



# भारत हेवी इलेक्ट्रिकल्स लिमिटेड

( भारत सरकार का उपक्रम )

## BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN - 01

Ref: PSER:SCT:NBN-C1637:TCN-01

Date: 15-12-2014

Sub	Tender change notice (TCN) 01	
Job	Design, manufacture, supply, installation and handing over of pre-fab structure for field hostel and six residential quarters with all necessary electrical fittings, supply and installation of furniture and furnishings etc. associated civil works such as fencing, roads, drains etc. and all other incidentals complete as per requirement and specification on turnkey basis at 3x660 MW Nabinagar STPP, Aurangabad, Bihar.	
Ref	1.0	Tender no PSER:SCT:NBN-C1637:14
	2.0	BHEL's NIT, vide reference no PSER:SCT: NBN-C1637:4114, dated 12-12-2014.
	3.0	All other pertinent issues till date.

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

- 1.0 "VOLUME-IF-TECH-REV-0" of the tender specification is superseded as per attached "VOLUME-IF-TECH-REV-1".
- 2.0 Revised Price Schedule, VOLUME-III-R-1 attached superseding PRICE SCHEDULE VOLUME-III-R-0 issued earlier along with NIT. Bidder shall quote as per this revised Volume-III, Rev-1 only.
- 3.0 Revised 'No deviation certificate' as per enclosed Annexure-2. Bidder shall submit no deviation certificate as per enclosed format only.
- 4.0 All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,  
for BHARAT HYEAVY ELECTRICALS LTD

SR.ENGR (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 : 23211691, 23211798, 23211796

**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, manufacture, supply, installation and handing over of pre-fab structure for field hostel and six residential quarters with all necessary electrical fittings, supply and installation of furniture and furnishings etc. associated civil works such as fencing, roads, drains etc. and all other incidentals complete as per requirement and specification on turnkey basis at 3x660 MW Nabinagar STPP, Aurangabad, Bihar	
Ref	1.0	Tender no PSER:SCT:NBN-C1637:14
	2.0	BHEL's NIT, vide reference no PSER:SCT: NBN-C1637:4114, Date: 12-12-2014
	3.0	BHEL's TCN-01, vide reference no PSER:SCT: NBN-C1637:TCN-01, dated 15-12-2014.
	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)

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

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

फैक्स/Fax : (033) 23211960

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**VOLUME-III  
PRICE SCHEDULE, REV-1**

**Design, manufacture, supply, installation and handing over of pre-fab structure for field hostel and six residential quarters with all necessary electrical fittings, supply and installation of furniture and furnishings etc. associated civil works such as fencing, roads, drains etc. and all other incidentals complete as per requirement and specification on turnkey basis at 3x660 MW Nabinagar STPP, Aurangabad, Bihar.**

**TENDER NO - PSER:SCT:NBN-C1637:14**

**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 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.
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.
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 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-1**

**Design, manufacture, supply, installation and handing over of pre-fab structure for field hostel and six residential quarters with all necessary electrical fittings, supply and installation of furniture and furnishings etc. associated civil works such as fencing, roads, drains etc. and all other incidentals complete as per requirement and specification on turnkey basis at 3x660 MW Nabinagar STPP, Aurangabad, Bihar.**

**TENDER NO - PSER:SCT:NBN-C1637:14**

SL NO	DESCRIPTION	QUANTITY		RATE (Rs)	AMOUNT (Rs)
1.0	Design, manufacture, supply, installation and handing over of pre-fab structure for field hostel and six residential quarters with all necessary electrical fittings, supply and installation of furniture and furnishings etc. associated civil works such as fencing, roads, drains etc. and all other incidentals complete as per requirement and specification on turnkey basis along with supply, installation and commissioning of DG set at 3x660 MW Nabinagar STPP, Bihar".	1	LS		

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VOLUME-IF-TECH-REV-1	TECHNICAL CONDITIONS OF CONTRACT	PAGE 1 OF 5

## **TECHNICAL SPECIFICATION**

**Scope** : Design, manufacture, supply, installation and handing over of pre-fab structure for field hostel and six residential quarters with all necessary electrical fittings, supply and installation of furniture and furnishings etc. associated civil works such as roads, drains, fencing etc. and all other incidentals complete as per requirement and specification laid hereunder on turnkey basis along with supply, installation and commissioning of DG set at 3x660 MW Nabinagar STPP, Bihar.

### **Salient features for design concept and lay-out :**

One no. single story field hostel with 25 no. rooms along with 2 no. Dining hall interconnected & 6 no. 1 BHK residential quarters, total area fenced with galvanized chain link fencing and provided with necessary approach pavements.

Approx. perimeter of galvanized chain link fencing with concertina as per specification : 450 m

6 feet wide covered walkway (passage/corridor) along the inner periphery of the field hostel. Passage being Plain cement concrete of approved nominal mix (say 1:3:6).

Separate lobby of 4 rooms of 3.0 m x 3.0 m for service staffs/drivers/servants etc. with common toilet.

Size of each room of field hostel = 5.0 m X 4.0 m with a 2.0 X 1.5 m attached toilet.

10/25 rooms must be Air-conditioned.

Size of dining hall 1 = 10.0 m X 6.0 M, adjacent Dining hall 2 = 6.0 m X 6.0 M with a common kitchen / pantry and an adjacent common room. Common room to be provided with one 42" wall mounted Plasma TV and 10 no. fixed mid back chairs. Large dining hall to be provided with one 16 seater dining table set of wooden make and smaller dining hall with 8 seater dining table set of wooden make. Fans and lights to be provided as per requirement and approved design. Reputed brands like PHILIPS/Bajaj/Havels or equivalent to be used.

Provision for a small 2.0 m X 2.0 guard room near the gate of the fencing must also be made.

Landscaped lawn area approx : 400 sqm located within the field hostel and residential quarter complex.

Size of each 1 BHK quarter = approx. 40-45 sqm (each with one living room, bed room dining space and kitchen and 1 toilet)

Residential quarters each to be furnished with the following :

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- Sofa set with centre table for living room(GODREJ/JASANI/ZUARI or equivalent)
- Refrigerator (165 ltr), (SAMSUNG /LG / GODREJ /KELVINATOR)
- Washing machine (5.0 ltr) (SAMSUNG /LG / GODREJ /KELVINATOR)
- Split AC (1.5 t, 3 star), (LG /SAMSUNG /HITACHI /CARRIER)
- 5 ltr Geyser (Havels/Bajaj/Philips or Equivalent)
- 21” wall mounted LCD TV – (LG / SAMSUNG / SONY / VIDEOCON)
- Microwave oven, 5.0 ltr geyser (SAMSUNG/ LG/ PANASONIC / ONIDA)
- One double bed ( cot and mattress), (MATTRESS – KURLON /SLEEPWELL /DUROFLEX)
- Wooden table and
- Revolving executive chair (Mid back – Godrej/Jasani/Zuari or equivalent)
- Furnished with curtains/ roller/vertical blinds as designed.

Each hostel room to be furnished with

- one 1.5 T 3 star window AC (only for 10 rooms),
  - one single cot,
  - mattress,
  - 1 table,
  - 1 chair and
  - 1 five feet almirah
  - and curtains as per design recommendation.
- Specifications of make as above.

Necessary electrical fittings such as fans, lights, exhausts, switch boards, etc. to be placed adequately as per requirement.

**General** : Structure must be of pre-fabricated type enabling rapid assembly.

**Technical specification :**

**Composition of wall** : Wall must be composed of Aerocon panels ( i.e. sandwich panel of two plain cement sheets on either side of a light weight concrete core composed of Portland cement, binders and a mix of silicious and micaceous material aggregate) of minimum thickness 75 mm fixed in tongue and groove method or plastocrete panels. Height of each panel must be a minimum of 3.0 m. Technical specification of aerocon panels/plastocrete panels must confirm to relevant IS/BS/ acceptable Standards, as applicable.

**Roof** :Roof must be composed of colour coated GI sheet as per IS specifications.- Minimum thickness 0.5 mm . Make – TATA/JINDAL or equivalent.

**Window / Door** : Designer windows of powder coated aluminum as per specific requirement of different sizes, fixed/ sliding or with shutters to be provided as per designer recommendation. Window size approximately 1500 mm X 1200 mm.

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**Paint** : Waterproof, fire-resistant polymer texture coating of approved shade to be applied on exterior panels. Interior wall to be coated with oil bound acrylic distemper or synthetic emulsion paint over primer of approved shade.

**False ceiling** : False ceiling of 12.5 mm thick tapered edge gypsum board conforming to IS : 2095 including providing and fixing of frame work made of special sections power pressed from M.S. sheet and galvanized in accordance with zinc coating 350 as per IS : 277 and consisting of angle cleats. Alternatively, mineral fibre tile false ceiling of minimum thickness 15 mm may be opted for.

**Galvanized chain link fencing** : 2.0 m high fencing with 2.4 m MS angle 50 x 50 x 6 mm posts (excluding cost of angle posts - to be paid elsewhere) placed every 3 m centre to centre embedded in cement concrete block (1:2:4), every 15th post last but one end post and corner post shall be strutted on both sides and end post on one side only, With galvanised chain link fencing of approved quality 50mmx50mmx8 g, by means of galvanised `C` clips, with fixing of galvanised special clips for fixing along with 2mm thick GI tension wire at top and bottom etc. all complete including supply and fixing. One MS gate approx. 6.0 m width to be provided as per vendor's design.

Supplying and fixing 600mm high concertina on top of fencing along the entire length of fencing including GI tension wires, clips, anchors, accessories etc. all complete is also included in the scope of work. Concertina shall be from tensile serrated galvanised wire (HTSW) made with wire diameter of 2.5 mm which will be stretched to 6m and attached on two strands of galvanised HTSSW (high tensile spring steel wire) of 2.5mm dia by means of clips at 1m interval. These two HTSSW strands will be attached to the fence posts/ angles with 12 mm security fasteners.

**Finish** : Flooring to be done with Vitrified floor tiles in 60x60 cm size (thickness to be specified by the manufacturer) of NITCO, ORIENT, SOMANY KAJARIA, or equivalent make with water absorptions less than 1% and flexural strength not less than 30N/mm<sup>2</sup>, in all colours and shades, laid on 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement and matching pigments etc., complete as per IS Specifications in all rooms of hostel as well as residential quarters. The same will be done over a bed of 100 mm thick PCC.

**Sanitary and Plumbing works** : All fittings and fixtures pertaining to sanitary and plumbing works must be of approved reputed brands. Total water supply and drainage system along with sanitary installations complete with construction of septic tank and all drainage/sewage system must be provided. All toilets must be provided with vitreous china wash basin, 1 vitreous china English water closet with automatic flush, necessary pipes and fittings, towel roads, soap dish, mirror, shower, etc. as per modern amenities. Sanitary and other fittings as above must be of reputed make such as JAQUAR/PARRYWARE/HINDWARE or equivalent)

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VOLUME-IF-TECH-REV-1	TECHNICAL CONDITIONS OF CONTRACT	PAGE 4 OF 5

**Pantry/Kitchen** : Must have a steel sink of required size, 18 mm thk slab top platform for cooking, gas oven etc.

**Sanitary works** : There will be ceramic wash basins of approved colour & make along with mirror of size 600 x 450mm minimum, towel rail, soap dish etc. There will be European ceramic water closets of approved colour and make. All required G.I. water lines (min 15mm dia), sewer lines (100mm – 150mm), soak pit of minimum 1.2mm dia and depth to suit at site, fixtures required for proper functioning like traps, chambers wall plugs, clamps, screws, (low height fibre made) Flushing cisterns of minimum 5 Ltr capacity each. Taps for water wash basins & toilets along soap dish etc. are in the contractor's scope. Contractor to note no fixtures, specials or any material will be given for any work which are required for the completion of works. The pantry is to be provided with kitchen sink and counter with Granite stone top.

**Electrical Works** : Total Electrification of Building by providing Incoming cable, Main Distribution Board, Wiring for all and installation of Light fixtures, fans, power sockets, Exhaust fans, Energy meter Etc.

Wiring for light point, fan point etc. are to be with 1.5 sq mm PVC insulated conductor wire. Wiring for a 3 pin 250 volts 5/15 Amp single phase and neutral switch socket outlet, with 2.5 sq mm PVC insulated conductor wire. The wiring is to be done with good and approved quality PVC conduits of 19 mm dia, above false ceiling and concealed PVC conduits below false ceiling. The ceiling fans of size 52 inch and tube light fittings of approved ISI makes are to be provided. The switches are to be modular.

Switches of approved make are to be used. The three phase distribution with three phase energy meter with reqd. ELCB is in contractor scope.

One centralized electrical room must be provided for. Reputed brands like PHILIPS/Bajaj/Havels or equivalent to be used for electrical works.

**Water supply and plumbing** : One/Two 2000 Ltr. (or HIGHER as required) PVC Syntax/ Rotax / Polymer make water tanks is to be provided at side of the building with stable supporting structure and the required incoming and outgoing water lines to the services with minimum 20 mm dia GI pipe must be provided.

**Cement** – Cement for concrete works below or above plinth must be procured from any of the following suppliers : ULTRATECH, GRASIM, JAYPEE, BIRLA, ACC, AMBUJA, LAFARGE

**Structural / Reinforcement Steel** - SAIL, TISCO, RINL, JINDAL

**DG set** : Scope includes Supply, installation and commissioning of **63 KVA** DG set of reputed brand such as Ashok Leyland/Kirloskar or equivalent for use of BHEL, including all necessary preparation of base, shed, associated electrical works, etc. on turnkey basis.

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VOLUME-IF-TECH-REV-1	TECHNICAL CONDITIONS OF CONTRACT	PAGE 5 OF 5

(scope is exclusive of operation, fuel and maintenance after handover of successfully commissioned equipment).

**Note : Tentative Lay-out sketch in compliance with the TCC and above technical and General requirements must be submitted by the bidder along with offer.**