling, drying out/ oil filteration, associated				
37.1	500 KVA transformer.	11	NO		
37.2	1000 KVA transformer.	1	NO		
38.0	Installation, testing and commissioning of 800 A LT distribution outdoor kiosk with all the provision & associated civil works as per specification.	12	NO		
39.0	Providing and fixing GI chain link fencing (75 mm x 75 mm x 8g) of approved quality with galvanised C-clips to a grid of horizontal strands of galvanised high tensile spring steel wire of 12 SWG which have to be tensioned and fixed to the vertical post by means of galvanised special clips, bolts, nuts, etc. The fencing to be provided around the sub-station with minimum clearance as per Electricity rules and 2500 mm minimum height with suitable steel structural posts (angle iron shall not be less than 65 x 65 x 10 mm) spaced at 2 m centre to centre with 1:3:6 concrete foundation size 300 x 300 x 500 mm approximately for stability of the fencing. Support shall be painted with primer and 2 coats of synthetic enamel. The fence shall be made lockable by providing 2 no of suitable gates made of the same section/frame and chain link fencing. Rates are inclusive of supply of all materials including supply of cement &	600	SQM		
40.0	Filling including supply of area in side the fencing with 20 mm gravel, 100 mm thick bed.	540	SQM		
41.0	Hiring charge of portable lighting tower with in-built DG set for use of BHEL. Approximate requirement is 2 sets/ month for 4 months (total 8 lighting tower-month). DG set shall be noiseless with fuel tank capacity of 8 hrs duty cycle, towers shall be of 30 ft height with 4x1000 W metal halide lights, complete with panels, self starter for DG set, manual winch,				

SL NO	DESCRIPTION OF ITEM	QUANTITY		UNIT RATE (Rs)	AMOUNT (Rs)
41.1	Monthly hiring charge for each lighting tower with DG set.	8	LT-MONTH		
41.2	Fuel, lubricant, etc charge for running of lightng tower with DG set. (Total running hrs has been calculated considering 2 no towers, working for 8 hrs per day, 30 days in a month, for 4 months. Payment shall be made as per actual total running hours of all the towers deployed on monthly basis)	1920	HR		
TOTAL					

VOLUME-III PRICE SCHEDULE, REV-01				
Design/ engineering (33 KV system), procurement, supply (Except those which BHEL will provide as per tender terms), erection, testing, commissioing, operation & maintenance (O&M), etc of construction power network for 2x660 MW units at IB TPS, OPGCL, Banharpalli, Odisha.				
TENDER NO - PSER:SCT:BNP-E1593:14				
SCH-5 - OPERATION & MAINTENANCE (O&M) PRICE BREAK-UP FOR 11 KV NETWORK				
SL NO	DESCRIPTION OF ITEM	QUANTITY	UNIT RATE (Rs)	AMOUNT (Rs)
O&M PRICE BREAK-UP OF 1.3 OF SCH-2.				
1.0	Lumpsum price for operation & maintenance of entire construction power system as detailed in the tender and as per direction of BHEL.	45	MONTH	
TOTAL				