

**TENDER SPECIFICATION
NO. BHE / PW / PUR / BRLT- ENB / 740**

FOR

CONSTRUCTION OF CLOSED SHED WITH STORE OFFICE AND C&I STORE ROOM, CLOSED SHED, STRUCTURAL SEMI CLOSED SHED, AREA DEVELOPMENT FOR PORTA CABIN , DEVELOPMENT OF OPEN STORAGE YARD, ROADS, FENCING, DRAINAGE, INCLUDING INTERNAL / EXTERNAL ELECTRIFICATION OF OFFICE/STORES & OPEN STORAGE YARD AREAS.

**AT
1 UNIT OF 2X600 MW
JHABUA POWER LIMITED
SEONI
MADHYA PRADESH**

Part- I -- TECHNICAL BID

(Volume-I)

**SPECIAL & GENERAL CONDITIONS OF CONTRACT,
QR, NIT**

BOOK NO.

BHARAT HEAVY ELECTRICALS LIMITED



**(A GOVERNMENT OF INDIA UNDERTAKING)
POWER SECTOR - WESTERN REGION
SHREEMOHINI COMPLEX
345, KINGS WAY - NAGPUR 440 001**

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30	Rate Schedule(Price Bid - II)	(Issued as a separate booklet)	@

#: ATTACHED AT THE END OF HARD COPY OF TENDER SPECIFICATION. ALSO HOSTED IN WEB PAGE AS PART OF NOTICE INVITING TENDER.

@: ISSUED AS A SEPARATE BOOKLET AS HARD COPY. ISSUED AS A SEPARATE DOWNLOADABLE SOFT COPY IN WEB PAGE.

NOTE: Bidders must Visit BHEL web site www.bhel.com for NIT, Qualifying Requirement of this work (QR), GCC etc. Further all corrigenda, addendum, amendments and clarifications to Tender Specifications will be hosted in this web page. Bidders shall keep themselves updated with all such amendments.

BHARAT HEAVY ELECTRICALS LIMITED

(A GOVERNMENT OF INDIA UNDERTAKING)
POWER SECTOR - WESTERN REGION
SHREEMOHINI COMPLEX
345, KINGS WAY - NAGPUR 440 001
PH: 0712-530641, FAX: 0712-530640

TENDER SPECIFICATION No. BHE/PW/PUR/ BRLT- ENB/740

NAME OF WORK: CONSTRUCTION OF CLOSED SHED WITH STORE OFFICE AND C&I STORE ROOM, CLOSED SHED, STRUCTURAL SEMI CLOSED SHED, AREA DEVELOPMENT FOR PORTA CABIN , DEVELOPMENT OF OPEN STORAGE YARD, ROADS, FENCING, DRAINAGE, INCLUDING INTERNAL / EXTERNAL ELECTRIFICATION OF OFFICE/STORES & OPEN STORAGE YARD AREAS.

**AT
1 UNIT OF 2X600 MW
JHABUA POWER LIMITED
SEONI
MADHYA PRADESH**

EARNEST MONEY DEPOSIT(EMD) : *EMD of this tender is RS.2,00,000/- (Rupees Two lakh only) . EMD shall be deposited by bidder as per Cl no : 1.9 (Page 11of 43) of General Terms & conditions of Contract (GCC) of this tender.*

These Tender Documents containing Part-I Technical Bid and Part-II Price Bid are issued to

M/s

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(THESE TENDER DOCUMENTS ARE NOT TRANSFERABLE)

For Bharat Heavy Electricals Limited

SENIOR MANAGER (PUR)

PLACE: NAGPUR
DATE:

BHARAT HEAVY ELECTRICALS LIMITED

(A GOVT. OF INDIA UNDERTAKING)

POWER SECTOR: WESTERN REGION
345, KINGS WAY, NAGPUR 440 001

Procedure for Submission of Sealed Tenders & Instructions to Bidders

The bidder must submit their tenders as required in two parts in separate sealed covers prominently super scribed as part-I technical bid and part-II price bid and also indicating on each of the covers the tender specification number and due date and time as mentioned in the tender notice.

Part-I (Technical Bid) Cover-I:

Excepting rate schedule, all other schedules, data sheets and details called for in the specification shall be enclosed in part-I "Technical Bid" only.

EARNEST MONEY DEPOSIT (EMD)

EMD of Rs. 2.00 lakh (Rupees Two lacs only) shall be included in the Technical Bid. **EMD shall be paid by bidders only in the manner specified in Section-15 Special Conditions of Contract.** No other mode of payment of EMD shall be acceptable. Provisions under clause no. 1.4 of the General Conditions of Contract shall not be applicable for this tender.

Bidder may opt to deposit "One Time EMD" of Rs. 2.0 lacks with this office (BHEL:PSWR:Nagpur) which will enable them to participate in the present and all the future tender enquiries in respect of Erection and Commissioning services issued from this office. Interested bidders may send their explicit consent for converting the present EMD into an "One Time EMD" in their offer.

Bidders who have already submitted such "One Time EMD" will be exempted from submission of any EMD for this tender. However bidder shall furnish details of the "One Time EMD" in his offer including the Check List furnished herein.

Part-II (Price Bid) Cover-II:

All indications of price shall be given in this part-II "Price Bid". **EMD shall not be included in this cover.**

These two separate covers-I and II (part-I and part-II) shall together be enclosed in a third envelope (cover-III) along with requisite EMD as indicated earlier and this sealed cover shall be super scribed and submitted to Addl. Gen Manager (Purchase) at the above-mentioned address on or before the due date as indicated.

The qualified bidder will be intimated separately about the status of their offer.

Bidder is requested to make specific note of the following conditions:

Contractor should have adequate resources including major T&P at his disposal for this job.

Contractor should have sound financial stability.

Bidder should meet quality requirement regarding workmanship, deployment of personnel, erection tools and necessary inspection, measurement & testing instruments.

All information as called for in various appendices and clauses of tender specification, should be furnished in completeness. Please refer the checklist.

The bidder, if any, shall obtain clarification on Tender Specifications, before submitting their offer.

Offers must be submitted without any deviation.

Offers received with any deviation or without relevant information as described above are liable to be rejected. **Price bids received in the form other than specified in Part-II (Price Bid) are liable to be rejected.**

Bidder must sign & stamp all pages of this tender specification as an acceptance of tender conditions and must enclose this tender specification with their offer.

Bidder shall note that their offer will be considered subject to the approval of BHEL's customer.

Offer of bidder received after due date shall NOT be considered under any Circumstances

PROJECT INFORMATION

The JPL Thermal power project consisting of 2 x 600 MW Units will be set up in Seoni District, Madhya Pradesh State, India.

The Site is located 40 km away from the national highway -7 between Nagpur Jabalpur. The site can be approached by below mentioned routes.

- a) **Nagpur – Lakhnadwan** (Nagpur Jabalpur Highway) – **Kahani – Mehta – Binaiki Railway Station (about 220 Km) – Barela Pani ki Tanki – Site.**
- b) Nagpur – Dhuma (Nagpur Jabalpur Highway) - Kahani - Mehta - **Binaiki Railway Station (about 220 Km)- Barela Pani ki Tanki - Site**
- c) **Jabalpur** – Bargi- Panarzir - Barela - Site.

Nearest railway station is Binaiki at approximately 2 km from proposed power plant site. Nearest airport is Jabalpur at a distance of 80 Km. Nearest seaport is Paradip (Orissa) at about 800 km from site.

2.2 Geological Condition

2.2.1 Site Elevation : 550 M above MSL

2.2.2 Seismic Intensity

Seismic Intensity : As per IS : 1893-2002, Part -1 &
As per IS : 1893-2002, Part –IV

Zone : III

Importance Factor : 1.75

Zone Factor : 0.16

2.3 Meteorological Conditions

Ambient Temperature

(a) Maximum Dry bulb Temperature: 39.7°C

(b) Minimum Dry bulb Temperature: 13.7°C

Relative Humidity

(a) Max. : 63%

(b) Min. : 19.0

Rain Fall

(a) Max. Recorded : 458

(b) Average Annual Rainfall : 984 mm

(c) Period of Monsoon (Average) Showers : June –September

Wind Data

(a) Basic Wind Speed : 47 m/s as per latest revision of IS:875 part III

(b) Wind direction : North East

Climatic Condition : Hot/Arid

Check List			
(Vide Para 1.3 Of Section-I of General Conditions Of Contract)			
1	Name of the Bidder with Postal Address for Correspondence		
2	Name of Contact Person with Telephone & Fax No.	Mr./Ms Tel No. Fax No.	
3	Nature of the firm	PROPRIETARY / PARTNERSHIP / LIMITED CO.	
4	Details of EMD Please Indicate whether 1) One Time EMD or, 2) Only for this Tender	DD No. DD Date..... Name of Bank..... Amount: Rs.....	
5	Validity of Offer (BHEL's Requirement: 180 days from Due Date)	Validity _____ days	
6	Mobilization Time (Please refer Section-11 of SCC)	Mobilization Time _____	
7	Whether any conditions stipulated?	Yes (vide Document reference:	No
		Bidder to note that tender with conditions unacceptable to BHEL shall be rejected.	
8	Bidder has visited the project site and acquainted with the site conditions	Yes	No
9	Details of concurrent jobs are furnished (Appendix-)	Yes	No
10	Headquarters organization is furnished	Yes	No
11	Proposed site organization is furnished	Yes	No
12	Names and particulars of directors/partners are furnished	Yes	No
13	Financial status of the firm (Annexure 'A' of GCC) is furnished	Yes	No
14	Copy of Audited Profit & Loss Account for preceding three years duly authenticated on each copy by bidders Chartered Accountants	Yes	No
15	Latest Certificate by Bidder's Banker for Overdraft & BG Limits is Furnished (Certificate shall not be older than six months from the Last Date for offer submission)	Yes	No

Check List (Vide Para 1.3 Of Section-I of General Conditions Of Contract)			
16	Latest copy of IT Return along with copy of PAN Card are Furnished	Yes	No
17	Month-wise Manpower Deployment Plan (Appendix –) is furnished	Yes	No
18	Analysis of Unit Rates quoted (Appendix-) is furnished	Yes	No
19	Month-wise deployment plan for major T&P (Appendix-) is furnished	Yes	No
20	Whether all the pages of the Tender Specification documents are read, understood and signed	Yes	No
21	Power of Attorney enclosed in favor of person making offer	Yes	No
22	Bidder has familiarized himself with all Relevant Local Laws & Local Conditions	Yes	No
23	Safety Requirement of this work in a Running plant Premises has been understood.	Yes	No
24	Erection and Commissioning programme furnished	Yes	No
25	List of Jobs completed in last seven years is furnished (Appendix-)	Yes	No
26	Whether copies of detailed Work Orders (with BOQ) and Completion Certificates in support of above furnished	Yes	No
27	Whether contractor has left any job unfinished? If so, give reasons.	Yes	No
28	Whether any client has terminated the contractor's work before completion? If so, furnish reasons for the same	Yes	No
29	BIDDER MUST FURNISH HERE THE FOLLOWING DETAIL FOR RELEASING EMD AND OTHER PAYMENTS DULY ENDORSED BY BANK (IE SIGN & STAMP BY BANK). 1 Name of the Company----- 2 Name of Bank----- 3 Name of Bank Branch----- 4 City/Place----- 5 Account Number----- 6 Account type----- 7 IFSC code of the Bank Branch----- 8 MICR Code of the Bank Branch-----	Yes	No

Note: strike off or tick '**yes**' or '**no**', as applicable

Date:

Signature of Bidder

BIDDERS MUST SUBMIT ALL NECESSARY DOCUMENTS AS BEING ASKED IN ABOVE CHECK LIST.

Declaration by Bidder's Authorized Signatory

I
hereby certify that all the information and data furnished by me with regard to this tender specification No. BHE/PW/PUR/BRLT- ENB/740 is true and complete to the best of my knowledge. I have gone through the specification, conditions and stipulations in detail and agree to comply with the requirements and intent of the specification. I further certify that I am duly authorized representative of the under mentioned bidder and a **valid power of attorney to this effect is also enclosed with the offer.**

Bidder's name and address

Authorized representative's signature with
Name and Address

Date:

**CERTIFICATE OF DECLARATION FOR CONFIRMING
KNOWLEDGE ON SITE CONDITIONS**

WE, M/S -----

HEREBY DECLARE AND CONFIRM THAT WE HAVE VISITED THE PROJECT SITE AT **1 UNIT OF 2X600 MW JHABUA POWER LIMITED SEONI MADHYA PRADESH**. AS REFERRED IN BHEL'S TENDER **SPECIFICATION NO. BHE/PW/PUR/BRLT-ENB/740** AND ACQUIRE FULL KNOWLEDGE AND INFORMATION ABOUT THE SITE CONDITIONS & NATURE OF JOB (ESPECIALLY THOSE ISOLATED FROM OTHER AGENCY). WE FURTHER CONFIRM THAT THE ABOVE INFORMATION IS TRUE AND CORRECT AND WE SHALL NOT BE ELIGIBLE FOR ANY-ADDITIONAL PAYMENT OF ANY NATURE DUE TO LACK OF KNOWLEDGE OR NON – FAMILIARIZATION OF SITE CONDITIONS.

CERTIFICATE OF NO-DEVIATION

TENDER SPECIFICATION No. BHE/PW/PUR/ BRLT - ENB/740

I/WE, M/s

.....

HEREBY CERTIFY THAT NOTWITHSTANDING ANY CONTRARY INDICATIONS/ CONDITIONS ELSEWHERE IN OUR OFFER DOCUMENTS, I/WE HAVE NEITHER SET ANY TERMS AND CONDITIONS NOR THERE IS ANY DEVIATION TAKEN FROM THE CONDITIONS OF BHEL'S TENDER SPECIFICATIONS, EITHER TECHNICAL OR COMMERCIAL, AND I/WE AGREE TO ALL THE TERMS AND CONDITIONS MENTIONED IN BHEL'S TENDER SPECIFICATION WITH ASSOCIATED AMENDMENTS AND CLARIFICATIONS.

Date:

Signature of the Bidder

SECTION-3

OFFER OF BIDDER

TO,
THE SR. MANAGER (PURCHASE)
M/s BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR - WESTERN REGION
SHREEMOHINI COMPLEX
345, KINGS WAY
NAGPUR 440 001

DEAR SIR,

WE HEREBY OFFER TO CARRY OUT THE WORK DETAILED IN TENDER SPECIFICATION NO. **BHE/PW/PUR/BRLT- ENB/740** ISSUED BY **BHARAT HEAVY ELECTRICALS LIMITED, POWER SECTOR-WESTERN REGION, NAGPUR**, IN ACCORDANCE WITH THE TERMS AND CONDITIONS THEREOF. I/WE HAVE CAREFULLY PERUSED THE FOLLOWING LISTED DOCUMENTS CONNECTED WITH THE ABOVE WORK AND AGREE TO ABIDE BY THE SAME.

1. INSTRUCTIONS TO TENDERERS
2. GENERAL CONDITIONS OF CONTRACT
3. SPECIAL CONDITIONS OF CONTRACT
4. OTHER SECTIONS, APPENDICES, SCHEDULES AND DRAWINGS.

WE HAVE DEPOSITED / FORWARDED HERewith THE EARNEST MONEY DEPOSIT FOR A SUM OF Rs. 2, 00,000/- (RUPEES TWO LAKH ONLY) DETAILS OF EMD PAYMENT ARE FURNISHED IN THE CHECK LIST.

EMD SHALL BE REFUNDED SHOULD OUR OFFER NOT BE ACCEPTED / EMD ***NEED NOT BE REFUNDED AND THE AMOUNT MAY BE TREATED AS "ONE TIME EMD" FOR ERECTION AND COMMISSIONING TENDERS OF BHEL-PSWR, NAGPUR.*** SHOULD OUR OFFER BE ACCEPTED, I/WE FURTHER AGREE TO DEPOSIT SECURITY DEPOSIT FOR THE WORK AS PROVIDED FOR IN THE TENDER SPECIFICATION WITHIN THE STIPULATED TIME AS MAY BE INDICATED BY BHEL, POWER SECTOR-WESTERN REGION, NAGPUR.

WE FURTHER AGREE TO EXECUTE ALL THE WORKS REFERRED TO IN THE SAID DOCUMENTS UPON THE TERMS AND CONDITIONS CONTAINED OR REFERRED TO THEREIN AND AS DETAILED IN THE APPENDICES ANNEXED THERETO.

SIGNATURE OF BIDDER:

PLACE:

DATE:

WITNESSES WITH THEIR ADDRESS

SN	SIGNATURE	NAME	ADDRESS
1.			
2.			

SECTION - 4

SPECIAL CONDITIONS OF CONTRACT

4.1 SCOPE OF WORK

4.1.1 The scope of work comprises of but not limited to the following: -

1. Construction of closed shed of size (60m x 15m) - 1 No. with provision of store office and C&I store room in part of area of shed.
2. Construction of closed Storage shed (60m x 15m) –2 Nos.
3. Construction of Structural Semi closed Storage shed (60m x 15m) – 2Nos.
4. Internal and External electrification of all sheds
5. Open storage yard development, leveling and consolidation (**approx.200000 sqm**) including removal of dense grass, vegetations, wild growth, trees etc. from open storage yard.
6. Construction of internal roads, drainage, fencing, gates for open storage yard, Providing and laying RCC Hume pipe culvert as per site requirement.
7. Cabling, electrification and Illumination of open storage yard including cabling from main source of supply (Customer point) and distribution to external panels of store sheds.
8. Misc. works for Porta- Cabin office complex:
 - i. Construction of Brick Pedestals for placing of proposed Porta cabins
 - ii. Construction of raised platform for porta-cabins, concrete paving/ pathway around the Porta cabin office complex including area grading, fencing, gate and associated electrical works.
 - iii. Sanitary works such as septic tank, soak pits, sewer line and connection with porta cabins.

All the above jobs shall be as per BHEL Engineer's instructions, drawings, detailed specification and respective bill of quantities furnished in the Rate Schedule.

Responsibility of the Contractor

The contractor shall engage all the unskilled, skilled and especially skilled labour including fabricators, welders and fitters etc. and supervisory staff. Only trained and competent personnel with previous experience in the job shall be employed. However, BHEL reserves the right to decide on the suitability of the workers and other personnel who will be employed by the contractor. BHEL reserves the right to insist on removal of any employee of the contractor at any time, if they found him unsuitable. The contractor shall be bound to follow the instruction of BHEL.

4.1.2

All the materials like steel, ventilators, rolled shutters, trusses, structural members, foundation bolts, MS bars, painting materials, G.I. Sheets, MS square bar and necessary electric goods etc. shall be supplied by the contractor as per the specification mentioned in the tender/Indian standard specification. The contractor is required to quote their rates inclusive of cost of all materials, labour, etc. BHEL reserves the right to inspect and reject any material not found satisfactory.

4.1.3 General

4.1.3.1

During execution of the job, it is very essential that proper and adequate inspection should be made constantly by the contractor to maintain quality of workmanship and to ensure that deviations from BHEL drawings not exceed the permissible limits, which shall be approved by BHEL. **The contractor shall submit test reports of all materials being procured by them for the job and also offer for inspection by BHEL. All the testing charges shall be borne by the contractor.** BHEL engineer shall carry out the inspection of quality of material being purchased/arranged, quality/composition of materials used during construction work and workmanship. Decision of BHEL engineer shall be binding on the contractor.

Contractor shall furnish the manufacturers test certificate for the steel & cement procured by them. Apart from this all the field test shall be arranged by contractor for cement, bricks, coarse & fine aggregates either at site or near by Field Quality Lab. approved by BHEL if so desired by BHEL's engineer. All the expenses in these regards shall be borne by contractor.

Contractor shall procure reinforced/ structural steel & cement from reputed manufacturer & approval for the same shall be obtained from BHEL well in advance before ordering for the materials.

4.1.3.2

The contractor shall visit the site and ascertain the local conditions, entry and traffic restrictions, all obstructions in the area and also ascertain all site conditions and particularly the sub-soil conditions etc. The contractor shall carry out the survey to study the properties of soil/sub soil like strength to withstand the weight of structure during all weather conditions without sinking of foundation. If any of such defects like cracks, sinking of foundation etc. occur after completion of work till the performance guarantee period, it shall be rectified by contractor free of cost including the supply of materials required. No claim shall be entertained on this account under any circumstances from the contractor.

4.1.3.3

The contractor shall provide and maintain at his own cost pumps and other equipment to keep the work free from water and continue to do so until the handing over of the work. The contractor shall clear all trees, rubbish, vegetation, brickbats etc. And dispose them suitably in allotted areas at his own cost.

4.1.3.4

The contractor shall take adequate precautions to ensure complete safety and prevention of accidents at site. The safety precautions shall conform to IS codes wherever applicable.

4.1.3.5

The contractor shall level the site in accordance with the sequence of earth leveling to maintain the proper gradient as per the instruction of BHEL; as soon as construction activity is over. Payment towards this shall be released as per the relevant items available in B.O.Q.

4.1.3.6

The work though not specifically mentioned either in the drawings or in the tender specification but are needed to complete the work as per site requirement & instruction of Engineer are also in the scope of this contract & to be erected to the entire satisfaction, for which the payment shall be released as per the respective item rate of **Rate Schedule. If the item is not available in the rate schedule the rate shall be derived as per CPWD- DSR-2007 rate schedule latest version with applicable escalation.**

4.1.3.7

The contractor shall provide and maintain at his own cost all T & P for carry out the work. The T & P shall be for fabrication of the structures and for the purpose of erection of columns, trusses, purlins bracings etc complete.

4.2

The detailed drawings and specifications will form part of the tender documents. BHEL reserves the right to modify/alter the tender drawings, if necessary during the actual execution at site.

4.3 **Specification for Civil Works for various Sheds, Open Storage Yard Roads & Drains and its electrification work, Porta cabins area development and its electrification,**

4.3.1

Standard specifications for various items of work for building and road construction as per the relevant IS-codes (latest edition) shall be applicable for this work. The work has to be executed as per standard specification and drawings to the satisfaction of BHEL. However, the following Drawings/Sketches are to be read along with specifications and shall be treated as in the scope of work. Please refer **Appendix – VII for drawings.**

These drawings are indicative and strictly for tendering purpose, only meant to give an idea to tenderers about nature of job. If any changes in the layout, plan, section, partition, truss, columns etc. are felt necessary by BHEL Engineer to suit site requirement, the same shall be done by contractor as per revised sketches/drawings given by BHEL engineer. Contractor shall ensure/ascertain the stability, safety of the said work. Any modification/variation from the said drawings, if necessary as suggested by the contractor will have to be approved by BHEL in writing.

4.3.2 **Preparation of actual layout and BOQ as per site condition.**

- (a) BOQ & drawing given in tender is tentative only as the tender is prepared on the basis of preliminary information which may vary during execution as per actual site condition. As soon as the area for construction of site office, sheds, open yard etc. is taken over from BHEL/customer, Contractor has to ensure actual layout of the sheds, open storage yard, roads, drains etc. after doing detailed survey of site. Contractor shall submit detailed survey report after plotting in graph sheet along with actual BOQ for each & every work - section wise and submit the same to BHEL for further comparison with the respective BOQ. All endeavors have to be made to restrict the quantities as per BOQ except some "exceptional cases" which are very necessary due to site condition. Individual item qty. variation may be allowed up to reasonable extent unless the overall executed value of the contract is within the LOA value. For any variation beyond the total contract value, prior approvals are required from BHEL PSWR HQ before release of payment.
- (b) Item of one Section can be utilized for another Section also (if it is required but not available) being "One Contract". This can be used judiciously to avoid extra items. Measurement of work done shall be recorded in respective section of the item indicating the area of usage.

4.3.3

Excavation of foundation, trenches shall be made as per IS specification.

4.3.4

Any filling/loose soil met below the foundation shall be made up with lean cement concrete 1:4:8 mix.

4.3.5

Basement and sides of the foundation wall shall be filled in with selected excavated earth including watering, consolidation etc. Complete as per IS specification.

4.3.6

The excess/unutilized suitable earth and debris shall be disposed & leveled to the proposed mentioned area for development. All unusable earth debris, trees, vegetations etc. shall be disposed off at a location embarked by BHEL /Client. Rate quoted for excavation shall be inclusive of such disposal.

4.3.7

Filling under floors/foundations with 100mm/150mm thick layer of compacted selected earth/river sand including watering, consolidation etc. shall be executed as per IS specification and drawings. However this can be eliminated in case a hard strata/good stratum is met with in foundation level & PCC shall be done directly in such cases. However this can be decided as per site requirement with discussion with site engineer.

4.3.8

PCC: below foundation and PCC capping: This shall include supplying and placing PCC at all depths below plinth level including form work, curing, all materials, tools and plants and labour complete. **Concrete of 1:4:8/1:3:6/1:2:4 grade** as defined in IS- 456 with 40mm/20mm and downgraded stone aggregates as per drawing. Nominal mix (volumetric) shall be allowed to use as per the guidelines of IS-456 (latest edition) with min. W/C ratio & cement content as per IS stipulation for moderate condition. Concrete shall be produced by concrete mixer machine & hand mix is generally not acceptable.

However in certain unavoidable circumstances, hand mix shall be permitted with 10% extra cement content as per the discretion of BHEL engineer.

4.3.9

Brick masonry: Brick masonry shall be done by using best quality locally available burnt clay bricks / Fly Ash Lime (FAL) bricks of standard size. **Minimum strength of the bricks should not be less than 35 KG/sq. cm.** Other quality requirement shall be in line with the relevant IS Code. One-brick thick brickwork shall be constructed as specified, in Cement mortar 1:6 including linking, plumbing, leveling, pacing, joints curing etc. Including all materials, tools, plants and labour complete at all level/elevation.

Rubble masonry: Rubble masonry shall be done by using best quality locally available hard stone (black basalt) in foundation/wall. BHEL should be approved quality of stone before placing in use. Irregular hard stones should be rounded off before use. Maximum size of stone should be between 200 – 230mm.

4.3.10

RCC: RCC 1:2:4 shall be provided for column foundations & structural column / supporting pedestal for sheds, platform, lintels, sunshades over doors & windows, etc. as per IS specification. Roof truss shall be directly resting on the RCC column & to be fixed with foundation bolt embedded in column

4.3.11

Formwork: The formwork should be capable of carrying the dead load of concrete, the reinforcements and the forces of vibration. The form works shall be designed by the contractor and approved by engineer in charge. After sufficient curing period & after attaining adequate strength of concrete the formwork shall be removed with the approval of BHEL engineer. The item of PCC/RCC shall be deemed as completed after removal of forms and required finishing is completed.

4.3.12

Roof cover with AC corrugated sheet (6mm thick) shall be provided with suitable AC ridges and 'J' bolts, GI Cup Washers, GI Plain Washers, and Bitumen Washers etc. Wind ties for protection against lifting of roof by wind etc. as per standard practice shall be provided by the contractor.

4.3.13

Two coats of Black tar paint shall be provided for the wooden work used in ceiling as per IS specification.

4.3.14

Structural works:

All structural works like roof truss, columns in semi-closed shed, tank staging etc. shall be carried out as per drawing given along with the tender. Bolts to be embedded in the RCC column for fixing of truss shall be paid by weight along with the truss.

4.3.15

Contractor is permitted to get steel truss & other structures fabricated at workshop outside of the plant premises with prior permission of BHEL. In this case contractor has to arrange for shop inspections periodically as required by BHEL Engineer to ensure the quality of fabrication work. Fabricated structures without inspection/certified by BHEL shall not be allowed for erection.

4.3.16

For necessary lighting inside the sheds, translucent RMP sheets of 2.0 mm thick of approved make to match with AC sheet roofing/cladding shall be provided.

4.3.17

Necessary sanitary and plumbing works shall be provided with necessary water taps and all connections with supply lines/septic tank shall be provided by the contractor for BHEL storage sheds. The materials used and the location etc. shall be as per the directions of BHEL engineer.

4.3.18

Septic tanks with soak pit/leaching cesspool shall be provided by the contractor at the location specified by BHEL complete in all respects as per IS specification. (Suitable for capacity of 25 users as per item rate available in the rate schedule). **The drawing attached with tender is indicative only & any changes required at site shall be done as per the instruction of BHEL Engineer.**

4.4 Fencing work

Barbed Wire Fencing

The fencing shall be with MS angles post **50x50x6 mm size – 2M** high (above G.L.) as instructed by engineer in charge, and fixed at every 3M interval with **PCC 1:3:6**,

0. 30 M x 0. 30 M x 0.45 M deep. It shall be supported with MS angle struts of ISA 50x50x6 every 30M and all turnings on both sides. Barbed wire shall be 10 horizontal and 2 diagonal and shall conform to IS: 278, shall be made of 2 strands of galvanized twisted 2.5 mm (12.5 gauge) steel wire with 4 point barbs. The barbs shall have a length of not less than 13mm and not more than 18mm. (For further details Refer relevant item of BOQ & Drawings).

4.5 Electrical Installations

4.5.1 General

4.5.1.1

The electrical installation shall generally be carried out in conformity with the requirements of the Indian electricity act, 1910 as amended up to date and the Indian electricity rules, 1956 framed there under and also the relevant regulations of the electric supply authority concerned as well as IS: 732-1963 (revised). **Before commencement of work Contractor has to submit detail electrical layout drawings prepared by experienced & licensed electrical agency/engineer indicating the cable route, internal/external panels, cable sizing, fittings & fixtures etc. in line with the BOQ for all sheds & open storage yard area and porta-cabin office complex .**

4.5.1.2

Good workmanship is an essential requirement for compliance with the rules in the code. The work shall be carried out under the direct supervision of a person holding a valid certificate of competency issued by the state government concerned for the type of work involved.

4.5.1.3

All out door/external lamps shall have weatherproof fittings of design approved by BHEL Engineer so as to effectively prevent the admission of moisture.

4.5.1.4

The distribution fuse boards shall be located as near as possible to the center of the load they are intended to control.

4.5.1.5

All main switches shall be of metal clad enclosed pattern, which shall be fixed at close proximity to the point of entry of supply.

4.5.1.6

Main and branch distribution boards shall be in accordance with Indian standard 732-1963 "code of practice for electrical wiring installation".

4.5.1.7

PVC conduit wiring system should be adopted through out and all conduit pipes/channel shall be conforming to latest IS.

4.5.1.8

Approved and good quality copper wire with adequate current carrying capacity/voltage rating with proper insulation as per IS should be used for the entire electrical wiring/installation.

4.5.1.9

The service connection from outside mains to the switchboard inside the building shall also be carried out by the contractor

4.6.2 Earthing

4.6.2.1

All earthing system shall be in accordance with IS: 3043-1966 "code of practice for earthing".

4.6.2.2

The installation and earthing shall generally be carried out in accordance with the Indian electricity rules 1956 as amended from time to time and the relevant regulations of the electricity supply authority concerned.

4.6.2.3

All plugs and sockets shall be of three-pin type, one of the pins being connected to earth.

4.6.2.4

Bodies of all electrical appliances shall be earthed by the use of three pin plugs. The covers of the regulators if of metallic construction, shall be earthed by means of a separate earth wire. A separate earth wire shall be used for earthing these appliances.

4.6.2.5

All earth wires and earth continuity conductors shall be of copper/-galvanized iron. They shall be either stranded or solid bars of flat rectangular strips and may be bared, provided, due care is taken to avoid corrosion and mechanical damage to it. Inter connections of earth continuity conductors and main and branch earth wires shall be made in such a way that reliable and good electrical connections are permanently ensured.

4.6.2.6

The neutral conductor shall not be used as earth wire.

4.6.2.7

Welded, bolted and clamped joints only are permissible. For stranded conductor, sleeve connectors are permissible. Bolted connectors and their screws shall be protected against any possible corrosion.

4.6.2.8

The path of the earth wire shall, as far as possible, be out of reach of any person and shall be visible for inspection.

4.6.2.9

The galvanized iron pipe electrodes shall not be smaller than 38mm internal diameter and shall not be less than 3.5M. In length and shall, as far as possible, be embedded below permanent moisture level and shall be one piece only without any joints.

4.6.2.10 Dewatering : It is the responsibility of the contractor to engage sufficient dewatering pump (Diesel, electrically operated) of adequate capacity for dewatering of sub-soil, rain water from excavated pit and other localized area and keep the area dry and workable till completion of entire work within their quoted rate.

4.6.3 GENERAL NOTES FOR STEEL DOOR, WINDOWS, AND VENTILATORS

4.6.3.1 STEEL/ IRON WORK

Steel Door: - Pressed steel doors as per standard specification, relevant IS code and sizes shall be supplied along with frames and fixed with suitable hold fasts, furniture and fittings.

Steel Window: - All steel Windows shall be supplied and fixed as per standard specifications, relevant IS code and instructions of Engineer-in-charge with all furniture, fittings, holdfasts etc. Complete.

Steel ventilators: - All steel ventilators shall be supplied and fixed as per standard specifications, relevant IS code and instructions of Engineer-in-charge with all furniture, fittings, holdfasts etc. Complete.

Rolling shutters (as per IS 6248):- All the rolling shutters as per standard specifications/IS code and drawings and as instructed by engineer-in-charge shall be supplied and fixed with all accessories and fittings for easy mechanical operation from inside and outside. The rolling shutters shall be manufactured with adequate thickness to avoid any damage/buckling due to heavy wind or storm.

Contractor shall arrange for shop inspection for all steel doors, windows, rolling shutters & trusses etc. if fabricated outside the plant. before delivery at site for engineer's clearance.

4.6.3.2

PAINTING

All the steel items such as door, windows, ventilators, roof trusses, columns, purlins etc. shall be supplied with one coat of red oxide primer; two coats of synthetic enamel paint of approved color and quality shall be applied after fixing in position to achieve uniform finishing. Rates shall be quoted taking into account cost of painting for woodwork, steel work etc.

4.6.3.3

Three coats of white/color washing shall be provided uniformly on all wall surfaces as per IS specification.

4.6.3.4

PVC water tank of Sintex or any approved make shall be supplied and erected on brick pillars or steel staging and to be constructed on location shown as per item rate given in rate schedule.

4.7 Specification of roofing structure for storage sheds.

4.7.1 General

4.7.1.1

This specification covers the roofing structure of store shed. The walls of the above sheds shall be constructed in masonry providing all doors and windows. Pre-fabricated tubular/structural steel trusses shall directly rest on the RCC columns with suitable arrangements of bolting.

4.7.1.2

The scope under this specification shall cover trusses with tubular (**CLASS B-MEDIUM QUALITY**) /structural steel made up of MS rolled sections, purlins, batten tie runners, and fixing bolts for trusses. AC ridges and AC sheets for roofing complete with J-bolts, I-bolts, and gutters and down pipe etc. Any other item not specifically mentioned but required for completion of the structure shall be deemed to have been included in this specification.

4.7.1.3

The trusses shall be tubular (**CLASS B-MEDIUM QUALITY**), fabricated in pieces of convenient length for transportation by truck and speedy erection at site. The base plates shall be welded to the trusses for fixing/resting the same on RCC columns. Suitable cleats or fixing plates shall be provided on the trusses for holding the purlins and the bottom tie runners. Bolts shall be fixed in RCC columns by using templates for fixing truss. These foundation bolts shall be paid under structural items of rate schedule whereas base plates, clits etc. fixed with truss shall be paid under tonnage of truss only. No separate payment shall be made for templates. Work shall be done as per BHEL Drawings.

4.7.1.4

The purlins and bottom tie runners shall be of structural steel sections or steel tubes of adequate size to give proper strength and rigidity. 6mm thick corrugated AC sheets and AC ridges shall be used for the roof of the shed. The sheet shall be of standard size for trusses, AC ridges and AC sheets for roofing complete and shall conform to IS 459. The sheets shall be fixed to purlins with galvanized J or I bolts. GI cup washers and bitumen washers shall be provided where holes are made in AC sheets to prevent any water leakages,. Fly strips shall be provided over the AC sheets for additional protection against storms. Providing & fixing 'J' bolts, washers etc. shall be a part of AC sheet fixing & no separate weight shall be paid for this.

4.7.1.5

All the bolts, nuts and washers supplied for the assembly of the structure shall be hot dipped galvanized and of metric sizes. All the members shall be given two coats of anti-rust red oxide primer paint after proper cleaning of the surface.

4.7.1.6

All the members of the structure shall be of standard dimensions and shall provide complete flexibility for assembling in the required number of days. The expansion of the structure in lengthwise direction shall be possible with minimum dismantling of the existing members.

4.8 Providing & laying of pipelines for Water supply to storage shed as well as for construction purpose:

Jhabua power Ltd. (Customer) will provide construction water and drinking water supply at single point (**approx. 300m**) inside the plant free of cost. Main supply pipe line of 40mm dia. GI pipe shall be laid up to the Overhead water tank near porta cabin office location for water supply to BHEL office premises. Internal plumbing if any shall be done in BHEL Store office toilet blocks as per requirement through 25mm/20mm/ 15mm dia GI pipes as per requirement. However contractor has to arrange tankers or further distribution pipeline up to the work site for Construction purpose from this point within their quoted rates. The water required for the commencement the civil activity before arranging water supply line from customer point shall be arranged by contractor within their quoted rate.

4.9 Prior Approval from BHEL Engineer

Contractor shall take prior approval from BHEL Engineer for use of Sanitary items , AC sheets ,Overhead water tanks ,Doors, Windows ,**Type of Cement (OPC/PPC)**, Brick, Steel and for other items as specified in respective items description and necessary **manufacturer's test certificate (MTC)** and laboratory test as required by BHEL shall be arranged by contractor within their quoted rate.

4.10

BIDDERS MUST SUBMIT ALL RELEVANT DOCUMENT AS PER THIS TENDER SPECIFICATION AND AS PER QUALIFYING REQUIREMENT (QR) OF NIT. BIDDER MUST VISIT OUR WEB SITE www.bhel.com FOR NIT, TECHNICAL SPECIFICATION, BOQ, AMENDMENTS ETC TO KEEP UPDATED FOR ANY CHANGES/ AMENDMENTS. INCOMPLETE DOCUMENT SUBMITTED BY BIDDER SHALL NOT BE CONSIDER FOR EVALUATION .

SECTION-5

SPECIAL CONDITIONS OF CONTRACT

OBLIGATIONS OF THE CONTRACTOR (SITE OFFICE, STORES, LABOUR COLONY, TOOLS & TACKLES, MEASURING AND MONITORING DEVICES, MATERIALS, CONSUMABLES, CONSTRUCTION POWER & WATER ,Taxes duties etc.)

5.1 CONSTRUCTION OF SITE OFFICE, STORES, ACCOMODATION FOR LABOURER AND STAFF:

Space for construction of contractor's site office, stores will be provided by BHEL's / customer free of charge within the project area. Construction of Contractor's site office and stores shall be done by contractor as per their requirement at their own cost.

All the temporary constructions like Contractor's Office, Contractor's Stores etc. shall be dismantled & area shall be handed over to BHEL/Client duly cleared of all the debris on completion of the contracted work. In the event of his failure to do so, the same will be done by BHEL at the risk and cost of the contractor. The decision of BHEL engineer in this regard is final.

However open space may be provided by **JHABUA POWER LTD./ BHEL** outside of the plant at about 5 KM. from main entry gate on availability free of charge on request of the contractor for construction of labour colony . Contractor shall construct suitable labor colony including toilet blocks & maintain it throughout the contract period to avoid the nuisance.

Electricity for labour colony shall be on chargeable basis and provided at one point. However further distribution shall be done by contractor at their cost. Water will be provided by JHABUA POWER LTD. / BHEL free of cost at one point and Contractor has to make suitable arrangement at their own cost.

LABOUR COLONY

LAND: Free Of Charge, Provided At About 5 Km From Main Entry Gate. (Approx – 10000 SQM)

POWER: On Chargeable Basis, Provided At About One point. However further distribution shall be done by contractor at their cost.

WATER: Free Of Charge, Provided At About One point. However further distribution shall be done by contractor at their cost.

5.2 TOOLS AND TACKLES

5.2.1

All tools and tackles required for the work have to be arranged by the contractor.

5.2.2

All tools and tackles to be procured and used for the work shall have the prior approval of BHEL engineer in regard to brand, quality and specification.

5.2.3

The contractor shall provide all the necessary scaffolding materials, temporary structures and necessary safety devices etc.

5.2.4

Contractor shall maintain and operate his tools and plants in such a way that major breakdowns are avoided. In the event of major breakdown, contractor shall make alternate arrangements expeditiously so that the progress of work is not hampered.

5.2.5

In the event of contractor failing to arrange the required tools, plants, machinery, equipment, material and non-availability of the same owing to breakdown, BHEL will resort to hiring out the same from outside agencies or may provide their equipment if available or may resort to buying of equipment/material at the cost of contractor. Full cost of equipment/hire charges/ rental charges along with departmental overheads will be charged to the contractor.

5.2.6

The T&P to be arranged by the contractor shall be in proper working condition. The operation shall not lead to unsafe conditions. The movements of derricks and other equipment should be such that no damage/breaking occurs to foundation, equipment, material and men.

5.2.7

For full welding of structures, only welding generators shall be used. The use of welding transformers will be subject to the approval of BHEL engineer.

5.2.8

Contractor to arrange necessary dewatering pumps, concrete mixers, vibrators etc.

5.3 MEASURING AND MONITORING DEVICES (MMD)

BHEL, Power Sector- Western Region (PS-WR) has already been accredited with ISO 9000 certification and as such this work is subject to various audits to meet ISO 9000 requirements. One particular aspect, which needs special attention, is about calibration of MMD deployed by the contractor. Contractor shall ensure deployment of reliable and calibrated MMD. All the MMD shall have calibration certificates from accredited laboratories traceable to National/International standards. Retesting/recalibration shall also be arranged at prescribed intervals during the period of use as advised by BHEL engineer within the contract price. The contractor will also have alternate arrangements for such MMD so that work does not suffer when the particular equipment/instrument is sent for calibration. Also if any items not found fit for use, BHEL shall have the right to stop the use of such item forthwith and instruct the contractor to deploy proper MMD. Repeat measurements shall have to be taken by a valid and proper MMD for those parameters measured with a non-acceptable MMD, failing which BHEL will deploy MMD and retake the readings at contractor's cost.

5.4 MATERIALS

All the materials necessary for the entire work like cement, all types of steel, tubular/structural trusses, coarse & fine aggregates, bricks, doors, windows, ventilators, rolling shutters, structural members, foundation bolts, MS bars, sanitary fittings, painting materials, AC sheets, Plywood materials, Rails, Putty, necessary wood materials, electrical fittings and wiring material and all other material required for the entire job shall be supplied by the contractor as per the specification mentioned in the Tender Specifications/Indian Standards. The contractor is required to quote their rates inclusive of cost of all materials etc. All these materials shall be inspected by BHEL before these are used for the work. Materials not found satisfactory by BHEL shall be rejected and removed forthwith by the Contractor.

5.5 CONSUMABLES

5.5.1

The contractor shall provide all consumables required for carrying out the work covered under this scope of work & rate quoted shall be inclusive of all those things.

5.5.2

All consumables to be procured and used for the work shall have prior approval of BHEL engineer in regard to brand and quality specification.

5.5.3 ELECTRODES AND GASES

5.5.3.1

Contractor at his cost as approved by BHEL shall arrange all the required electrodes. It shall be the responsibility of the contractor to obtain prior approval of BHEL, before procurement regarding suppliers, type of electrodes etc. On receipt of the electrodes at site, it shall be subject to inspection and approval by BHEL details regarding type of electrodes, batch number and date of expiry etc.

BHEL reserves the right to reject the use of any electrodes at any state, if found defective because of bad quality, improper storage, quality date expiry, unapproved type of electrodes etc. It shall be the responsibility of the contractor to replace at his cost without loss of time.

5.5.3.2

All the required gases like Oxygen, Acetylene, etc. will be provided by the contractor at his cost.

5.5.3.3

If at any time during the execution of work, it is noticed that the work is suffering on account of non-availability of consumables from the contractor's side like electrodes, gases and other materials, then, BHEL will make alternate arrangements and the necessary costs with overheads at 30% will be recovered from the running bills of the contractor.

5.6 POWER AND WATER FOR CONSTRUCTION

5.6.1

A) Construction Power: Construction power of 3phase, 415V, 50HZ will be provided by **Customer** free of cost at a single point from their available feeder within the plant area at a distance of approx. **300m**. Cabling as required for drawing the power up to work site shall be paid under relevant item of BOQ. Further Distribution from main DB to contractor's site office, fabrication yard shall be done by contractor at their own cost including fixing of energy meter. During non-availability of power, contractor has to arrange power through adequate DG sets at their cost. Adequate arrangement for diesel/petrol engine powered Concrete mixer, vibrator and other construction machinery shall be made by contractor to ensure uninterrupted work. However, necessary taxes and levies as imposed by M/s **JHABUA POWER LTD.** have to be borne by contractor and the quoted rates deemed to have included all this things. Cabling for BHEL store Office shed / porta cabin office from main feeder shall be paid under relevant item available from **Section A to Section J**

All temporary wiring must comply with local regulations and will be subjected to Engineer's inspection and approval before connecting to supply point.

B) Construction Water - As per clause no. 4.8

5.7 OTHER IMPORTANT TERMS AND CONDITIONS

5.7.0 TAXES, DUTIES, LEVIES

5.7.0

Refer to Clause 2.8.4 of General Conditions of Contract. Notwithstanding anything contained therein, the following provisions shall be applicable for this contract.

5.7.1

The contractor shall pay all (save the specific exclusions as enumerated in this contract) taxes, fees, license charges, deposits, duties, tools, royalty, VAT/WCT, commissions or other charges which may be levied on the input goods & services consumed and output goods & services delivered in course of his operations in executing the contract. In case BHEL is forced to pay any of such taxes, BHEL shall have the right to recover the same from his bills or otherwise as deemed fit (**i.e. rate quoted by bidder shall be inclusive of all Taxes and Duties, VAT/WCT except Service Tax**).

However, provisions regarding Service Tax on output services and goods shall be as per following clauses.

5.7.2 Service Tax & Cess on Service Tax

Service Tax and Cess on Service Tax as applicable on output Services are excluded from contractor's scope; therefore contractor's price/rates shall be **exclusive** of Service Tax and Cess on Output Services. In case, it becomes mandatory for the contractor under provisions of relevant act/law to collect the Service Tax & Cess from BHEL and deposit the same with the concerned tax authorities, such applicable amount will be paid by BHEL.

Contractor shall submit to BHEL documentary evidence of Service Tax registration certificate specifying name of services covered under this contract. Contractor shall submit serially numbered Service Tax and Cess Invoice, signed by him or a person authorized by him in respect of taxable service provided, and shall contain the following, namely,

- I. The name, address and the registration number of the contractor,**
- II. The name and address of the party receiving taxable service,**
- III. Description, classification and value of taxable service provided and,**
- IV. The service tax payable thereon.**

All the four conditions shall be fulfilled in the invoice before release of service tax payment. **Contractor shall obtain prior written consent from BHEL before billing the amount towards such taxes.**

With introduction of Cenvat Credit Rules 2004, which came into force w.e.f. 10.09.2004, Excise Duty paid on Input Goods including Capital Goods and Service Tax paid on Input Services that are used for providing the output services can be taken credit of against the Service Tax payable on output services. However BHEL may opt for availing the abatement provision in which case cenvat credit may not be available on input duty.

5.7.3 Modalities of Tax Incidence on BHEL

Wherever the relevant tax laws permit more than one option or methodology for discharging the liability of tax/levy/duty, BHEL will have the right to adopt the appropriate one considering the amount of tax liability on BHEL/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by BHEL shall be binding on the Contractor for discharging the obligation of BHEL in respect of the tax liability to the Contractor.

5.7.4 New Taxes/Levies

In case the Government imposes any new levy/tax on the output service/goods/work after award of the contract, the same shall be reimbursed by BHEL at actual.

In case any new tax/levy/duty etc. becomes applicable after the date of Bidder's offer, the Bidder/Contractor must convey its impact on his price duly substantiated by documentary evidence in support of the same **before opening of Price Bid**. Claim for any such impact after opening the Price Bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.

No reimbursement/recovery on account of increase/reduction in the rate of taxes, levies, duties etc. on input goods/services/work shall be made. Such impact shall be taken care of by the Price Variation/Adjustment Clause (PVC) if any. In case PVC is not applicable for the contract, Bidder has to make his own assessment of the impact of future variation if any, in rates of taxes/duties/ levies etc. in his price bid.

5.8.0 SUBMISSION OF PERIODICAL REPORTS

CONTRACTOR SHALL SUBMIT PERIODICAL REPORTS IN RESPECT OF FOLLOWING ASPECTS OF OPERATION:

1. CONSUMPTION OF CONSTRUCTION POWER
2. AVAILABILITY AND UTILIZATION OF BHEL'S CRANES (IF ANY)
3. MANPOWER REPORTS - DAILY
4. PROGRESS REPORTS - DAILY
5. CALIBRATION REPORTS OF INSTRUMENTS
6. RECORD OF WAGES PAYMENT, PF REMMITANCES
7. RECONCILIATION OF BHEL SUPPLIED MATERIALS – MONTHLY
8. ACCIDENT REPORT (IF ANY) WITHIN 24 HRS.

BHEL AT SITE WILL INFORM FORMATS FOR THESE REPORTS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ARRANGE GATE PASS FOR ALL HIS EMPLOYEES, T&P ETC. NECESSARY COORDINATION WITH CUSTOMER OFFICIALS IS THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR TO FOLLOW ALL THE PROCEDURES LAID DOWN BY THE CUSTOMER FOR MAKING GATE PASSES. WHERE PERMITTED, BY CUSTOMER/BHEL, TO WORK BEYOND NORMAL WORKING HOURS, THE CONTRACTOR SHALL ARRANGE NECESSARY WORK PERMIT FOR WORKING BEYOND NORMAL WORKING HOURS.

5.8.1 THE SCOPE OF WORK UNDER THIS CONTRACT IS DEEMED TO BE COMPLETE ONLY WHEN SO CERTIFIED BY THE ENGINEER INCHARGE OF BHEL.

5.9.0 INSURANCE:

(A) BHEL SHALL ARRANGE INSURANCE COVERAGE FOR THE MATERIALS AND PROPERTIES OF BHEL/CUSTOMER COVERING THE RISKS DURING TRANSIT, STORAGE, ERECTION AND COMMISSIONING.

(B) THE CONTRACTOR HAS TO ARRANGE ON HIS OWN, INSURANCE FOR ALL MATERIALS LIKE CEMENT AND OTHER BOUGHT OUT ITEMS, AND FOR THEIR ALL T & P AND OTHER FIXED ASSETS WHICH THEY MAY HAVE TO ACQUIRE AND DEPLOY AT SITE. IT IS ALSO THE RESPONSIBILITY OF THE CONTRACTOR TO ARRANGE FOR ACCIDENT RISK POLICY/WORKMEN COMPENSATION POLICY. THE CONTRACTOR HAS TO ARRANGE ON HIS OWN INSURANCE FOR THEIR SUPPLIED MATERIALS LIKE CEMENT,AND OTHER VALUABLE BUILDING MATERIALS DURING ITS TRANSPORT, STORAGE, TILL IT GOES TO THE PERMANENT WORK.

(C)

IT IS THE ENTIRE RESPONSIBILITY OF THE CONTRACTOR TO INSURE HIS WORKMEN AGAINST ACCIDENT AND INJURY WHILE AT WORK AS REQUIRED BY THE RELEVANT RULES AND TO PAY COMPENSATION, IF ANY, TO THEIR WORKMEN AS PER WORKMEN'S COMPENSATION ACT. THE CONTRACTOR HAS ALSO TO INSURE HIS STAFF AGAINST ACCIDENT/INJURY. THE CONTRACTOR HAS TO TAKE INSURANCE COVER FOR HIS TOOLS AND PLANTS, ASSETS ETC.(D) THESE INSURANCE COVERS HAVE TO BE TAKEN PRIOR TO START OF HIS WORK AT THE SUBJECT PROJECT AND HE SHALL MAKE AVAILABLE THE POLICY TO BHEL SITE IN-CHARGE FOR NECESSARY VERIFICATION BEFORE COMMENCEMENT OF WORK. HOWEVER, IRRESPECTIVE OF SUCH VERIFICATION/ACCEPTANCE, THE SOLE RESPONSIBILITY TO MAINTAIN ADEQUATE INSURANCE COVER FOR HIS WORKMEN, T&P, ASSETS ETC. AT ALL TIMES DURING THE PERIOD OF CONTRACT SHALL LIE WITH THE CONTRACTOR. REGARDING THE AFORESAID INSURANCE COVER, THE CONTRACTOR SHALL DIRECTLY DEAL WITH THE INSURANCE COMPANY FOR ALL MATTERS REGARDING THE INSURANCE IN HIS SCOPE.

SECTION-6

SPECIAL CONDITIONS OF CONTRACT

6.0 CONTRACTOR'S OBLIGATION WITH REGARD TO EMPLOYMENT OF SUPERVISORY STAFF AND WORKMEN

6.1 SUPERVISORY STAFF AND LABOUR

6.1.1

The contractor shall supply all the skilled/unskilled labour, gas cutters, riggers, sarongs, erectors, carpenters, fitters and electricians, masons, plumbers etc. BHEL reserves the right to decide on the suitability of the workers and other personnel who will be employed by the contractor. BHEL reserves the right to insist on removal of any employee of the contractor at any time if he is found to be unsuitable and the contractor shall forthwith remove him.

6.1.2

It is the responsibility of the contractor to engage his workmen in shifts and or on overtime basis for achieving the target set by BHEL. This target may be set to suit BHEL's commitments to its customer or to advance date of completion of events or due to other reasons. The decision of BHEL in regard to setting the erection targets will be final and binding on the contractor.

6.1.3

Contractor shall employ only qualified and experienced engineers/supervisors for this job. They shall have professional approach in executing the work having adequate knowledge and experience in the fields. Contractor shall give an organization chart indicating the staffing pattern.

6.1.4

The contractor shall engage all the unskilled, skilled and specially skilled labourer including brick masons, carpenters, plumbers, electricians, fabricators and fitters etc. and supervisory staff. Only trained and competent personnel with previous experience in the job shall be employed. However, BHEL reserves the right to decide on the suitability of the workers and other personnel who will be employed by the contractor. BHEL reserves the right to insist on removal of any employee of the contractor at any time, if they found him unsuitable. The contractor shall be bound to follow the instruction of BHEL.

6.2 INDUSTRIAL RELATIONS AND LABOUR LAWS

6.2.1

An industrial relations supervisor shall coordinate for the implementation of local labour laws, maintenance of records as required by contract labour (regulation and abolition act) and also coordinate with the local labour authorities. Contractor has to ensure minimum wages payment to their labours as per the rule of the state and they have to produce documentary evidence to that effect to BHEL.

6.2.2

Contractor shall provide the names and details of Engineer/ Supervisors at the time of mobilization to BHEL as per the proposed organization chart.

6.2.3

In case at any time the contractor is not in a position to deploy the required Engineers/Supervisors due to any reason, BHEL shall have the option to deploy their Engineers/supervisors. The expenditure incurred with overheads on this account will be recovered from the contractor's bills.

6.2.4

The contractor's supervisory staff shall execute the work in the most substantial and workmanlike manner in the stipulated time. Accuracy of work and aesthetic finish are essential part of this contract. They shall be responsible to ensure that the assembly and workmanship conform to dimensions and tolerances given in the drawings/ instructions given by BHEL Engineer from time to time.

6.2.5

The supervisory staff employed by the contractor shall ensure proper outturn of work and discipline on the part of the labour put on the job by the contractor and in general, see that the works are carried out in a safe and proper manner and in coordination with other labour and staff employed directly by BHEL or other contractors of BHEL or BHEL's Client.

6.2.6

Contractor will deduct the necessary amount from his employees towards provident fund and contribute the equal amount as per Government of India rules. This amount will be deposited regularly to the Provident Fund Commissioner and an account code obtained. Contractor shall submit the above account code duly certified by PF Commissioner to BHEL project in-charge. Also all other employees' benefits are to be borne by the contractor as per statutory laws.

6.2.7

The contractor shall obtain independent Labour License under the Contract Labour (regulation and abolition) Act from the concerned authorities based on the certificate (form-V) issued by the principal employer/customer.

6.2.8

The contractor shall pay for all taxes, fees, license charges, local body clearance, duties, tools, royalty, commissions and other charges, Gate passes which may be leviable on account of his operation in executing the contract. In case BHEL is forced to make any such payments, BHEL shall have the right to recover the same from Contractor's bills.

SECTION-7

SPECIAL CONDITIONS OF CONTRACT

OBLIGATIONS OF BHEL

FACILITIES PROVIDED BY BHEL

7.1.1 SPACE FOR CONTRACTOR'S SITE OFFICE, STORES AND LABOUR COLONY:

As per Section - 5

7.1.2 CONSTRUCTION POWER AND WATER

Construction Power :,(As per Section - 5)

Water for Construction: As specified in Section –4 & Section – 5

TOOLS & PLANTS

BHEL will **NOT** provide any Tools & Plants for this work.

CONSUMABLES AND MATERIALS

BHEL will **NOT** provide any Consumables and Materials for this work.

SECTION-8
SPECIAL CONDITIONS OF CONTRACT

Inspection / Quality Assurance / Quality Control / Statutory Inspection

- 8.1** Various inspection/quality control/quality assurance procedures /methods at various stages of erection and commissioning will be as per BHEL quality control procedure/codes and other statutory provisions and as per BHEL engineer's instructions.
- 8.2** Preparation of quality assurance log sheets and protocols with's engineers, welding logs and other quality control and quality assurance documentation as per BHEL engineer's instructions, is within the scope of work/specification.
- 8.3** A daily logbook should be maintained by every supervisor/ engineer of contractor on the job in duplicate (one for BHEL and one for contractor) for detailing and incorporating alignment/ clearance/ centering/leveling readings and inspection details of various equipments, structures, piping, and others.
- Welding details like serial number of weld joints, welders name, date of welding, details of repair, heat treatment etc shall be documented in welding log as per BHEL engineer's instructions.
- 8.4** All the electrical/mechanical measuring and monitoring devices/ gauges, feeler gauges, height gauges, dial gauges, micrometers, precision levels, spirit levels, water level micrometers surface plates, straight edges, vernier calipers and all other measuring instruments shall be provided by the contractor for checking, leveling, alignment, centering etc Of the erected equipments at various stages.
- The instruments/gauges/tools etc provided should be of brand, quality and accuracy, specified by BHEL engineer and should have necessary calibration and other certificates as per the requirements of BHEL engineer.
- 8.5** In the course of erection, it may be necessary to re-check or counter check or finally check the work with instruments recently calibrated, recalibrated or of inspection grade gauge/tools or special measuring instruments. Such instruments whenever necessary will be provided by BHEL on specific authorization by BHEL engineer.
- 8.6** The instruments mentioned in clause 8.5 shall be drawn by the contractor from BHEL stores on the specific authorization and use the same on the specific job for the purpose of inspection/ rechecking/counter checking/ finally checking of the work and shall be returned to BHEL stores immediately on completion of the inspection.

- 8.7** Total quality is the watchword of the work and contractor shall strive to achieve the quality standards, procedures laid down by BHEL. He shall follow all the instructions as per BHEL drawings and quality standards. Contractor shall provide for the services of quality assurance engineer.
- 8.8** The welder's performance will be reviewed from time to time as per the BHEL standards and any welder not performing to the standards set by BHEL will be removed from working. Contractor shall arrange for the alternate welders immediately.
- 8.9** All the welders shall carry identity cards as per the pro forma prescribed by BHEL only welders duly authorized by BHEL shall be engaged on the work.
- 8.10** Contractor shall ensure speedy alignment and welding of all equipments erected by him soon after placement. Also all alignments, welding, NDT tests required for stage inspection shall be completed as per the quality assurance procedures.
- 8.11.1** Any minor rectification or minor repairs of defective work found at during stage inspection shall be rectified free of cost, by the contractor.
- 8.11.2** Any major rectification or major repair/major rework of defective work, found out during stage inspection as per clause 8.11, but not attributable to contractor shall also be carried out. Claims of contractor, if any, shall be governed as per clause 13.1 to 13.8.

Statutory Inspection

- 8.12.1** During the statutory inspection, contractor shall provide all the manpower assistance as per the requirement within their quoted rate. However, all other arrangements for visiting of statutory authorities at site including fee etc shall be borne by BHEL also refer section 5 in this regard.
- 8.13.0** BHEL, power sector- western region (PSWR) has already been accredited with ISO 9002 certification and as such this work is subject to various audits to meet ISO 9002 requirements. One particular aspect, which needs special mention, is about arrangement of calibration of instruments by the contractor. Contractor shall ensure deployment of reliable and calibrated MMD (measuring and monitoring devices). The MMD shall have test/calibration certificates from authorized/government approved/ accredited agencies traceable to national/international standards. Retesting/recalibration shall also be arranged at regular intervals during the period of use as advised by BHEL engineer within the contract price. The contractor will also have alternate arrangements for such MMD so that work does not suffer when the particular equipment/instrument is sent for re-calibration. Also if any MMD is not found fit for use, BHEL shall have the right to stop the use of such item and instruct the contractor to deploy proper item and recall i.e. Repeat the readings taken by that instrument, failing which BHEL may deploy MMD s and retake the readings at contractor's cost.

Section-9

Special Conditions

Safety, Occupational Health and Environmental Management

Introduction:-

BHEL PSWR has been certified for Environmental Management under ISO 14001:1996 standard and Occupational Health & Safety under OHSAS 18001 by DNV. In order to comply with the above standards, it shall be the endeavor of BHEL and all its subcontractors to meet and implement the requirements by following the guidelines issued under Environmental, Occupational Health and Safety Management (EHS) manual a copy of which will be available with the BHEL Site-in-charge.

Contractor shall also enter into a "Memorandum of Understanding" as given in clause 9.9 in case of award of contract.

Responsibility of The Contractor In Respect Of Safety Of Men, Equipment, Material And Environment.

The Contractor Shall abide by the Safety Regulations applicable for the Site/Project and in particular as mentioned in the booklet "Safe Work Practices" issued by BHEL. Contractors are also to ensure that their employees and workmen use safety equipments as stipulated in the Factories Act (Latest Revision) during the execution of the work. Failure to use safety equipment as required by BHEL Engineer will be a sufficient reason for issuance of memo, which shall become part of Safety evaluation of the contractor at the end of the Project. Also all site work may be suspended if it is found that the workmen are employing unsafe working practice and all the costs/losses incurred due to suspension of work shall be borne by contractor. A comprehensive list of National Standards from which the contractor can draw references for complying with various requirements under this section is given under 9.10

Hold BHEL harmless and indemnified from and against all claims, cost and charges under Workmen's Compensation Act 1923 and 1933 and any amendment thereof and the contractor shall be solely responsible for the same.

Abide by the Procedure governing entry/exit of the contractor's personnel within the Customer/Client premises. All the contractors employees shall be permitted to enter only on displaying of authorized Photo passes or any other documents as authorized by the Customer/Client.

Be fully responsible for the identity, conduct and integrity of the personnel/workers engaged by them for carrying out the contract work and ensure that none of them are ever engaged in any anti national activity

Prepare a sign board giving the following information and display it near the work site:

Name of Contractor

Name of Contractor Site-in-charge & Telephone number

Job Description in short

Date of start of job

Date of expected completion

Name of BHEL Site-in-charge.

Abide by the rules and regulations existing during the contract period as applicable for the contractors at the Project premises.

Observe the timings of work as advised by BHEL Engineer-in-charge for carrying out the contract work.

SPECIAL CONDITIONS

Safety

Safety Plan

Before commencing the work, contractor shall submit a “safety plan” to the authorized BHEL official. The safety plan shall indicate in detail the measures that would be taken by the contractor to ensure safety to men, equipment, material and environment during execution of the work. The plan shall take care to satisfy all requirements specified hereunder.

The contractor shall submit “safety plan” before start of work. During negotiations, before placing of work order and during execution of the contract, BHEL shall have right to review and suggest modifications in the safety plan. Contractor shall abide by BHEL’s decision in this respect.

The contractor shall take all necessary safety precautions and arrange for appropriate appliances and/or as per direction of BHEL or it’s authorized person to prevent loss of human lives, injuries to men engaged and damage to property and environment.

The contractor shall provide to his work force and also ensure the use of ***Personnel Protection Equipment (PPE)*** as found necessary and/or as directed and advised by BHEL officials without which permission is liable to be denied.

Safety helmets conforming to IS 2925/1984 (1990)

Safety belts conforming to IS 3521/1989

Safety shoes conforming to IS 1989 part-II /1986(1992)

Eye and face protection devices conforming to IS 2573/1986(1991), IS 6994 (1973), part-I (1991), IS 8807/1978 (1991), IS 8519/1977(1991).

Other job specific PPEs of standard ISI make as may be prescribed

All tools, tackles, lifting appliances, material handling equipment, scaffolds, cradles, cages, safety nets, ladders, equipment, etc used by the contractor shall be of safe design and construction. These shall be tested and certificate of fitness obtained before putting them to use and from time to time as instructed by authorized BHEL official who shall have the right to ban the use of any item found to be unsafe

All electrical equipment, connections and wiring for construction power, its distribution and use shall conform to the requirements of Indian Electricity Act and Rules. Only electricians licensed by the appropriate statutory authority shall be employed by the contractor to carryout all types of electrical works. All electrical appliances including portable electric tools used by the contractor shall have safe plugging system to source of power and be appropriately earthed.

The contractor shall not use any hand lamp energized by electric power with supply voltage of more than 24 volts. For work in confined spaces, lighting shall be arranged with power source of not more than 24 volts.

The contractor shall adopt all fire safety measures as per relevant Indian Standards

Where it becomes necessary to provide and/or store petroleum products, explosives, chemicals and liquid or gaseous fuel or any other substance that may cause fire or explosion, the contractor shall be responsible for carrying out such provisions and/or storage in accordance with the rules and regulations laid down by the relevant government acts, such as petroleum act, explosives act, petroleum and carbides of calcium manual of the chief controller of explosives, Government of India etc. The contractor in all such matters shall also take prior approval of the authorized BHEL official at the site.

Proper means of access must be used e.g. ladders, scaffolds, platforms etc. No makeshift access such as oil drums or pallets shall be used. Design of these will be in accordance with relevant standards and certified by competent persons before use.

Temporary arrangements made at Site for lifting , platforms, approach, access etc should be properly designed and approved before being put to use.

All excavations and openings must be securely and adequately

Fenced/barricaded and warning signs erected when considered Necessary as per relevant code of practice.

No persons shall remove guard rails, covers or protective devices unless authorized by a responsible supervisor and alternative precautions have been taken

Access ways, means of escape and fire exits shall be clearly marked, kept clear and unobstructed at all times

Only authorized persons holding relevant license will drive and operate site plant and equipments eg cranes, dumpers, excavators, transport vehicles etc

Only authorized personnel are allowed to repair, commission electrical equipments.

Gas cylinders shall be handled and stored as per Gas Cylinder Rules and relevant safe working practices

All wastes generated at Site shall be segregated and collected in a designated place so as to prevent spillage/contamination/scattering at Site, until the waste is lifted for disposal to designated disposal area as advised by BHEL official.

The contractor shall arrange at his cost (wherever not specified) appropriate illumination at all work spots for safe working when natural day light is not adequate for clear visibility.

The contractor shall train adequate number of workers/ supervisors for administering "FIRST AID". List of competent first aid administrators should be prominently displayed.

The contractor shall display at strategic places and in adequate numbers the following in fluorescent markings

Emergency telephone numbers

Exit, Walkways

Safe working load charts for wire ropes, slings, D shackles etc

Warning signs

The contractor shall be held responsible for any violation of statutory regulations (local, state or central) and BHEL instructions that may endanger safety of men, equipment, material and environment in his scope of work or other contractors or agencies. Cost of damage, if any, to life and property arising out of such violation of statutory regulations and BHEL instructions shall be borne by the contractor.

In case of a fatal or disabling injury/accident to any person at construction sites due to lapses by the contractor, the contractor as per statutory requirements shall compensate the victim and/or his/her dependents. However, if considered necessary, BHEL shall have the right to impose appropriate financial penalty on the contractor and recover the same from payments due to the contractor for suitably compensating the victim and/or his/her dependents. Before imposing any such penalty, appropriate enquiry shall be held by BHEL giving opportunity to the contractor to present his case.

In case of any damage to property due to lapses by the contractor, BHEL shall have the right to recover cost of such damages from payments due to the contractor after holding an appropriate enquiry.

In case of any delay in the completion of a job due to mishaps attributable to lapses by the contractor, BHEL shall have the right to recover cost of such delay from payments due to the contractor after notifying the contractor suitably and giving him opportunity to present his case.

If the contractor fails to improve the standards of safety in its operation to the satisfaction of BHEL after being given a reasonable opportunity to do so, and/or if the contractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions regarding safety issued by the authorized BHEL official, BHEL shall have the right to take corrective steps at the risk and cost of the contractor after giving a notice of not less than seven days indicating the steps that would be taken by BHEL.

Emergency Response

BHEL will have an Emergency Response Plan for each Project Site in consultation with the Owner as the case may be, detailing the procedure for mobilization of personnel and equipment, and defining the responsibilities of the personnel indicated, in order to prepare for any emergency that may arise in order to ensure the priorities of
Safeguard of life

Protect assets under construction or neighboring
Protect environment
Resumption of normal operations as soon as the emergency condition is called off

All Contractors shall also be part of the Emergency response Plan and the personnel so nominated shall be aware of their duties and responsibilities in an emergency response situation.

At least 5% Contractors supervisors and workmen shall undergo training in administering 'First Aid'. The trained persons should represent for all categories of work and for all areas of work. Adequate number of trained persons should be available for each shift. These first aiders shall be included in the emergency response team. Contractor employees and workmen are encouraged to participate in first aid training programmes whenever organized by BHEL.

OCCUPATIONAL HEALTH

Specific occupational health hazards will be identified through the hazard evaluation processes in consultation with BHEL engineers and the necessary prevention/reduction/elimination methods implemented.

All personnel working in an activity with a potential risk to health shall be made aware of all those risks and the actions they must take to reduce/control/eliminate the risk

Safety coordinator shall conduct periodic checks to ensure that every group of workers engaged in similar activities are aware of potential risks to health and the actions required to be taken to mitigate the risk

In order to protect personnel from associated health hazards, the following main areas will be focused

Issue of approved Personnel Protective Equipment

Verification that the PPEs are adequate/maintained and worn by all staff involved in operations that are potentially hazardous to their health

Ensure that the personnel deployed are physically fit for the operation/work concerned

Provide hygienic and sanitary working conditions

Contractor workers employees engaged in noise risk areas shall be issued with hearing protection aids and the use of the same will be enforced. Further, these workers will be educated on the hazards of noise

Contractor workers engaged in dust environment shall be issued with necessary dust protection aids and the use of the same shall be enforced

Workers engaged in exposure to bright light/rays as in welding or radiation shall be issued with eye protection devices and the use of the same shall be enforced

Adequate arrangements shall be made to provide safe drinking water

Health monitoring records on at least sample basis for contractor employees & workmen shall be maintained for persons engaged in specified categories of work. These shall include

Noise induced hearing loss
Lung Function test
Ergonomic Test
Eye Test for Welders, Grinders, Drivers etc

HYGIENE AND HOUSEKEEPING

Good house keeping and proper hygiene is one of the key requirements of Occupational Health Safety and Environment management. Towards this the contractor shall encourage his workers and supervisors to maintain cleanliness in their area of work.

The Contractor shall arrange to place waste bins/chutes at convenient locations for the collection of scrap and other wastes. The bins shall be clearly marked and segregated for metal, non-metal, hazardous and non hazardous wastes.

BHEL may take up appropriate remedial measures at the cost of the contractors if the contractors fail good house keeping and if there is an imminent risk of pollution

ENVIRONMENT MANAGEMENT

BHEL has a sound environmental management system, which is to be maintained and implemented by all the contractors. The system allows for project specific objectives to be set and developed sensitive to Client requirements, applicable environmental legislation and BHEL's own objectives and policy. BHEL engineers will assess and monitor the environmental impact of their work and lay out objectives for their minimization. The contractors shall implement the objectives for continual improvement of environmental performance. BHEL shall regularly audit environmental impacts and their improvements.

WASTE MANAGEMENT

The objective of waste management is to ensure the safe and responsible disposal of waste, ensuring that it is correctly disposed of and being able to audit the process to ensure compliance.

Chemical wastes if any shall be collected separately and disposed of to BHEL designated refuse yard as per BHEL advice

No dangerous chemicals, noxious waste products or materials will be disposed off on or off site without approval obtained through BHEL.

All disposal of wastes generated during construction shall be in accordance with all relevant legislation.

Acid and alkali cleaning wastes shall be neutralized to acceptable norms before disposal to the designated area.

All necessary measures shall be taken to ensure safe collection and disposal of waste oils. In particular to ensure the prevention of their discharge into surface waters, ground waters, coastal waters or drainages

9.3 SUPERVISION

Contractor must provide at least one full time on site safety coordinator when the manpower engaged is in excess of 50 for the contract activities in the premises. If the manpower is less than 50, the on site safety coordination responsibilities shall be assumed by any one of the contractor's other supervisory staff; however in both the cases, the contractor must specify in writing the name of such persons to the BHEL Engineer in Charge .

Contractor's safety coordinator or his supervisor responsible for safety as the case may be shall conduct at his work site, and document formal safety inspection and audits at least once in a week. Such documents are to be submitted to BHEL Engineer in Charge for his review and record. Contractor, supervisor must attend all schedule safety meetings as would be intimated to him by the BHEL Engineer in Charge.

Before starting work under any contract, the contractor must ensure that a job specific safety procedures/field practices as required over and above the safety permit conditions are prepared and followed .He should also ensure that all supervisors and workers involved understand and follow this procedures /field practices.

Contractor must ensure that in his work site appropriate display boards are put displaying signs for site safety , potential hazards and precautions required

TRAINING & AWARENESS

Contractor shall deploy experienced supervisors and other manpower who are well conversant with the safety and environment regulations of the Project. The electricians to be deployed on the job should have wireman license.

All Supervisors & Workmen of the Contractor shall undergo Fire safety training/demonstration whenever arranged by BHEL with the help of either Customer's Fire and Safety department or outside faculty so as to acquire knowledge of fire prevention and also to be able to make use of appropriate fire extinguishers.

Contractor must familiarize himself from BHEL Engineer in Charge about all known potential fire, explosion or toxic release hazards related to the contract. He in turn will ensure that same information has been passed to the supervisors and workmen

Contractor must ensure that all his supervisors are properly trained and each employee has received and understood from his supervisor necessary training

and briefing about the safety requirement. Necessary document as a means to verify that employees have understood the training is to be maintained.

The contractor supervisors shall also give a small safety briefing to all the workmen under his charge before undertaking any new work and specially understand the safety requirements that are mandatory

REPORTING

The contractor shall submit report of all accidents, fires and property damage, dangerous occurrences to the authorised BHEL official immediately after such occurrence but in any case not later than twelve hours of the occurrence. Such report shall be furnished in the manner prescribed by BHEL and also to meet statutory requirement.

Any injury sustained by any of the contractor's employees within the Project premises must be reported to BHEL supervisor and FIRST AID should be immediately administered. The Contractor shall be responsible for keeping and maintaining proper records of Accidents to his personnel.

Contractor must arrange to immediately investigate, properly document and report any injury, accident or near miss involving any of his employees and take appropriate follow up action. He must furnish within 12 hours of the incident a written report to BHEL Engineer in charge and the Safety Section.

According to the Factory Act and the Employees state Insurance Act & regulation, any person sustaining any injury within the project premises and absenting himself from work for more than 46 hours, his accident report has to be sent to the respective Government Authorities. Therefore contractor shall inform the owner's representative such matter immediately for their needful action.

In addition, contractor shall submit periodic reports on safety to the authorised BHEL official from time to time as prescribed.

Before commencing the work, the contractor shall appoint/nominate a responsible officer to supervise implementation of all safety measures and liaison with his counterpart of BHEL.

AUDIT REVIEW AND INSPECTION

BHEL shall conduct audit on the contractor performance and compliance with the project specific requirements of the Environment and Occupational Health & Safety Management systems. The programme of audit shall cover all activities under the contract but will focus particularly on high-risk activities. The Construction Manager shall decide the schedule of audit. The audit findings shall be communicated to the contractors and necessary remedial action as advised by BHEL Engineers shall be under taken within the stipulated time.

Inspections shall be carried out regularly by the contractors and by BHEL Engineers on activities, facilities, equipment, and documentation, to cover the following aspects.

Compliance with procedures and systems
Availability, condition and use of PPEs
Condition of maintenance tools, equipments, facilities
Availability of fire fighting equipments and its condition
Use of fire fighting equipments and first aid kit
Awareness of occupational health hazard
Awareness of safe working practices
Presence of quality supervision
Housekeeping

The Safety Co-ordinator shall visit and inspect work sites daily. All unsafe acts, unsafe conditions that have imminent potential for causing harm/injury/damage will be immediately corrected. He shall maintain a daily logbook giving details of unsafe acts or conditions observed and the corrective action taken and recommendations for preventing recurrence. Adequacy of corrective actions will be verified

The contractor shall take remedial measures as per the findings of each inspection

Besides the above, the contractor shall be required to carry out the following inspections

Sl no	Equipment	Scope of inspection	Inspection by	Schedule
1	Hand tools	To identify unsafe/defective tool	User	Daily
2	Power tools	To identify unsafe/defective tool	User	Daily
3	Fire Extinguishers	To check pressure and any defect	User / Safety Coordinator	Daily Every month
4	Lifting equipment/tackles	To check for defects and efficacy of brakes	User Third party	Daily Every Year
5	PPE	To check for defects	User	Daily

NON COMPLIANCE:-

NONCONFORMITY OF SAFETY RULES AND SAFETY APPLIANCES WILL BE VIEWED SERIOUSLY AND THE BHEL HAS RIGHT TO IMPOSE FINES ON THE CONTRACTOR AS UNDER **for every instance of violation noticed:**

Sl. No.	Safety	Fine (in Rs)
01.	Not Wearing Safety Helmet	50/-
02.	Not wearing Safety Belt	100/-
03.	Grinding Without Goggles	50/-
04.	Not using 24 V Supply For Internal Work	500/-
05.	Electrical Plugs Not used for hand Machine	100/-
06.	Not Slings property	200/-
07.	Using Damaged Sling	200/-
08.	Lifting Cylinders Without Cage	500/-
09.	Not Using Proper Welding Cable With Lot of Joints And Not Insulated Property.	200/-
10.	Not Removing Small Scrap From Platforms	200/-
11.	Gas Cutting Without Taking Proper Precaution or Not Using Sheet Below Gas Cutting	200/-
12.	Not Maintaining Electric Winches Which are Operated Dangerously	500/-
13.	Improper Earthing Of Electrical T&Ps	500/-

Any other non-conformity noticed not listed above will also be fined as deemed fit by BHEL. The decision of BHEL engineer is final on the above. The amount will be deducted from running bills of the contractor. The amount collected above will be utilised for giving award to the employees who could avoid accident by following safety rules. Also the amount will be spent for purchasing the safety appliances and supporting the safety activity at site.

CITATION:- If safety record of the contractor in execution of the awarded job is to the satisfaction of safety department of BHEL, issue of an appropriate certificate to recognise the safety performance of the contractor may be considered by BHEL after completion of the job

Memorandum of Understanding

After Award Of Work, Contractors Are Required To Enter Into A Memorandum Of Understanding As Given Below:

Memorandum of Understanding

BHEL, PSWR is committed to Health, Safety and Environment Policy (EHS Policy) as given in the booklet titled “ Safe Working Practices” issued to all contractors.

M/s _____ do hereby also commit to the same EHS Policy while executing the Contract Number _____

M/s _____ shall ensure that safe work practices not limited to the above booklet are followed by all construction workers and supervisors. Spirit and content therein shall be reached to all workers and supervisors for compliance.

BHEL will be carrying out EHS audits twice a year and M/s _____ shall ensure to close any non-conformity observed/reported within fifteen days.

Signed by authorized representative of M/s-----

Name :

Place & Date:

Comprehensive list of National Standards for reference and use wherever applicable in the execution of Civil, Erection and Commissioning Contracts

IS No	YEAR	<i>Amd upto</i>	DESCRIPTION
IS 10204	1982		PORTABLE FIRE EXTINGUISHERS MECHANICAL FOAM TYPE
IS 10245	1994		SPECIFICATION FOR BREATHING APPARATUS
IS 10291	1982		SAFETY CODE FOR DRESS DRIVERS IN CIVIL ENGINEERING WORKS
IS 10658	1983		HIGHER CAPACITY DRY POWDER FIRE EXTINGUISHERS (TROLLEY MOUNTED)
IS 10662	1992		COLOUR TELEVISION
IS 10667	1983		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR PROTECTION OF FOOT AND LEG
IS 11037	1984		ELECTRONIC FAN REGULATORS
IS 11057	1984		INDUSTRIAL SAFETY NETS
IS 11451	1998		RECOMMENDATION FOR SAFETY AND HEALTH REQUIREMENT RELATING TO OCCUPATION EXPOSURE TO ASBESTOS
IS 1169	1967		PEDESTAL FANS
IS 1179	1967		SPECIFICATION FOR EQUIPMENT FOR EYE AND FACE PROTECTION DURING WELDING
IS 11833	1986		DRY POWDER FIRE EXTINGUISHERS FOR METAL FIRES
IS 11972	1987		CODE OF PRACTICE FOR SAFETY PRECAUTION TO BE TAKEN WHEN ENTERING A SEWAGE SYSTEM
IS 1287	1986		ELECTRIC TOASTER
IS 13063	1991		STRUCTURAL SAFETY OF BUILDINGS ON SHALLOW FOUNDATIONS ON ROCKS
IS 13385	1992		SPECIFICATIONS FOR FIRE EXTINGUISHERS 50 LITRE WHEEL MOUNTED WATER TYPE (GAS CARTRIDGES)
IS 13386	1992		SPECIFICATIONS FOR FIRE EXTINGUISHERS 50 LITRE MECHANICAL FOAM TYPE
IS 13415	1992		CODE OF SAFETY FOR PROTECTIVE BARRIERS

			IN AND AROUND BUILDINGS
IS 13416	1992		RECOMMENDATIONS FOR PREVENTIVE MEASURES AGAINST HAZARDS AT WORKING PLACE PART 1 TO PART 5
IS 13430	1992		CODE OF PRACTICE FOR SAFETY DURING ADDITIONAL CONSTRUCTION AND ALTERATION TO EXISTING BUILDINGS
IS 13849	1993		PORTABLE FIRE EXTINGUISHERS DRY POWDER TYPE (CONSTANT PRESSURE)
IS 1446	1985		CLASSIFICATION OF DANGEROUS GOODS (FIRST REVISION)
IS 1476	1979		REFRIGERATORS
IS 1641	1988		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS (GENERAL): GENERAL PRINCIPLES OF FIRE GRADING AND CLASSIFICATION
IS 1642	1989		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS- DETAILS OF CONSTRUCTION
IS 1643	1988		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS (GENERAL): EXPOSURE HAZARD
IS 1646	1997		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS (GENERAL): ELECTRICAL INSTALLATIONS
IS 1904	1986		CODE OF PRACTICE FOR DESIGN AND CONSTRUCTION OF FOUNDATIONS IN SOIL
IS 1905	1987		STRUCTURAL SAFETY OF BUILDINGS MASONARY WALLS
IS 2082	1985		ELECTRICAL GEYSERS
IS 2171	1985		PORTABLE FIRE EXTINGUISHERS DRY POWDER TYPE (CARTRIDGE)
IS 2309	1989		PRACTICE FOR THE PROTECTION OF BUILDINGS AND ALLIED BUILDINGS AGAINST LIGHTENING
IS 2312	1967		EXHAUST FANS
IS 2361	1994		SPECIFICATION FOR BUILDING GRIPS – FIRST REVISION
IS 2418	1977		TUBULAR FLUORSCENT LAMPS IS 2418 (FT-1)
IS 2750	1964		STEEL SCAFFOLDINGS
IS 2762	1964		SAFE WORKING LOADS IN KGS FOR WIRE ROPE SLINGS
IS 2878	1986		FIRE EXTINGUISHERS CARBON DIOXIDE TYPE (PORTABLE AND TROLLEY MOUNTED)
IS 2925	1984		SPECIFICATION FOR INDUSTRIAL SAFETY HELMETS
IS 3016	1982		CODE OF PRACTICE FOR FIRE PRECAUTIONS IN WELDING AND CUTTING OPERATIONS- FIRST REVISION
IS 3315	1974		DESERT COOLERS
IS 3521	1989		INDUSTRIAL SAFETY BELTS AND HARNESS
IS 368	1983		IMMERSION WATER HEATERS
IS 3696	1991		SAFETY CODE OF SCAFFOLDS AND LADDERS PART 1 TO 2

IS 3737	1996		LEATHER SAFETY BOOTS FOR WORKERS IN HEAVY METAL INDUSTRIES
IS 374	1979		CEILING FANS INCLUDING REGULATORS
IS 3764	1992		EXCAVATION WORK – CODE OF SAFETY
IS 3786	1983		METHOD FOR COMPUTATION OF FREQUENCY AND SEVERITY RATES FOR INDUSTRIAL INJURIES AND CLASSIFICATION OF INDUSTRIAL ACCIDENTS
IS 3935	1966		CODE OF PRACTICE FOR COMPOSITE CONSTRUCTION
IS 4014	1967		CODE OF PRACTICE FOR STEEL TUBULAR SCAFFOLDING
IS 4081	1986		SAFETY CODE FOR BLASTING AND RELATED DRILLING OPERATIONS
IS 4082	1977	1996	STACKING AND STORAGE OF CONSTRUCTION MATERIALS AND COMPONENTS AT SITE
IS 4130	1991		DEMOLITION OF BUILDINGS – CODE OF SAFETY PART 1 TO 2
IS 4138	1977		SAFETY CODE FOR WORKING IN COMPRESSED AIR (FIRST REVISION)
IS 4155	1966		GLOSSARY OF TERMS RELATING TO CHEMICAL AND RADIATION HAZARDS AND HAZARDOUS CHEMICALS
IS 4209	1967		CODE OF SAFETY FOR CHEMICAL LABORATORY
IS 4250	1980		FOOD MIXERS
IS 4262	1967		CODE OF SAFETY FOR SULFURIC ACID
IS 4756	1978		SAFETY CODE FOR TUNNELING WORK
IS 4912	1978		SAFETY REQUIREMENTS FOR FLOOR AND WALL OPENINGS, RAILINGS AND TOE BOARDS
IS 5121	1969		SAFETY CODE FOR PILING AND OTHER DEEP FOUNDATIONS
IS 5182	1969	1982	METHODS FOR MEASUREMENT OF AIR POLLUTION
IS 5184	1969		CODE OF SAFETY FOR HYDROFLUORIC ACID
IS 5216	1982	2000	RECOMMENDATIONS ON SAFETY PROCEDURES AND PRACTICE IN ELECTRICAL WORK PART I AND II
IS 555	1979		TABLE FANS
IS 5557	1995		INDUSTRIAL AND SAFETY LINED RUBBER BOOTS (SECOND REVISION)
IS 5916	1970		SAFETY CODE FOR CONSTRUCTION INVOLVING USE OF HOR BITUMINOUS MATERIALS
IS 5983	1980		SPECIFICATION FOR EYE PROTECTORS – FIRST REVISION
IS 6234	1986		PORTABLE FIRE EXTINGUISHERS WATER TYPE (STORED PRESSURE)
IS 692	1994		CRITERIA FOR SAFETY AND DESIGN OF STRUCTURES SUBJECTED TO UNDERGROUND BLASTS
IS 6994	1973		SPECIFICATION FOR SAFETY GLOVES

IS 7155	1986		CODE OF RECOMMENDED PRACTICE FOR CONVEYOR SAFETY (PART 1 TO 8)
IS 7205	1974		SAFETY CODE FOR ERECTION OF STRUCTURAL STEEL WORK
IS 7293	1974		SAFETY CODE FOR WORKING WITH CONSTRUCTION MACHINERY
IS 7323	1994		GUIDELINES FOR OPERATIONS OF RESERVOIRS
IS 7812	1975		CODE OF SAFETY FOR MERCURY
IS 7969	1975		SAFETY CODE FOR HANDLING AND STORAGE OF BUILDING MATERIALS
IS 8089	1976		CODE OF SAFE PRACTICE FOR LAYOUT OF OUTSIDE FACILITIES IN AN INDUSTRIAL PLANT
IS 8091	1976		CODE OF PRACTICE FOR INDUSTRIAL PLANT LAYOUT
IS 8095	1976		ACCIDENTS PREVENTION TAGS
IS 818	1968	1997	CODE OF PRACTICE FOR SAFETY AND HEALTH REQUIREMENTS IN ELECTRIC AND GAS WELDING, AND CUTTING OPERATIONS
IS 8448	1989		AUTOMATIC LINE VOLTAGE CORRECTOR (STABILISER)
IS 8519	1977		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR BODY PROTECTION
IS 8520	1977		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR EYE, FACE AND EAR PROTECTION
IS 875	1987		STRUCTURAL SAFETY OF BUILDING: LOADING STANDARD PART 1 TO 5
IS 8807	1978		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR PROTECTION OF ARMS AND HANDS
IS 8978	1985		INSTANTANEOUS WATER HEATERS
IS 8989	1978		SAFETY CODE FOR ERECTION OF CONCRETE FRAMED STRUCTURES
IS 940	1989		PORTABLE FIRE EXTINGUISHERS WATER TYPE (GAS CARTRIDGE)
IS 9457	1980		SAFETY COLOURS AND SIGNS
IS 9679	1980		CODE OF SAFETY FOR WORK ENVIRONMENTAL MONITORING
IS 9706	1997		CODE OF PRACTICE FOR THE CONSTRUCTION OF AERIAL RPEWAYS FOR THE TRANSPORTATION OF MATERIAL
IS 9759	1981		GUIDELINES FOR DEWATERING DURING CONSTRUCTION
IS 9815	1989		SERVO MOTOR OPERATED LINE VOLTAGE CORRECTOR (SERVO STABILISER)
IS 9944	1992		RECOMMENDATIONS ON SAFE WORKING LOAD FOR NATURAL AND MAN-MADE FIBRE ROPE SLINGS
IS 996	1979		SINGLE PHASE ELECTRIC MOTORS
ISO 3873	1977		SAFETY HELMET

SECTION-10
SPECIAL CONDITIONS OF CONTRACT

10.0 DRAWINGS AND DOCUMENTS

10.1

THE DETAILED DRAWINGS, WILL BE ISSUED TO THE CONTRACTOR DURING THE EXECUTION AT SITE. WORK SHALL BE CARRIED OUT AS PER THE “**RFC**” RELEASED FOR CONSTRUCTION DRAWINGS

10.2

TWO SETS OF NECESSARY DRAWINGS/DOCUMENTS TO CARRY OUT THE WORK WILL BE FURNISHED TO THE CONTRACTOR BY BHEL ON LOAN, WHICH SHALL BE RETURNED TO BHEL AFTER COMPLETION OF THE WORK. CONTRACTOR'S PERSONNEL SHALL TAKE CARE OF THESE DOCUMENTS GIVEN TO THEM.

10.3

The data furnished in various sections and appendices and the drawings enclosed with this tender specification describe the equipment to be installed, tested and commissioned under this specification, briefly. However, the changes in the design and in the quantity may be expected to occur as is usual in any such large scale of works.

10.4

If any error or ambiguity is discovered in the specification/information contained in the documents/drawings and tender, the contractor shall forthwith bring the same to the notice of BHEL before submission of offer.

10.5

In case an ambiguity is detected after award of work, the same must be brought to the notice of BHEL before commencement of the work/activity. BHEL's interpretation in such cases will be final and binding on the contractor.

SECTION-11

SPECIAL CONDITIONS OF CONTRACT

11.0 TIME SCHEDULE, MOBILIZATION, PROGRESS, PLANNING AND MONITORING, COMPLETION, AND VARIATIONS etc.

11.1

CONTRACTOR HAS TO MOBILISE THEIR MATERIALS, RESOURCES AND WORK FORCE SO AS TO START THE WORK **WITHIN 15 DAYS OF FAX/TELEGRAPHIC INTIMATION OF AWARD OF WORK**. FURTHER MOBILIZATION OF RESOURCES AND AUGMENTATION OF EXISTING RESOURCES SHALL BE DONE IN CONSULTATION WITH BHEL IN ALL THE AREAS IN SUCH A MANNER THAT THE ENTIRE WORK IS COMPLETED **WITHIN THE CONTRACT PERIOD OF 11 (ELEVEN) MONTHS**.

Milestone activities - Break up activities completion period:

SR.NO.	MILESTONE ACTIVITY	PERIOD
1	Area development, platform, sanitary line / septic tank for Porta cabin office and distribution work for construction Power & Water including drinking water.	one (1.5) month from the date of mobilization at site
2	Construction of closed Shed with office --1 No, Including their associated electrical works.	Two (2.5) months from the date of first excavation at site.
3	Construction of closed Shed ---1 No, Construction of structural Shed ---1 No, Including their associated electrical works.	Four (4) months from the date of first excavation at site.
4	Development of Open Storage area 50% along with Roads, Drains, fencing and illumination, porta cabins area & its electrification.	Five (5) months from the date of first excavation at site. Developed yard to be handed over in phased manner for storage of plant materials received from BHEL MUs.
5	Construction of Balance closed Shed—1 Nos, Construction of structural Semi closed Shed ---1 No, Including their associated electrical works.	Six (6) months from the date of first excavation at site.

6	Balance 50% development of Open Storage area along with Roads Drains. Fencing around Open Storage area and other left out misc. jobs	Ten (10) months from the date of first excavation at site in phased manner.
7	Cabling and External Lighting of Yard.	Eleven (11) months from the date of first excavation at site.

THE OVERALL CONTRACT PERIOD SHALL BE **11(ELEVEN) MONTHS**.

CONTRACTOR SHALL NOTE THAT INDIVIDUAL MILESTONES AS ABOVE SHALL BE ACHIEVED AS PER SCHEDULE FURNISHED ABOVE. THE DATE OF START OF FIRST EXCAVATION SHALL BE RECKONED AS THE START OF CONTRACT PERIOD FOR THIS PURPOSE.

THE CONTRACTOR SHALL REACH SITE AND ESTABLISH HIS SITE OFFICE AND MOBILIZE NECESSARY RESOURCES WELL IN ADVANCE OF ACTUAL COMMENCEMENT OF THE CONTRACT TIME SCHEDULE AS PER DIRECTIONS OF BHEL ENGINEER. THE DATE OF COMMENCEMENT FOR THE PURPOSE OF CLAUSE 11.1 SHALL BE THE DATE ON WHICH FIRST EXCAVATION WORK IS STARTED.

11.1.1 GRACE PERIOD

Grace period NOT Applicable.

11.2 PROGRESS MONITORING, CONTRACT EXTENSION AND OVERRUN

SHALL BE AS PER GCC (GENERAL CONDITIONS OF CONTRACT) cl no: 2.9 (page 24 of 43) OF THIS TENDER

11.3 CONTRACT EXTENSION

SHALL BE AS PER GCC (GENERAL CONDITIONS OF CONTRACT) cl no: 2.11 (page 25 of 43) OF THIS TENDER

11.4 OVERRUN COMPENSATION

SHALL BE AS PER GCC (GENERAL CONDITIONS OF CONTRACT) cl no: 2.12 (page 25 & 26 of 43) OF THIS TENDER.

11.5 PRICE VARIATION (PVC)

PVC SHALL NOT BE APPLICABLE TO THIS CONTRACT . AS SUCH PVC CL -2,17 OF GCC (GENERAL CONDITIONS OF CONTRACT) SHALL NOT BE APPLICABLE

11.6 CONTRACT VARIATIONS

SHALL BE AS PER GCC (GENERAL CONDITIONS OF CONTRACT) cl no: 2.14 (page 27 of 43) OF THIS TENDER

11.7 INTEREST BEARING RECOVERABLE ADVANCE

SHALL BE AS PER GCC (GENERAL CONDITIONS OF CONTRACT) cl no: 2.13 (page 28 of 43 OF THIS TENDER

11.8 DEFINITION OF WORK COMPLETION

THE CONTRACTOR'S SCOPE OF WORK UNDER THESE SPECIFICATIONS WILL BE DEEMED TO HAVE BEEN COMPLETED IN ALL RESPECT, ONLY WHEN ALL THE ACTIVITIES ARE COMPLETED SATISFACTORILY AND SO CERTIFIED BY BHEL SITE IN CHARGE. THE DECISION OF BHEL IN THIS REGARD SHALL BE FINAL AND BINDING ON THE CONTRACTOR.

11.9 SECURED ADVANCE

Interest free secured advance up to a maximum **75%** of the value as given in paid up purchase voucher of the following materials required for incorporation in the permanent works and brought at site duly certified by Engineer shall be payable to contractor.

- a) Cement.
- b) Steel items under contractor's scope of supply including MS Bolts
- c) Tubular trusses(class B-medium quality), purlins and AC/FRP sheets
- d) Steel windows/doors/rolling shutters/louvers/gates
- e) MS, CI, GI pipes and RCC Hume pipes.

The claim for secured advance is to be given in the prescribed form. A formal deed of hypothecation is to be drawn up on non-judicial stamp paper under which BHEL secured a lien on the materials and safeguarded against losses due to contractor postponing the execution of the work due to storage or misuse of materials and against expenses incurred on their watch and safe custody. Secure advance shall be adjusted in the interim bills prorated to work billed.

No secured advance will be paid by BHEL against value of any erection equipment brought to site by the contractor.

11.10 Liquidated damages (L D)

L D shall be applicable as per General Terms & Conditions (GCC) of contract CL NO 2.7.9 (Page 21 of 43).

11.2 EXTRA WORK

SHALL BE AS PER GCC (GENERAL CONDITIONS OF CONTRACT) cl no: 2.15.8 (page 28 of 43 OF THIS TENDER

SECTION-12

SPECIAL CONDITIONS OF CONTRACT

12.0 Terms of Payment

12.0.1

The contractor should submit his monthly on account bills with all the details required by BHEL on specified date every month covering progress of work in all respects and areas from the 25 of previous calendar month to 24th of the current month.

12.0.2

GCC (general conditions of contract) shall be referred to as regards mode of payment, and measurement of the work completed.

12.0.3

Release of payment in each running bill will be restricted to 95% of the value of work admitted, as per the percentage break-up for the stage of work completion stipulated vide clauses hereinafter.

The 5% thus remaining shall released as specified in GCC (Refer Cl no : 2.22 Page 32 of 43)

12.0.4

The payment for running bills will normally be released within around 30 days of submission of running bill with measurement sheets. Contractor shall make his own arrangement for making payment of impending labour wages and other dues in the meanwhile.

12.0.5

BHEL will release payment through Electronic Fund Transfer (EFT)/RTGS. In order to implement this system, the following details are to be furnished by the Contractor pertaining to his Bank Accounts where proceeds will be transferred through BHEL's banker:

1. Name of the Company
2. Name of Bank
3. Name of Bank Branch
4. City/Place
5. Account Number
6. Account type
7. IFSC code of the Bank Branch
8. MICR Code of the Bank Branch

BHEL may also choose to release payment by other alternative modes as suitable.

12.1.4 Stages of Progressive Payments

Subject to any deductions, which BHEL may be authorized to make under the contract, the contractor shall on the certificate of the engineer at site be entitled for payment as under.

12.1.4.1

The percentage of payment for progressive completion of work in various categories of work shall be as under:

- A) 100% of agreed item rate will be released for the completed work against monthly R.A. bills.

B) Structural items & tubular trusses in closed & semi-closed sheds:

The item rate for the above work shall be paid in pro-rata basis in progressive RA Bills as per the following:

- (i) On supply of materials duly certified by engineer - **60%** of item rate
(However total payment towards supply of structural/tubular/plates materials shall be limited to actual requirement as per drawing for fabrication of trusses & columns) & no surplus materials shall be taken over by BHEL.
- (ii) On fabrication & primer painting – **20%** of item rate
- (iii) On completion of erection, alignment, welding/bolting – **15%** of item rate.
- (iv) On completion of final painting – **5%** of item rate

C) Power/Electrical Cables: Supply of cables shall be paid as per the relevant items in various Sections of BOQ. (However total payment towards supply of cables shall be limited to actual requirement/laying at site & no surplus materials shall be taken over by BHEL.

SECTION-13

SPECIAL CONDITIONS OF CONTRACT

13.0 DETAILS TO BE FURNISHED BY THE BIDDERS

Apart from other details called for in the tender document under the various other provisions, the following details shall be submitted by the tenderers along with their offers (Technical Bid). Please also refer the checklist furnished in the beginning of the Tender Specification.

13.1

Contractor shall submit his HQ and Site organization charts.

13.2

Contractor shall submit tentative month-wise plan to match the Completion Schedule as in Section-11 of Special Conditions of Contract.

13.3

Contractor shall furnish the list of major tools and plants owned by them as well as T&P deployment plan for this work.

13.4

Contractor shall furnish the names of engineers, supervisors, and other specialized staff working with him for more than two years.

13.5

Contractor shall furnish month-wise deployment plan of manpower.

SECTION-14

SPECIAL CONDITIONS OF CONTRACT

14.0 INSURANCE

SHALL BE AS PER GCC (GENERAL CONDITIONS OF CONTRACT) cl no -2,18 (Page no-30 & 31) OF THIS TENDER

SECTION-15

SPECIAL CONDITION OF CONTRACT

15.0 EARNEST MONEY DEPOSIT, SECURITY DEPOSIT & BANK GUARANTEE

EARNEST MONEY DEPOSIT(EMD) : EMD of this tender is RS.2,00,000/- (Rupees Two lakh only) . EMD shall be deposited by bidder along with their offer as a part of technical bid as per Cl no : 1.9 (Page 11 of 43) of General Terms & conditions of Contract (GCC) of this tender.

SECTION 16

SUSPENSION OF BUSINESS DEALING WITH CONTRACTORS

16.1 A bidder may be put on HOLD for a period of 6 months, for future tenders for specific works on the basis of one or more of the following reasons:

- I. Bidder does not honour his own offer or any of its conditions within the validity period.
- II. Bidder fails to respond against **three consecutive** enquires of BHEL.
- III. After placement of order, Bidder fails to execute a contract.
- IV. Bidder fails to settle sundry debt account, for which he is legitimately liable, within one year of its occurrence.
- V. Bidder's performance rating falls below 60% in specific category.
- VI. Bidder works are under strike/ lockout for a long period.

16.2 A Bidder may be de-listed from the list of registered Bidders of the region for a period of 1 year on the basis of one or more of the following reasons:-

- I. Bidder tampers with tendering procedure affecting ordering process or commits any misconduct which is contrary to business ethics.
- II. Bidder has substituted, damaged, failed to return, short returned or unauthorizedly disposed off materials/ documents/ drawings/ tools etc of BHEL.
- III. Bidder no longer has the technical staff, equipment, financial resources etc. required to execute the orders/ contracts.

16.3 A Bidder can be banned from doing any business with all Units of BHEL for a period of 3 years on the basis of one or more of the following reasons:

- I. Bidder is found to be responsible for submitting fake/ false/ forged documents, certificates, or information prejudicial to BHEL's interest.
- II. In spite of warnings, the Bidder persistently violates or circumvents the provisions of labour laws/ regulations/ rules and other statutory requirements.
- III. Bidder is found to be involved in cartel formation.
- IV. The Bidder has indulged in malpractices or misconduct such as bribery, corruption and fraud, pilferage etc which are contrary to business ethics.
- V. The Bidder is found guilty by any court of law for criminal activity/ offences involving moral turpitude in relation to business dealings.
- VI. The Bidder is declared bankrupt, insolvent, has wound up or been dissolved; i.e ceases to exist for all practical purposes.
- VII. Bidder is found to have obtained Official Company information/ documentation by questionable means.
- VIII. Communication is received from the administrative Ministry of BHEL to ban the Bidder from business dealings.

SECTION-17

IMPLEMENTATION OF INTEGRITY PACT IN BHEL

NOT APPLICABLE FOR THIS TENDER



SECTION 18

REVERSE AUCTION PROCEDURE (Dtd 08/04/2010)

Business Rules, Terms & Conditions of Online Reverse Auction for the procurement of:

CONSTRUCTION OF CLOSED SHED WITH STORE OFFICE AND C&I STORE ROOM, CLOSED SHED, STRUCTURAL SEMI CLOSED SHED, AREA DEVELOPMENT FOR PORTA CABIN , DEVELOPMENT OF OPEN STORAGE YARD, ROADS, FENCING, DRAINAGE, INCLUDING INTERNAL / EXTERNAL ELECTRIFICATION OF OFFICE/STORES & OPEN STORAGE YARD AREAS. AT 1 UNIT OF 2X600 MW ,JHABUA POWER LIMITED ,SEONI ,MADHYA PRADESH

TENDER SPECIFICATION NO: **BHE/PW/PUR/BRLT-ENB/640**

BUYER'S NAME	BHARAT HEAVY ELECTRICALS LIMITED POWER SECTOR – WESTERN REGION
AUCTION TO BE CONDUCTED BY	M/s. e-Procurement Technologies Ltd. (abcprocure) B-705, Wall Street-II, Opp. Orient Club, Nr. Gujarat College, Ellis Bridge, Ahmedabad – 380 006, Gujarat, India. Ph. Nos. : +91 79 – 4001 6860 / 861 / 863 / 864 / 866 / 874 / 875 / 877 / 878 / 880 / 882 Fax No. : +91 79 – 4001 6876 / 816 Auction Website: https://bhel.abcprocure.com
DATE & TIME OF AUCTION	Auction Date : (Shall be informed later) Online Sealed Bid Time : (Shall be informed later) Online Reverse Auction Time : (Shall be informed later))
DOCUMENTS ATTACHED	1) Business rules for reverse auction 2) Terms & conditions of reverse auction 3) Process Compliance Statement (Annexure II) 4) Final Price Confirmation (Annexure III) 5) Contact Information

BUSINESS RULES FOR REVERSE AUCTION

GENERAL TERMS AND CONDITIONS OF REVERSE AUCTION

Against this Enquiry for the subject item/system with detailed scope of supply as per our specification, BHEL-PSWR may resort to “ONLINE REVERSE AUCTION PROCEDURE” i.e. **ONLINE BIDDING on INTERNET**.

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
2. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on Internet.
3. BHEL will inform the vendor in writing in case reverse auction, the details of service provider to enable them to contact and get trained.
4. Business rules like event date, time, start price, bid decrement, extensions, etc. also will be communicated through service provider for compliance.
5. Vendors have to email a scanned copy of the Process Compliance Form (**Annexure II**) in the prescribed (provided by service provider) before start of Online Initial Sealed Bid. Without this form, the vendor will not be eligible to participate in the event.
- ~~6. BHEL will provide the calculation sheet (e.g.: EXCEL sheet), if any, which will help to arrive at “Total Cost to BHEL” like packing & forwarding charges, Taxes and duties, Freight charges, Insurance, Service tax for services and loading factors (for non-compliance to BHEL standard Commercial terms and conditions.) for each the vendor to enable them to fill in the price and keep it ready for keying in during the auction.~~
7. Reverse auction will be conducted on schedule date & time.
8. At the end of reverse auction event, the lowest bidder value will be known on the network.
9. The lowest bidder has to email a scanned copy of the price break-up & confirmation duly signed filled-in prescribed format (as per BHEL’s price excel sheet) as provided on case-to-case basis to BHEL through service provider within 24 hours of the reverse auction without fail.
10. Any variation between the on-line bid value and sealed price bid will be considered as sabotaging the tender process and will invite disqualification of vender to conduct business with BHEL as per prevailing procedure.
11. In case BHEL decides not to go for Reverse auction procedure for this tender enquiry, the price bids and price impacts, if any already submitted and available with BHEL shall be opened as per procedures mentioned in the tender specifications.
12. Only those vendors, who participate in the Online Initial Sealed Bid, will be eligible to participate in the subsequent Online English Reverse Auction.
13. **The reverse auction will be treated as closed only when the bidding process gets closed in all respects for the item listed in the tender.**

Business Rules for finalization of the procurement

BHEL shall finalise the procurement of the item against this Tender through reverse auction mode. BHEL has made arrangement with **M/s. e-Procurement Technologies Ltd., Ahmedabad**, who shall be BHEL's authorized service provider for the same. Please go through the guidelines given below and submit your acceptance to the same along with your Commercial Bid.

1. Computerized reverse auction shall be conducted by BHEL, on pre-specified date, while the vendors shall be quoting from their own offices/ place of their choice. Internet connectivity shall have to be ensured by vendors themselves. In extreme case of failure of Internet connectivity, (due to any reason whatsoever may be) it is the bidders' responsibility / decision to send fax communication immediately to M/s. e-Procurement Technologies Ltd., Ahmedabad. Furnishing the price the bidder wants to bid online with a request to the service provider to upload the faxed price on line so that the service provider will up load that price on line on behalf of the Bidder. It shall be noted clearly that the concerned bidder communicating this price to service provider has to solely ensure that the fax message is received by the service provider in a readable / legible form and also the Bidder should simultaneously check up with service provider about the clear receipt of the price faxed. It shall also be clearly understood that the bidder shall be at liberty to send such fax communications of prices to be up loaded by the service provider only within the closure of Bid time and under no circumstance it shall be allowed beyond the closure of Bid time / reverse auction. It shall also be noted that the service provider should be given a reasonable required time by the bidders, to upload such prices online and if such required time is not available at the disposal of the Service provider at the time of receipt of the fax message from the bidders, the service provider will not be uploading the prices and either BHEL or the service provider are not responsible for this unforeseen circumstances. In order to ward-off such contingent situation bidders are requested to make all the necessary arrangements/ alternatives whatever required so that they are able to circumvent such situation and still be able to participate in the reverse auction successfully. Failure of power at the premises of vendors during the Reverse auction cannot be the cause for not participating in the reverse auction. On account of this, the time for the auction cannot be extended and neither BHEL nor M/s. e-Procurement Technologies Ltd., Ahmedabad is responsible for such eventualities.
2. e-Procurement Technologies Ltd. shall arrange to train your nominated person (s), without any cost to you. They shall also explain you, all the Rules related to the Reverse Auction / Business Rules Document to be adopted along with bid manual. You are required to give your compliance on it before start of bid process.
3. **MATERIAL FOR BID:** Scope of Work as detailed in Tender Specification No: **BHE/PW/PUR/BRLT-ENB/640**
- 4.
5. **Starting Bid/Bid Decrement:** The opening price of the RA and the bid decrement value can be viewed by the bidders on the bidding screen.
6. **BIDDING CURRENCY AND UNIT OF MEASUREMENT:** Bidding and evaluation will be conducted in **Indian Rupees (INR)** of the item. The price bid placed during the "Sealed Bid Auction" as well as "Reverse Auction" shall be the **total amount for the entire** Scope of Work as mentioned in Price Bid Specification of Tender Specification No **BHE/PW/PUR/BRLT-ENB/740**

7. **BID PRICE:** The Bidder has to quote the Total Cost to BHEL for the entire Scope of work. Calculation sheet to arrive at the Total Cost to BHEL will be provided by BHEL if required.
8. The technical & commercial terms are as per BHEL Tender Specification No **BHE/PW/PUR/BRLT-ENB/740**. Vendors technical and commercial bid and subsequent correspondences between BHEL and the vendors regarding commercial terms & conditions.
9. **VALIDITY OF BIDS:** The Bid price shall be firm for a period mentioned in the subject tender and shall not be subjected to any change whatsoever.
10. At the end of the reverse auction, bidder has to provide a detailed price break-up & price confirmation for his lowest offer, as per the Annexure III format, within 24 hours of the reverse auction.
11. **Procedure of Reverse Auctioning:**
 - i. **Online Initial Sealed Bid:** The opening bid (In the initial auction) of the bidders shall place a bid which shall be same as that quoted in their Final Sealed price submitted to BHEL or lesser. The bidders shall confirm in writing to BHEL that their opening bid shall be same as that quoted in their final sealed price bid submitted against Tender Specification No **BHE/PW/PUR/BRLT-ENB/740**. If it is found to be otherwise at a later date, the bidder will be disqualified from the tender.
 - ii. **Online English Reverse (no ties) Auction {Reverse Auction}:** BHEL will declare its **Opening Price (OP)**, which shall be visible to the all vendors during the start of the reverse Auction. You will be required to start bidding after announcement of Opening Price and decrement amount. Also, please note that the start price of an item in online reverse auction is open to all the participating bidders. Any bidder can start bidding, in the online reverse auction, from the start price itself. If the start price is your own price, you still need to bid in the online reverse auction. Also, please note that the first online bid that comes in the system during the online reverse auction can be equal to the auction's start price, or lesser than the auction's start price by one decrement, or lesser than the auction's start price by multiples of decrement. The second online bid and onwards will have to be lesser than the L1 rate by one decrement value, or lesser than the L1 rate by multiples of the decrement value.
 - iii. The vendor's who have participated in the Initial Sealed Bid Auction will only be eligible to participate in the subsequent English Reverse Auction.
 - iv. Online Initial Sealed Bid will be for **30 minutes** and Online English Reverse (no ties) Auction shall be for a **period of one hour**. If a bidder places a bid in the last 10 minutes of closing of the Reverse Auction and if that bid gets accepted, then the auction's duration shall get extended automatically for another 10 minutes, for the entire auction, from the time that bid comes in. Please note that the auto-extension will take place only if a bid comes in those last 10 minutes and if that bid gets accepted. If the bid does not get accepted, the auto-extension will not take place even if that bid might have come in the last

10 minutes. In case, there is no bid in the last 10 minutes of closing of Reverse Auction, the auction shall get closed automatically without any extension. However, vendors are advised not to wait till the last minute or last few seconds to enter their bid during the auto-extension period to avoid complications related with internet connectivity, network problems, system crash down, power failure, etc.

- v. The bid decrement amount shall be specified by BHEL before start of bidding.
 - ~~vi. Any commercial loading shall be intimated to bidders in advance and it shall be added to price during dynamic auction process. For evaluation purpose, commercial loading if any, shall be added to the quoted price of respective bidder. However for ordering only the final bid placed by you shall be considered.~~
 - ~~vii. After the completion of English Reverse (no ties), the **Closing Price (CP)** shall be available. In case, any commercial loading was made to L1 bidder's price, it shall be de-loaded from the closing price of L1 bidder (**CP**) for further processing.~~
 - viii. The ratio of CP and originally quoted price shall be applied on all elements of originally quoted prices to arrive at the final price break up.
- 12. Successful vendor shall be required to submit the final prices, quoted during the English Reverse (no ties) in the **Annexure III Format** after the completion of Auction to BHEL, duly signed and stamped as token of acceptance without any new condition other than those already agreed to before start of auction.
 - 13. During the Online English Reverse (No Ties) Auction, if no bid is received in the auction system/website within the specified time duration of the reverse auction, then **BHEL**, at its discretion, may decide to revise the auction's Opening Price / scrap the online reverse auction process / proceed with the conventional mode of tendering (opening of the hard copy final bids submitted by you earlier to BHEL).
 - 14. Your bid will be taken as an offer to supply. Bids once made by you, cannot be cancelled / withdrawn and you shall be bound to supply as mentioned above at your final bid price. **Should you back out and not supply as per the rates quoted, BHEL shall take action as appropriate.**
 - 15. You shall be assigned a **Unique User Name & Password** by BHEL (or) e-Procurement Technologies Ltd. **You are advised to change the Password** and edit the information in the Registration Page after the receipt of initial Password from BHEL / e-Procurement Technologies Ltd. to ensure confidentiality. All bids made from the Login ID given to you will be deemed to have been made by your company.
 - 16. You will be able to view the following on your screen along with the necessary fields in the English Reverse (no ties) {Reverse Auction}:
 - a. Leading Bid in the Auction (only total price)
 - b. Bid Placed by you
 - c. Your Own Rank
 - d. Opening Price & Bid Decrement value.

17. At the end of the Reverse Auction, BHEL will decide upon the winner. BHEL's decision on award of Contract shall be final and binding on all the Bidders.
18. BHEL shall be at liberty to cancel the reverse auction process / tender at any time, before ordering, without assigning any reason.
19. BHEL shall not have any liability to bidders for any interruption or delay in access to the site irrespective of the cause.
20. Other terms and conditions shall be as per your techno-commercial offers and other correspondences till date.
21. You are required to submit your acceptance (Process Compliance Form - Annexure II) to the terms/ conditions/ modality given above before participating in the reverse auction.

Terms & Conditions of Reverse Auction

1. **LOG IN NAME & PASSWORD:** Each Bidder is assigned a Unique User Name & Password by e-Procurement Technologies Ltd. The Bidders are requested to change the Password and edit the information in the Registration Page after the receipt of initial Password from e-Procurement Technologies Ltd., Ahmedabad. All bids made from the Login ID given to the bidder will be deemed to have been made by the bidder.
2. **BIDS PLACED BY BIDDER:** The bid of the bidder will be taken to be an offer to execute the work. Bids once made by the bidder cannot be cancelled. The bidder is bound to execute the work as mentioned above at the price that they bid. Should any bidder back out and not make the supplies at per the rates quoted, BHEL and / or e-Procurement Technologies Ltd., Ahmedabad shall take action as appropriate.
3. **LOWEST BID OF A BIDDER:** In case the bidder submits more than one bid, the lowest bid will be considered as the bidder's final offer to execute the work.
4. **AUCTION TYPE:** 1). Online Initial Sealed Bid
2). Online English Reverse (No Ties) Auction (refer Bidder Manual for details)
5. **DURATION OF AUCTION:** The duration of Auction will be for one hour. If a bidder places a bid in the last 10 minutes of closing of the Reverse Auction and if that bid gets accepted, then the auction's duration shall get extended automatically for another 10 minutes, for the entire auction, from the time that bid comes in. Please note that the auto-extension will take place only if a bid comes in those last 10 minutes and if that bid gets accepted. If the bid does not get accepted, the auto-extension will not take place even if that bid might have come in the last 10 minutes. In case, there is no bid in the last 10 minutes of closing of Reverse Auction, the auction shall get closed automatically without any extension. However, vendors are advised not to wait till the last minute or last few seconds to enter their bid during the auto-extension period to avoid complications related with internet connectivity, network problems, system crash down, power failure, etc. (THIS SCHEDULE IS TENTATIVE. IF ANY CHANGE IN SCHEDULE, THE SAME SHALL BE COMMUNICATED TO YOU)
6. **BID DECREMENT:** The minimum Bid decrement shall be available to the Bidders at the start of the auction. The bidder can view the same by clicking on the Item details at the start of the auction. The bidder can bid lower than the Lowest Bid in the auction by a decrement, multiple of the minimum Bid decrement or at least of minimum bid decrement plus multiples of Bid Decrement. Also, please note that the start price of an item in online reverse auction is open to all the participating bidders. Any bidder can start bidding, in the online reverse auction, from the start price itself. If the start price is your own price, you still need to bid in the online reverse auction. Also, please note that the first online bid that comes in the system during the online reverse auction can be equal to the auction's start price, or lesser than the auction's start price by one decrement, or lesser than the auction's start price by multiples of decrement. The second online bid and onwards will have to be lesser than the L1 rate by one decrement value, or lesser than the L1 rate by multiples of the decrement value.

7. **VISIBILITY TO BIDDER:** The Bidder shall be able to view the following on his screen along with the necessary fields during English Reverse –NO ties Auction:
- Leading Bid in the Auction
 - Bid Placed by him
 - His Own Rank
 - Start Price & Bid Decrement Value
8. **AUCTION WINNER:** At the end of the Reverse Auction, BHEL will evaluate all the bids submitted and will decide upon the winner.
9. **PROXY BIDS:** Proxy bidding feature is a pro-supplier feature to safe guard the supplier's interest of any Internet failure or to avoid last minute rush. The Proxy feature allows Bidders to place an automated bid against other Bidders in an auction and bid without having to enter a new amount each time a competing Bidder submits a new offer.

The bid amount that a Bidder enters is the minimum that the Bidder is willing to offer. Here the software bids on behalf of the supplier.

- The proxy amount is the minimum amount that the Bidder is willing to offer. During the course of bidding, the Bidder cannot delete or change the amount of a Proxy Bid.
- Bids are submitted in decrements (decreasing bid amounts). The application automates proxy bidding by processing proxy bids automatically, according to the decrement that the auction originator originally established when creating the auction, submitting offers to the next bid decrement each time a competing Bidder bids, regardless if competing bids are submitted as proxy or standard bids.
- This feature can be used only once during a particular Reverse Auction and only after the L1 rate is equal to or less than the minimum bid amount that the bidder has put in the system will he get the option to manually bid for the same. In no case during the bidding till the L1 rate or less is not reached as equivalent to the minimum bid amount offered by the bidder, will the bidder get the option to manually bid for the same.

GENERAL TERMS & CONDITIONS: Bidders are required to read the "Terms and Conditions" section of the auction website (<https://bhel.abcprocure.com>) using the Login IDs and passwords given to them.

10. OTHER TERMS & CONDITIONS:

- The Bidder shall not involve himself or any of his representatives in Price manipulation of any kind directly or indirectly by communicating with other suppliers / bidders.
- The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.
- BHEL's decision on award of Contract shall be final and binding on all the Bidders.

- BHEL along with e-Procurement Technologies Ltd., Ahmedabad can decide to extend, reschedule or cancel any Auction. Any changes made by BHEL and / or e-Procurement Technologies Ltd., after the first posting will have to be accepted if the Bidder continues to access the site after that time.
- e-Procurement Technologies Ltd., shall not have any liability to Bidders for any interruption or delay in access to the site irrespective of the cause.
- e-Procurement Technologies Ltd., is not responsible for any damages, including damages that result from, but are not limited to negligence.
- e-Procurement Technologies Ltd., will not be held responsible for consequential damages, including but not limited to systems problems, inability to use the system, loss of electronic information etc.

N.B.

- All the Bidders are required to submit the Agreement Form / Process Compliance Form (**Annexure - II**) duly signed to M/s e-Procurement Technologies Ltd., Ahmedabad before the due date (auction date). After the receipt of the Agreement Form, Login ID & Password shall be allotted to the suppliers (bidders).
- After the completion of the Auction event, all the Bidders have to submit the Price Break-up & confirmation as per the Annexure III format, within 24 hours of the reverse auction, to M/s e-Procurement Technologies Ltd., Ahmedabad for further proceedings.

ANNEXURE- I

The List of Items to be procured along with the Quantities and the Auction Start Time & Close Time is as follows:

DESCRIPTION OF WORK:

CONSTRUCTION OF CLOSED SHED WITH STORE OFFICE AND C&I STORE ROOM, CLOSED SHED, STRUCTURAL SEMI CLOSED SHED, AREA DEVELOPMENT FOR PORTA CABIN , DEVELOPMENT OF OPEN STORAGE YARD, ROADS, FENCING, DRAINAGE, INCLUDING INTERNAL / EXTERNAL ELECTRIFICATION OF OFFICE/STORES & OPEN STORAGE YARD AREAS. AT 1 UNIT OF 2X600 MW ,JHABUA POWER LIMITED ,SEONI ,MADHYA PRADESH

TENDER SPECIFICATION NO: BHE/PW/PUR/BRLT-ENB/640

Item	Quantity	Opening Prices in Rs	Bid Decrement in Rs	Opening Time	Closing Time
As Detailed IN subject tender	As Detailed IN subject tender	Would be displayed on the bidding screen	Would be displayed on the bidding screen	Shall be informed later	Shall be informed later

Annexure- II

Process Compliance Form

(The bidders are required to print this on their company's letterhead, sign & stamp before emailing a scanned copy)

To,

**M/s. e-Procurement Technologies Ltd. (abcprocure)
B-705, Wall Street-II, Opp. Orient Club,
Nr. Gujarat College, Ellis Bridge,
Ahmedabad – 380 006, Gujarat, India.**

Sub: Agreement to the Process related Terms and Conditions for the Reverse Auction

Dear Sir,

This has reference to the Terms & Conditions for the Reverse Auction mentioned in the Tender Specification No **BHE/PW/PUR/BRLT-ENB/740**

This letter is to confirm that:

- 1) The undersigned is authorized representative of the company.
- 2) We have studied the Commercial Terms and the Business rules governing the Reverse Auction as mentioned in your letter and confirm our agreement to them.
- 3) We also confirm that we have taken the training on the auction tool and have understood the functionality of the same thoroughly.
- 4) We also confirm that we will email a scanned copy or fax the Price Confirmation (**Annexure-III**) & break-up (as per Excel Sheet), if any, of our online quoted price, immediately after the completion of the Reverse Auction.
- 5) We, hereby, confirm that we will honor the Bids placed by us during the auction process.
- 6) We confirm that we have changed the password on the auction website after first log in.

With regards,

Signature with company seal

Name –

Company / Organization –

Designation within Company / Organization –

Address of Company / Organization –

- **Scan & email this document to abcprocure.**

Annexure III
Price Confirmation

(To be submitted by the bidder on their Letterhead, duly stamped & signed after the completion of the Reverse Auction)

To,
M/s. e-Procurement Technologies Ltd. (abcprocure)
B-705, Wall Street-II, Opp. Orient Club,
Nr. Gujarat College, Ellis Bridge,
Ahmedabad – 380 006.
Gujarat, India.

Sub: Final price quoted during Reverse Auction

Ref : 1. BHEL Tender Specification No **BHE/PW/PUR/BRLT-ENB/740**
2. Reverse Auction dtd. (Shall be informed later)
3. Our Offer No. dtd.

Dear Sir,

We confirm that we have quoted.

1. _____
2. _____

(Price quoted on Total Cost to BHEL basis)

as our final lump sum prices during the Reverse Auction conducted on _____
(date).

Thanking you and looking forward to the valuable order from BHEL.

Yours sincerely,

For _____

Name:
Company:
Date:
Seal:

CONTACT INFORMATION

M/s. e-Procurement Technologies Ltd., Ahmedabad (abcprocure)	Bharat Heavy Electricals Limited, PSWR
B-705, Wall Street-II, Opp. Orient Club, Nr. Gujarat College, Ellis Bridge, Ahmedabad – 380 006, Gujarat, India. Ph. Nos. : +91 79 – 4001 6860 / 861 / 863 / 864 / 866 / 874 / 875 / 877 / 878 / 880 / 882 Fax Nos. : +91 79 – 4001 6876 / 816 Helpdesk Email-Id: helpdesk@tendertiger.com Mr. Parin Desai Cell : 0 – 93745 19754 E-mail : parin@abcprocure.com	Mr S M BORKAR Sr Manager/Purchase E mail : smborkar@bhelpswr.co.in Phone : 0712 - 3048600 Fax : 0712 - 3048605 (Or) Mr. R K Ranade Manager/Purchase Email : rkranade@bhelpswr.co.in Phone: 0712 - 3048635 Fax : 0712 - 3048605 (Or) Mr. Pratish Gee Varghese Engineer/Purchase Email: pgv@bhelpswr.co.in Phone: 0712 - 3048713 Fax : 0712 - 3048605

ANNEXURE – I

LIST OF TOOLS AND PLANTS TO BE ARRANGED BY CONTRACTOR

- 1) Concrete Mixture -2nos
- 2) Vibrators- 2nos
- 3) Leveling instrument with calibration certificate as per required
- 4) Theodolite with calibration certificate as per required
- 5) Shuttering materials as per requirement
- 6) Cube moulds required nos and testing arrangement
- 7) Slump testing cone as required
- 8) Pump with Motor required for curing
- 9) Power generator (of Minimum 63 KVA)-1No
- 10) Diesel/Petrol/Electric Pump set (2.5 HP)-4no
- 11) Electric Water Pump (1.5HP)-2no
- 12) Welding Transformer-3nos
- 13) Gas cutting Set- 3 Nos
- 14)Drilling Machine- 2Nos
- 15)JCB- 1No
- 16) Water Tanker- 1No
- 17) Road Roller- 2 No
- 18) Tractor- Trailer- 2No
- 19)Tripper-2Nos
- 20)Chain Pulley Block (3T)- 3No

21) Grinding Machine-2Nos

22) Fire extinguishers & Fire Buckets-2Nos

NOTE

The above list is only indicative and not exhaustive. Arrangement for any other T and P required for completion of the job shall be the responsibility of the contractor and shall be arranged by him.

APPENDIX-II

CONCURRENT COMMITMENTS CONCURRENT COMMITMENTS (Bidder Must Fill up the details in this format)

SL. NO	FULL POSTAL ADDRESS OF CLIENT AND NAME OF OFFICER IN-CHARGE	DESCRIPTION OF THE WORK	VALUE OF THE CONTRACT	COMMENCEMENT DATE	SCHEDULED COMPLETION	% COMPLETED. AS ON DATE	ANTICIPATED COMPLETION DATE	REMARKS

Bidder may use separate sheet if required.

SIGNATURE OF THE BIDDER

DATE:

APPENDIX-III

MONTHWISE MANPOWER DEPLOYMENT PLAN (CATEGORYWISE NUMBERS TO BE INDICATED FOR EACH MONTH) FOR TOTAL CONTRACT PERIOD (BIDDER MUST SUBMITT THIS PLAN WITH THEIR OFFER)

SL. NO.	CATEGORY	M O N T H S										
		1	2	3	4	5	6.....11					
01	Resident engineer											
02	Engineers											
03	Supervisors											
04	Materials management supervisors											
05	Welders											
06	Plumbers, Masons											
07	Carpenters											
08	Khalasis											
09	Truck/trailer drivers											
10	Store keepers											
11	Electricians											
12	Helpers/semiskilled workers											
13	Unskilled workers											
MONTHWISE TOTAL												

Bidder may use the separate sheet to furnish the above details

APPENDIX - IV
ANALYSIS OF UNIT RATE QUOTED

SL. NO.	DESCRIPTION	PERCENTAGE OF UNIT RATE QUOTED	REMARKS IF ANY
01	Site facilities viz., Electricity, water, workshop and other infrastructure		
02	Cement, steel, structures and all materials		
03	Salary & wages		
04	Consumables		
05	Depreciation & maintenance for T&P and other items		
06	Establishment & administration expenses of site		
07	Retrenchment benefit		
08	Overheads		
09	Profit		
	Total	100%	

SIGNATURE OF TENDERER

APPENDIX–V

FORMAT FOR DEPLOYMENT PLAN FOR MAJOR TOOLS AND PLANTS

**CATEGORY-WISE NUMBERS TO BE INDICATED FOR EACH MONTH FOR TOTAL CONTRACT PERIOD OF TEN MONTHS. BIDDER
MUST INCLUDE THE T&P AS SPECIFIED BY BHEL AS PER APPERNDIX-I**

SN	DESCRIPTION & CAPACITY OF T&P	MONTHS											REMARKS
		1	2	3	4	5	6	7	8	9	10	11	
01													
02													
03													
04													
05													
06													
07													
08													
09													
10													

APPENDIX–VI

DETAILS OF WORK DONE DURING THE LAST SEVEN YEARS

SL. NO.	FULL POSTAL ADDRESS OF CLIENT & NAME OF OFFICER IN CHARGE	DESCRIPTION OF WORK	VALUE OF CONTRACT	DATE OF AWARD OF WORK	DATE OF COMMENCEMENT OF WORK	ACTUAL COMPLETION TIME (MONTHS)	DATE OF ACTUAL COMPLETION OF WORK	REMARKS
1								
2								
3								
4								
5								

BIDDERS SHALL ENCLOSE COPIES OF DETAILED WORK ORDER (GIVING BILL OF QUANTITIES AND SCOPE OF WORK) AND ITS COMPLETION CERTIFICATE IN SUPPORT OF THIS STATEMENT AND AS REQUIRED FOR QUALIFICATION AS PER QR OF NIT.

DATE

SIGNATURE OF TENDERER WITH SEAL

APPENDIX-VII (JHABUA)

FOLLOWING DRAWINGS ARE ENCLOSED WITH THE TENDER.

SL.NO.	DRAWING/SKETCH No.	TITLE
1)	BHE/PW/CS - 01:	PLAN AT PLINTH LEVEL OF CLOSED SHED (60M X 15M)
2)	BHE/PW/CS - 02:	SECTIONAL DETAILS OF RCC FOOTING AND COLUMN FOR CLOSED STORAGE SHED
3)	BHE/PW/CS - 03:	PLAN OF FOOTINGS
4)	BHE/PW/CS - 04:	SECTION OF PLINTH BEAM
5)	BHE/PW/CS - 05:	SECTION OF TIE BEAM.
6)	BHE/PW/CS - 06:	SECTION OF LINTEL AND PROJECTION FOR CLOSED STORES ROLLING SHUTTER
7)	BHE/PW/CS - 07:	DETAILS OF BASE PLATE AT TRUSS LEVEL OF CLOSED STORAGE SHED
8)	BHE/PW/CS/SS - 08:	DETAILS OF TRUSS FOR CLOSED STORAGE SHED /STRUCTURAL SEMI CLOSED SHED OF WIDTH 15M. (TRUSS DETAILS COMMON FOR BOTH SEDS)
9)	BHE/PW/CS – 09	SECTION OF RCC COLUMN
10)	BHE/PW/C0S-01:	PLAN FOR CLOSED SHED WITH OFFICE (60M X 15M) AND C&I ROOM (10M X 6M)
11)	BHE/PW/C0S-03:	SECTION OF LINTEL AND PROJECTION FOR CLOSED STORES MAIN DOOR (OUT SIDE)
12)	BHE/PW/C0S-02:	DETAILS OF BRICK FOUNDATION
13)	BHE/PW/SS - 01:	PLAN AT PLINTH LEVEL OF STRUCTURAL /SEMI CLOSED SHED (60M X 15M)
14)	BHE/PW/SS - 02:	SECTIONAL DETAILS OF RCC FOOTING, FLOOR AND COLUMN FOR SEMI CLOSED STORAGE SHED
15)	BHE/PW/SS - 03:	PLAN & RCC DETAILS OF FOOTING FOR STRUCTURAL /SEMI CLOSED STORAGE SHED
16)	BHE/PW/SS- 04:	SECTION OF PLINTH BEAM
17)	BHE/PW/SS – 05 (A):	DETAILS OF STRUCTURAL SHED STEEL COLUMN

18)	BHE/PW/SS – 05(B):	DETAILS OF AC SHEET CLADDING
19)	BHE/PW/SS-06:	DETAILS OF PEDESTAL & BRICK WORK FOR STRUCTURAL SHED
20)	BHE/PW/OY-01	LAYOUT FOR OPEN STORAGE AREA
21)	BHE/PW/OY-02	SECTIONAL DETAILS OF WBM ROADS
22)	BHE/PW/OY-03	DRAIN DETAILS 0.4M DEPTH
23)	BHE/PW/OY-04	DRAIN DETAILS 0.5M DEPTH
24)	BHE/PW/OY-05	DRAIN DETAILS 0.6M DEPTH
25)	BHE/PW/OY-08	DRAIN DETAILS 1.0M DEPTH
26)	BHE/PW/OY-09	CULVERT DETAILS FOR 400MM DIA. RCC HUME PIPE
27)	BHE/PW/OY-10	CULVERT DETAILS FOR 600MM DIA. RCC HUME PIPE
28)	BHE/PW/OY-11	DETAILS OF BARBED WIRE FENCING
29)	BHE/PW/ ST.SP-01	SEPTIC TANK
30)	BHE/PW/ ST.SP-02	SECTION OF BAFFLE BEAM
31)	BHE/PW/ ST.SP-03	DETAILS OF SOAK PIT
32)	BHE/PW/ STAG-01	STAGING OF OVER HEAD WATER TANK
33)	BHE/PW/PO-01	BRICK PEDESTAL BLOCK FOR PROPOSED PORTA CABIN OFFICE
34)	BHE/PW/GATE	DETAILS OF GATE
35)	BHE/PW/01	PROPOSED LAYOUT OF BHEL PORTA-CABIN OFFICE COMPLEX (TOTAL NUMBER OF DRAWINGS-5 NOS)

NOTE:

The above drawings are tentative and strictly for tender purpose only. Changes in the drawing as per site requirement will be intimated during execution.

These drawings are the property of BHEL and should not be made use of by the contractor except for the purpose of implementing this contract. All these drawings should be returned to BHEL on completion of the work.

The interpretation of BHEL engineer regarding the details shown in the drawing shall be final, conclusive and binding.

DATE

SIGNATURE OF TENDERER WITH SEAL