



# भारत हेवी इलेक्ट्रिकल्स लिमिटेड

( भारत सरकार का उपक्रम )

## BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN - 01

Ref: PSER:SCT:NAM-C1926:TCN-01

Date: 22-11-2018

Sub	Tender change notice (TCN) 01	
Job	Structural and strengthening works of 1X100MW NRPP, AGPCL Namrup Project, Dibrugarh, Assam.	
Ref	1.0	Tender no PSER:SCT:NAM-C1926:18
	2.0	BHEL's NIT, vide reference no no PSER:SCT:NAM-C1926:7176, Date: 20-11-2018
	3.0	All other pertinent issues till date.

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

- 1.0 Revised TECHNICAL CONDITIONS OF CONTRACT (TCC-CML), VOLUME-IF-CML-REV-1 is attached herewith, superseding TECHNICAL CONDITIONS OF CONTRACT (TCC-CML), VOLUME-IF-CML-REV-0 issued earlier along with NIT. (Revision in cl. no. 15.1.1.4 & 15.1.1.5). However, bidder shall go through entire volume before submitting their bid.
- 2.0 Revised 'No deviation certificate' as per enclosed Annexure-2. Bidder shall submit no deviation certificate as per enclosed format only.
- 3.0 All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,  
for BHARAT HEAVY ELECTRICALS LTD

DY MGR (SCT)

Encl : As above.

पावर सेक्टर पूर्वी क्षेत्र ( मुख्यालय )

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

फैक्स/Fax : (033) 23211960

फोन/Phone : बोर्ड/EPABX : 23211691, 23211798, 23211796

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

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

Sub	No Deviation Certificate.	
Job	Structural and strengthening works of 1X100MW NRPP, AGPCL Namrup Project, Dibrugarh, Assam.	
Ref	1.0	Tender no PSER:SCT:NAM-C1926:18
	2.0	BHEL's NIT, vide reference no no PSER:SCT:NAM-C1926:7176, Date: 20-11-2018
	3.0	BHEL's TCN-01, vide reference no PSER:SCT:NAM-C1926:TCN-01, Dated 22-11-2018.
	4.0	All other pertinent issues till date.

Dear Sirs,

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

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

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

We confirm to have submitted/uploaded offer/documents in accordance with tender instructions with acceptance of the terms & conditions of the tender by us and as per aforesaid references.

Thanking you,

Yours faithfully,

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

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

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

फैक्स/Fax : (033) 23211960 फोन/Phone : बोर्ड/EPABX : (033) 2339-8000/ 2339-8231

**CONTENT**

CLAUSE NO	DESCRIPTION
1.0	PROJECT SYNOPSIS AND GENERAL INFORMATION
2.0	SITE VISIT
3.0	SCOPE OF WORK
4.0	BROAD SCOPE OF WORK
5.0	DEVIATIONS/ CLARIFICATIONS
6.0	DEWATERING
7.0	LAND
8.0	WATER
9.0	ELECTRICITY
10.0	CONSUMABLE
11.0	TEST CERTIFICATES
12.0	MMD
13.0	QUALITY CONTROL & QUALITY ASSURANCE
14.0	QUALITY ASSURANCE PROGRAMME
15.0	PROJECT MANAGEMENT/ CONSTRUCTION MANAGEMENT
16.0	TEST CERTIFICATE FOR TOOLS & PLANT
17.0	ISSUE OF TOOLS & PLANT BY BHEL
18.0	INSURANCE
19.0	MATERIAL HANDLING (BHEL ISSUED MATERIAL)
20.0	ISSUE OF MATERIALS
21.0	RETURN OF MATERIALS
22.0	CONSUMPTION AND WASTAGE
23.0	RECONCILIATION OF BHEL ISSUED MATERIALS
24.0	RECOVERY OF MATERIAL
25.0	CONSTRUCTION OF TEMPORARY OFFICE, STORES ETC
26.0	TOOLS & PLANTS (TO BE PROVIDED BY CONTRACTOR)
27.0	CONSTRUCTION SCHEDULE
28.0	COMPLETION PERIOD
29.0	LIQUIDATED DAMAGE
30.0	CERTIFICATE TOWARDS COMPLETION
31.0	GUARANTEE
32.0	INTEREST BEARING RECOVERABLE ADVANCE (IBRA) / MOBILIZATION ADVANCE
33.0	OVER RUN CHARGES
34.0	REVISION ON ACCEPTED CONTRACT RATE
35.0	PRICE VARIATION CLAUSE
36.0	SECURITY DEPOSIT & PERFORMANCE BOND
37.0	TAXES AND DUTIES
38.0	INTERIM PAYMENT
39.0	METHOD OF MEASUREMENT
40.0	EXTRA/ ADDITIONAL ITEMS OF WORK
41.0	CONTRACT PRICE
42.0	DESIGN OFFICE AND FABRICATION DRAWING
43.0	FABRICATION/ GALVANISING
44.0	OTHER TERMS

These Technical conditions, applicable for civil/ structural portion of work, shall be construed as part of tender document and shall be read along with general conditions of contract (GCC), Special conditions of contract (SCC) and other volumes of tender. In case of any conflict or inconsistency between GCC, SCC, other volumes and these technical conditions of contract (TCC), the same shall be brought out by the bidder in writing to BHEL for clarification, failing which most stringent interpretation/ clause in favour of BHEL shall be adopted and the same shall be binding to the bidder.

CLAUSE NO	DESCRIPTION
<b>1.0</b>	<b>PROJECT SYNOPSIS AND GENERAL INFORMATION</b>
1.1	<p>Details of proposed stage/ units</p> <p>The proposed 100 MW Gas based Combined Cycle Power Project at Namrup is being set up by APGCL, Assam. The site is approachable by road. The information given hereunder is for general guidance and shall not be contractually binding on BHEL.</p>
<b>1.2</b>	<b>APPROACH TO SITE</b>
	<p>The proposed project site is located at Namrup, Dibrugarh, Assam</p> <p>Nearest important town: Naharkatia (15 km).</p> <p>Nearest railway station: Namrup (Broad guage) (10 km).</p> <p>Nearest airport: Dibrugarh (70 Km).</p> <p>Road Approach :NH-37 is 70 km away from the site</p>
1.3	Owner: Assam Power Generation Company Ltd. (APGCL)
<b>2.0</b>	<b>SITE VISIT</b>
	Contractor should visit project site and acquire full knowledge and information about site conditions. The bidder must visit site, to acquaint himself with the conditions prevailing at site and in and around the plant premises, together with all statutory, obligatory, mandatory requirements of various authorities before submission of bid.
<b>3.0</b>	<b>SCOPE OF WORK</b>
3.1	<p>The work to be performed under the scope of this tender mainly consists of but not limited to Civil, structural and Architectural works and their maintenance for specified period of the following plant buildings, structures, and other miscellaneous facilities.</p> <p>A. Buildings</p> <ol style="list-style-type: none"> <li>1) GTG Building</li> <li>2) STG Hall cum SWGR Building</li> <li>3) IA / PA Shed</li> <li>4) Cooling water pump shed (CWPH)</li> <li>5) GBC hall</li> <li>6) Deaerator structure</li> </ol> <p>B. Foundations for the following Equipment</p> <ol style="list-style-type: none"> <li>1) FRP cooling tower etc.</li> </ol> <p>The plot for construction area/ fabrication yard/ field office/ construction stores has to be developed by the contractor of its own and the Client shall only identify the space on as in where is basis. All the infrastructure facilities which include roads, approaches, drainage system, pavements etc. shall be developed &amp; provided by the contractor of its own.</p> <p>THE WORK WILL INVOLVE.</p> <p>Civil, structural and architectural works connected with the above mentioned buildings / structures such as earth work, concrete work, brick work, steel work embedment, plastering and painting, windows flooring, grouting etc.</p> <p>Structure / Building wise indicative scope of work is as follows:</p>
3.2.1	<p><u>GTG Building:</u></p> <p>This structure already exists at the site. New trusses, roof / side sheeting are required to be fabricated and erected and modification works need to be carried out as per following details:</p> <ul style="list-style-type: none"> <li>➤ Dismantling lacings at the top of existing columns for modification works at the column tops and re-welding of lacing after column top modification.</li> </ul>

	<ul style="list-style-type: none"> <li>➤ Fabrication and erection of New structure / members on existing structure <ul style="list-style-type: none"> <li>a) Roof trusses, supporting column stub and base plates.</li> <li>b) Top cord bracing</li> <li>c) Purlins including sag rods</li> <li>d) Tie members</li> </ul> </li> <li>➤ Fabrication and welding of new members on the following existing members <ul style="list-style-type: none"> <li>a) Columns</li> <li>b) Bracings</li> </ul> </li> <li>➤ Dismantling / Removing existing purlins and re-erection</li> <li>➤ Roof and side sheeting works</li> <li>➤ Platforms and hand railing.</li> </ul>
3.2.2	<p><u>STG Hall cum SWGR Building:</u> This structure already exists at the site. STG Hall is dismantled above crane level. New roof legs, trusses, roof / side sheeting are required to be fabricated and erected and modification works need to be carried out as per following details:</p> <ul style="list-style-type: none"> <li>➤ Modification works on top of existing columns for erecting roof legs.</li> <li>➤ Fabrication and erection of New structure / members on existing structure <ul style="list-style-type: none"> <li>a) Roof leg columns above crane level</li> <li>b) Roof trusses.</li> <li>c) Top and bottom cord bracing</li> <li>d) Purlins including sag rods</li> <li>e) Tie members</li> <li>f) Vertical posts and top rafter above control room floor (including base support for vertical posts)</li> <li>g) Crane girder beams, bracing, Chequered plate platforms, hand railing etc.</li> </ul> </li> <li>➤ Fabrication and welding of new members on the following existing members <ul style="list-style-type: none"> <li>a) Columns</li> <li>b) Beams</li> <li>c) Bracings</li> </ul> </li> <li>➤ Roof and side sheeting works</li> <li>➤ NDT test on concrete slabs</li> <li>➤ Dismantling of RCC and relaying.</li> </ul>
3.2.3	<p><u>Air Compressor hall:</u> This building already exists at the site. Following works need to be carried out on the building</p> <ul style="list-style-type: none"> <li>➤ Fabrication and welding of new members on the following existing members <ul style="list-style-type: none"> <li>a) Columns</li> <li>b) Bracings</li> <li>c) Gusset plates</li> <li>d) Truss bottom cord members</li> </ul> </li> <li>➤ Fabrication and erection of New members on existing structure <ul style="list-style-type: none"> <li>a) Bracing between top and bottom cord members</li> <li>b) Bracing between bottom cord member and columns</li> </ul> </li> <li>➤ Dismantling of Column encasement for welding new members and re-encasement after welding.</li> </ul>
3.2.4	<p><u>Cooling water pump shed:</u> This building already exists at the site. Following works need to be carried out on the building</p> <ul style="list-style-type: none"> <li>➤ Fabrication and welding of new members on the following existing members <ul style="list-style-type: none"> <li>a) Columns</li> <li>b) Bracings</li> <li>c) Gusset plates</li> <li>d) Truss bottom cord members</li> </ul> </li> </ul>
3.2.5	<p><u>GBC hall:</u> This building already exists at the site. Following works need to be carried out on the building</p> <ul style="list-style-type: none"> <li>➤ Fabrication and welding of new members on the following existing members</li> </ul>

	<ul style="list-style-type: none"> <li>i. Columns</li> <li>ii. Beams</li> <li>iii. Bracings</li> <li>iv. Gusset plates</li> <li>v. Truss bottom cord members</li> <li>➤ Fabrication and erection of New members on existing structure</li> <li>i. Bracing between top and bottom cord/column members</li> <li>➤ Extension of existing base plate including fixing of anchor fasteners.</li> <li>➤ Dismantling of brick wall for extension of base plate and re-construction of brick wall after completion of erection.</li> </ul>
3.2.6	<p><u>Deaerator structure:</u> This structure already exists at the site. Following works need to be carried out on the building</p> <ul style="list-style-type: none"> <li>➤ Fabrication and welding of new members on the following existing members <ul style="list-style-type: none"> <li>i. Columns</li> <li>ii. Beams</li> <li>iii. Bracings</li> <li>iv. Gusset plates</li> <li>v. Truss bottom cord members</li> </ul> </li> <li>➤ Fabrication and erection of New members on existing structure</li> <li>➤ Providing grating on platforms including modification of existing grating.</li> </ul>
3.3	<p><b>CIVIL AND ARCHITECTURAL WORKS</b> The scope covers all Civil and Architectural within the battery limits. The important works covered are as below.</p> <ul style="list-style-type: none"> <li>a) Excavation of earth and backfilling including dewatering of excavations for foundations, trenches, tunnels pits, etc. till the construction of the same is completed and disposal of surplus.</li> <li>b) Civil and architectural works such as brick work, plastering, painting floor finishes.</li> <li>c) Preparation of detailed working drawings and bar bending schedules for all reinforced concrete work and getting them approved by the BHEL Engineer.</li> <li>d) Taking delivery from BHEL stores, fabrication and fixing structural steelwork for cable trench covers, plates etc.</li> <li>e) Fabrication supply and fixing of anchor bolts, sleeves, fixing frames, embedment etc. in concrete.</li> <li>f) Supply of all instruments and personnel for conducting necessary tests at site as specified/as directed by the Engineer.</li> </ul>
3.4	<p><b>STRUCTURAL WORKS</b> The work involves:</p> <ul style="list-style-type: none"> <li>a) Taking delivery from BHEL stores fabrication and erection of structural steel work including all interfacing work and miscellaneous work. Supply of steel will be made by BHEL. The nature of work shall include columns, beams, splicing of steel works as needed, bracings, purling, sheeting runners, sag rods, ties, struts walkways, galleries, stairs, ladders, handrails, floor gratings, chequered plate work, M.S, pipes, equipment supporting platforms and all other structures required for successful completion of project.</li> <li>b) Connection design &amp; preparation of fabrication drawings including appointment of a separate agency, approved by BHEL, for review and approval of fabrication drawings in consultation with BHEL.</li> <li>c) Taking delivery of M.S pipes from BHEL stores, fabrication and erection of handrail as per drawing and specifications.</li> <li>d) Supply and fixing of floor gratings as per Specifications.</li> <li>e) Supply of high tensile bolts, mild steel bolts, nuts, plain/taper and spring washers, all electrodes required for shop and field work.</li> <li>f) Shop and final painting as per Technical Specification after properly cleaning the steel surfaces.</li> </ul>
3.5	<p><b>GENERAL</b></p> <ul style="list-style-type: none"> <li>a) The drawings enclosed with this tender are intended to give the tenderer a general idea of the type and extent of work involved. The drawings are as such only</li> </ul>

	<p>indicative and not to be considered as the exact construction drawings. Further this is to be noted that the drawings and the documents furnished along with this specification are the sole property of B.H.E.L. It must not be used directly or indirectly in any way detrimental to the interest of the company.</p> <p>b) The scope of work will also include such other related works although they may not be specifically mentioned in the above paragraph and all such incidental items not specified but reasonably imply and necessary for completion of the job as a whole all as desired and as directed by the engineer.</p> <p>c) The detail scope of work covered above is not a comprehensive list of items of work involved. The detail scope of work may vary considerably depending on the actual construction requirements.</p>
3.6	<p><b>ALSO INCLUDED IN THE SCOPE</b></p> <p>Unless otherwise specified, the work to be provided by the contractor for the items mentioned in the “Schedule of items”, shall include but not be limited to the following.</p> <p>a) Furnishing all labour, materials, supervision, construction plans, equipment, supplies, transport, to and from the site, fuel, electricity, compressed air, water, transit and storage insurance and all other incidental items and temporary works not shown on specified but reasonably implied or necessary for the proper completion, maintenance and handling over the works, except in accordance with the stipulations laid down in the contract documents and additional stipulations as may be provide by the engineer during the course of works.</p> <p>b) Furnishing samples of all materials required by the engineers for testing/inspection and approval for use in the works. The samples may be retained by the engineer for final incorporation in the works.</p> <p>c) Furnishing test reports for the products used or intended to be used, if called for the specifications or if so desired by the engineer.</p> <p>d) Giving all notices, paying all fees, taxes etc., in accordance with the general conditions of contract, that are required for all works including temporary works.</p> <p>e) Arranging manufacturer’s supervision for items of work done as per manufacturer’s specifications when so specified.</p> <p>f) The contractor shall provide the owner/BHEL such a assistance, instruments, machines, labour and materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity of any material used.</p> <p>Providing all incidental items not shown or specified but reasonably implied or necessary for the successful completion of the work in accordance with contract</p>
3.7	<p><b>WORK BY OTHERS</b></p> <p>No work under the specification will be provided by any agency other than the contractor unless specifically mentioned elsewhere in the contract.</p>
3.8	<p>The scope shall include other related works although they may not be specifically mentioned in the subsequent clauses and all such incidental items not mentioned, but are necessary for completion of the work as a whole. The scope also includes supply of all labour, technical personnel, materials and equipment for execution of work and getting all materials tested, submitting test reports, arranging supervision etc. and execution of the contract with above mentioned major areas of work.</p>
3.9	<p>The work to be performed under this specification consists of providing all labour, materials, consumables, equipment, temporary works, temporary storage sheds for contractors own use, temporary colony for labour and staff, temporary site offices, constructional plant’s transportation / handling and all incidental items not shown or specified but reasonably implied or necessary for the completion of subject scope, all in strict accordance with the specifications including revisions and amendments thereto as may be required during the execution of work.</p>
3.10	<p>All quality standards, tolerances, welding standards &amp; other technical requirements shall be strictly adhered to. The bidder shall fully apprise himself of the prevailing conditions at the proposed site, climatic conditions including monsoon pattern, soil conditions, local conditions and site specific parameters and shall include for all such conditions and contingent measures in the bid, including those which may not have been specifically brought out in the specifications.</p>

3.11	Civil works, associated with modification work
<b>4.0</b>	<b>BROAD SCOPE OF WORK</b>
4.1	The scope shall include other related works although they may not be specifically mentioned in the subsequent clauses and all such incidental items not mentioned, but are necessary for completion of the work as a whole. The scope also includes supply of all labour, technical personnel, materials and equipment for execution of work and getting all materials tested at site laboratory or approved laboratory outside, submitting test reports, arranging supervision etc. and execution of the contract with following major areas of work. The work also involves grit blasting of fabricated structures along with painting prior to erection. The paint shall be supplied by vendors free of cost. Bidder's quoted rate should be inclusive for these works also. Structural painting along with grit blasting & supply of paint is to be included in quoted rate.
4.2	The work to be performed under this specification consists of providing all labour, materials, consumables, equipment, temporary works, temporary storage sheds, temporary colony for labour and staff, temporary site offices, constructional plants, transportation/ handling and all incidental items not shown or specified but reasonably implied or necessary for the completion of subject scope, all in strict accordance with the specifications including revisions and amendments thereto as may be required during the execution of work. The works include unloading and storage of steel and cement supplied by BHEL vendors directly within the quoted rate and no separate payment is admissible.
4.3	The scope shall also include setting up by the bidder a testing laboratory in the field to carry out all relevant tests.
4.4	All quality standards, tolerances, welding standards & other technical requirements shall be strictly adhered to. The bidder shall fully apprise himself of the prevailing conditions at the proposed site, climatic conditions including monsoon pattern, soil conditions, local conditions and site specific parameters and shall include for all such conditions and contingent measures in the bid, including those which may not have been specifically brought out in the specifications.
<b>5.0</b>	<b>DEVIATIONS/ CLARIFICATIONS</b>
	The bidder is required to submit his offer in the relevant schedule/ format without any ambiguity. Any assumptions, presumptions, deviations etc. indicated or implied anywhere by the bidder except those indicated in the deviation schedule/ format will not be recognized and will not form a part of consideration/ offer. In the absence of such filled-up schedule/ format it will be understood and agreed that the bidder's offer is based on strict conformance to the specification and no negotiation would be allowed in this regard. BHEL reserve the right not to recognize any/ all deviations submitted after opening of the bid.
<b>6.0</b>	<b>DEWATERING</b>
	Contractor shall ensure at all times that his work area & approach/ access roads are free from accumulation of water, so that the materials are safe and the erection/ progress schedule are not affected. No separate claim in this regard shall be admitted by BHEL. No separate payments for dewatering of subsoil, surface water or catchments water, if required, at any time during execution of the work including monsoon period shall be considered by BHEL.
<b>7.0</b>	<b>LAND</b>
7.1	Availability of land within plant boundary is very limited and the contractor has to plan and use the existing land considering the use of land by other mechanical/ electrical contractors and the storage of plant machineries and materials. The existing land shall be shared by all erections agencies. The same will be reviewed by BHEL/ customer and allotted to the extent available/ considered necessary, depending upon the area availability. Contractor shall develop these areas for their site office, covered storage shed, various open yard, fabrication yard, batching plant yard etc including grass/ tree cutting, leveling, grading etc as applicable. Bidder must visit site to assess site condition, prior to quoting.
7.2	Suitable area of land for labour colony will be provided inside project boundary wall, free of cost, depending on availability of the same from customer during the project period. The contractor to construct labour colony/ hutment at their own cost. The



	contractor is to fulfill norms of cleanliness, sanitation, sewerage etc for labour colony, as per site requirement. However, bidder shall also note the following.
7.2.1	These temporary shelters shall be separated from construction/ storage area by providing suitable boundary wall/ fencing and suitable watch & ward shall be provided for security.
7.2.2	Proper sanitation, cleanliness etc shall be maintained at site.
7.2.3	In case required by customer to meet any statutory requirement or otherwise, the land will be vacated without any cost & time implication within a suitable mutually agreed time.
7.2.4	On completion of work & before demobilizing, labour colony shall have to be dismantled, the whole area cleaned and the debris etc removed from the land.
7.2.5	All statutory, legal and contractual requirements shall be complied with while constructing temporary shelters.
7.3	Land for contractor's site office, store, fabrication yard, batching plant, plant material storage will be provided free of cost as per availability within the project premises. The contractor has to construct site office, store, fabrication yard as per requirement at their own cost.
7.4	The contractor will be responsible for handing back all lands, as handed over to the by BHEL/ customer.
<b>8.0</b>	<b>WATER</b>
8.1	BHEL will provide one bore well point (about 200 mtr away from work place) free of cost for construction as well as drinking water. Further distribution of pipeline net work including bore well pump (preferably submersible pump) is to be arranged by the bidder at his own cost. Contractor will submit work plan showing batching plant, temporary covered cement store 500MT capacity, civil construction office of contractor along with toilet, septic tank, soak pits etc, fabrication yard, within twenty days. Contractor will construct civil laboratories, their own offices, stores, erection approaches near each work spot, at their own cost.
8.2	Contractor will arrange for drinking water in their labour colony at his own cost.
8.3	BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of water supply and the contractor shall claim no compensation for delay in work for such interruption. Contractor may make standby arrangement for water for which no separate payment shall be made by BHEL.
8.4	Contractor will have to arrange at his own cost for storage of water near batching plant (minimum 100 cum) to meet day-to-day requirement. Contractor will ensure adequate storage of construction water to meet the requirement of water during major concreting.
8.5	Availability of water (construction as well as drinking) in project is limited. Contractor shall ensure that no water is wasted. In this regard the contractor shall take all necessary measure towards preservation of water.
<b>9.0</b>	<b>ELECTRICITY</b>
9.1	Electricity/Construction Power shall be provided by BHEL free of charge at a single point (about 200 M from the place of work) within the project premises to the successful bidder for the entire scope under this tender. Successful bidder shall make their own arrangement for further distribution of electricity at different points/ locations at their own cost.
9.2	If any other voltage level (other than normally available) is required, the same shall be arranged by contractor from power supply as above. Contractor will have to provide at his own cost necessary calibrated energy meters (tamper proof, suitably housed in a weather proof box with lock & key arrangement) at point of power supply along with calibration certificate from authorized/ accredited agency for working out the power consumption. In case of recalibration required for any reason, necessary charges including replacement by calibrated meters is to be borne by the contractor. Supply of electricity shall be governed by Indian Electricity Act and Installation Rules and other Rules and Regulation as applicable. The contractor shall ensure usage of electricity in an efficient manner and the same may be audited by BHEL time to time. In case of any major deviation from normally accepted norms is observed, BHEL will reserve the

	right to impose penalty as deemed fit for such cases.
9.3	The bidder shall have to provide earth leakage circuit breaker at each point wherever human operated electrical drives/ T&Ps are deployed.
9.4	The power supply will be from the available grid. BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of power supply/ variation in voltage level and no compensation for delay in work can be claimed by the contractor due to such non-supply on the grounds of idle labour, machinery or any other grounds.
9.5	Bidder shall arrange sufficient illumination at their own cost in the working areas.
9.6	The contractor should ensure that the work in critical areas is not held up in the event of power breakdown. In the event of breakdown in the electric supply, if the progress of work is hampered, it will be the responsibility of the contractor to step up the progress of work after restoration of electric supply so that overall progress of work is not affected.
9.7	Contractor will arrange power including area illumination inside labour colony at their own cost.
<b>10.0</b>	<b>CONSUMABLE</b>
10.1	All consumables, like gas, electrodes, chemicals, lubricants, paints etc. required for work, shall be arranged by the contractor at their cost unless otherwise specifically mentioned in the contract.
10.2	All consumables to be used for the job shall have to be approved by BHEL/ customer prior to use.
10.3	In the event of failure of contractor to bring necessary and sufficient consumables, BHEL may arrange for the same at the risk & cost of the contractor. The entire cost towards this along-with overhead shall be paid by the contractor or deducted from the contractor's bills.
<b>11.0</b>	<b>TEST CERTIFICATES</b>
	Necessary test certificates of all materials supplied by contractor are to be produced to BHEL prior to use of those materials.
<b>12.0</b>	<b>MMD</b>
	The contractor shall provide all (excepting those in BHEL scope) required monitoring and measuring devices (MMD) and handling & transportation equipments for the scope of work covered under these specifications. The MMD shall have test calibration certificate from authorized/ Govt. approved agencies. The contractor shall also keep provision of alternate engagement for such MMD so that the work does not suffer when a particular MMD is sent for calibration. Re-testing/ re-calibration shall also be arranged by the contractor at their own cost at regular interval during the period of use as advised by BHEL.
<b>13.0</b>	<b>QUALITY CONTROL &amp; QUALITY ASSURANCE</b>
	Contractor's engineers & supervisors shall be adequately qualified and also inclined to do a quality job. The quality assurance engineer shall co-ordinate all aspects of quality control, inspection, implementation of quality assurance procedures laid down in Quality Plan and technical specification by BHEL. He shall fill up quality assurance log sheets/ formats and submit to BHEL for joint inspection and acceptance. The contractor shall fill up, maintain & preserve the quality records in computerized media. BHEL's authorized representative shall be given free access at all time to such quality related records etc for inspection, review etc.
<b>14.0</b>	<b>QUALITY ASSURANCE PROGRAMME</b>
14.1	The contractor shall arrange for suitable quality assurance programme to control all activities pertaining to the scope of work, as necessary. Such programs shall be outlined by the contractor & shall be finally accepted by BHEL. A quality assurance programme of the contractor shall generally cover the following
14.2	Organization structure and qualification data for key personnel of the contractor for the management and implementation of proposed quality assurance programme.
14.3	The procedure for source inspection, incoming raw material inspection, verification of material purchased etc.
14.4	System for maintenance of records.

14.5	<b>General requirements – quality assurance</b>	
	All materials, components and equipments covered under the specification shall be procured, manufactured, erected, commissioned and tested, as applicable, at all stages as per comprehensive quality assurance programme. An indicative programme for inspection/ test, to be carried out by the contractor, for some of the major items is given in the respective technical specification.	
14.6	Field quality plan will detail out the quality practices and procedures etc to be followed by the contractor's site quality control organization, during various stages of site activities from receipt of material /equipment at site.	
14.7	Casting and forgings used for construction shall be of tested quality. Details of results of chemical analysis, mechanical properties test result, as necessary, shall be furnished.	
14.8	All welding shall be carried out as per procedure drawn and qualified in accordance with the requirements of ASME Section- 1X/BS4870 or other international equivalent standard acceptable to BHEL	
14.9	All welders etc employed on any part of the contract at contractors' work or at site shall be qualified as per ASME Section–IX or BS:4871 or equivalent international standard approved by BHEL/ customer. Such qualification test shall be conducted in presence of BHEL.	
14.10	All non-destructive examinations (NDT) shall be carried out in accordance with approved international standard. NDT operators shall be qualified as per SNT-TC-IA (of American society of non-destructive examination) Results of NDT shall be properly recorded and submitted for approval.	
14.11	All the purchase specifications for the major bought out items list of which shall be drawn up by the contractor and finalized with BHEL shall be furnished to BHEL for comments and approval before placement of orders.	
14.12	BHEL reserves the right to carry out quality audit and quality surveillance of the systems and procedures of contractor's quality management. Contractor shall provide all necessary assistance to enable BHEL to carry out such audit.	
14.13	Quality audit/ approval of the results of test & inspection will not prejudice the right of BHEL to reject an equipment service not giving desired performance and shall not in no way limit the liabilities and responsibilities of the contractor in earning satisfactory performances of equipment/ service as per specification.	
14.14	Repair/rectification procedure to be adopted to make any job acceptable shall be subject to the approval of BHEL.	
14.15	All the latest relevant IS codes as per technical specification should be available with the contractor at site with in 45 days from the date of placement of LOI.	
<b>15.0</b>	<b>PROJECT MANAGEMENT/ CONSTRUCTION MANAGEMENT</b>	
	To meet the need of construction management at site, contractor shall provide the following services within quoted/ accepted rates.	
15.1	<b>PLANNING &amp; MONITORING</b>	
15.1.1	The bidder shall prepare detail construction schedule (L-3) as per completion dates given in this document. This schedule must include all milestone and key activities for each sub-system / components in the areas of engineering (wherever applicable), procurement, manufacture (wherever applicable), excavation/ construction/ erection. This network must conform to the overall project schedule. The bidder should also ensure monitoring of these activities at least weekly basis to start with and on daily basis whenever required by BHEL. The network must conform to following overall project schedule. However, further micro break-up of project schedule based on major schedule shall be drawn at site prior to start of work. Bidder should also ensure monitoring of these activities at least weekly basis to start with and on daily basis whenever required by BHEL/ customer.	
	Construction Milestones	Completion schedule from date of LOI
15.1.1.1	Release of LOI	Zero Date
15.1.1.2	Mobilization & Start of Civil & Structural Works	Within 7 days
15.1.1.3	Fabrication & erection of GTG Building	2 Months

15.1.1.4	Fabrication & erection of STG Hall cum SWGR Building	4 Months
15.1.1.5	Fabrication & erection IA / PA Shed & GBC hall	3 Months
15.1.1.6	Fabrication & erection Cooling water pump shed (CWPH)	5 Months
15.1.1.7	Deaerator structure & foundation of FRP cooling tower	4 Months
15.1.1.8	All Balance work including Civil Work	6 Months
15.1.2	The bidder shall also prepare progress report indicating progress on key activities, management summary for critical activities, list of actions requiring attention of BHEL. This schedule is to be preferably made in Primavera/ MS Projects, so that the same is compatible with BHEL's project management software.	
15.1.3	The contractor's site office must have facilities of communications like Fax, E-mail, and telephone with STD facility within a month from date of LOI.	
15.2	<b>PROGRESS REPORTING</b>	
15.2.1	The bidder shall submit daily, weekly and monthly progress reports for work force, materials reports, consumables (gases/ electrodes) report and other reports as per pro-forma considered necessary by the BHEL. In case of any failure on contractor's part to comply with this, BHEL may at its discretion, consider to withhold part payment against their RA bills.	
15.2.2	The progress report shall indicate the progress achieved against planned with reasons indicating delays, if any, and shall give the remedial actions which the contractor intends to take to make good the slippage or lost time, so that further works again proceed as per the original program and the slippages do not accumulate and effect the overall program.	
15.2.3	The daily work force reports shall clearly indicate the work force deployed, category-wise specifying also the activities in which they are engaged.	
15.2.4	Weekly progress review meetings will be held at site during which actual progress during the week vis-à-vis scheduled program shall be discussed or actions to be taken for achieving targets. For discussions, the contractor shall present program of subsequent week. The contractor shall constantly update/revise his work program to meet the overall requirement.	
15.2.5	Periodic progress reviews on the entire activities of execution in respect of supply and works in scope of bidder will be held once in a month at site/ any other location. These meetings will be attended by reasonably higher officials of the contractor and will be used as a forum for discussing all areas where progress needs to be speeded up. The contractor shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.	
15.2.6	During construction contractor shall take an average thirty colour digital photograph/slides per month (not less than seven per week) of the works during progress and fifty colour digital photograph/slides of completed facilities.	
15.2.7	Successful bidder has to provide for electronic/ computerized storing and re-production/ printing/ plotting of various data, log sheets, protocols, measurements etc. These may be stored in CD (as per requirement) and handed over to BHEL as per requirement.	
15.3	<b>SITE ORGANIZATION</b>	
15.3.1	The contractor shall maintain a site organization of adequate strength in respect of manpower, construction machinery and other implements at all time for smooth execution of the contract headed by a competent construction manager for site operations with sufficient level of authority to take site decisions. The vendor will submit organization chart (showing the name of Site-In-Charge) with individual bio-data indicating various levels of experts to be posted for supervision in the fields of supervision and execution, quality, material management, planning, safety, etc. The organization shall be reinforced from time to time, as required to make up slippage (if any) from the schedule without any commercial implication to BHEL. The organization chart is to be submitted within 10 days from the date of LOI.	
15.3.2	Following engineering manpower apart from construction manager with power plant construction background to be deployed at site by the successful vendor for their day to day supervision etc..	
15.3.2.1	Qualified safety officers with assistants (exclusive for	Officer – One No.

	safety supervision for project jobs).	
15.3.2.2	Engineer & supervisors for quality inspection (civil+strl).	One No. Engineer
15.3.2.3	Site supervising engineer and supervisors (civil+strl).	One No. Engineer (civil+strl) Two supervisors (civil+strl)
15.3.2.4	Planning engineer (power plant erection background)	One
15.3.3	Engineer/ supervisor for other functions like store & purchase, material management, planning, fin, admn etc are to be provided as per site requirement and not considered above.	
15.3.4	In the event of non deputation of engineer/ supervisor/ draftsman by the bidder BHEL shall reserve the right to deduct Rs 75,000 per man-month for engineer and Rs 45,000 per man-month for the supervisor from the date of deputation as indicated as above from RA bills. Further induction of manpower regarding site supervisor & site engineer will be decided at site as per requirement.	
15.3.5	BHEL reserves the right to reject or approve the list of personnel proposed by the contractor. The persons whose bio-data have been approved by BHEL will have to be posted at site and deviation in this regard will not be permitted unless specific & reasonable justification is made.	
15.3.6	In addition to above, a well experienced qualified engineer to be designated, as 'Project Co-coordinator', shall be deployed by the contractor. Such engineer shall have adequate exposure on the job and shall remain fully involved in all planning activities, guidance etc to contractor's own team during the complete execution period of contract.	
15.3.7	The contractor should also submit to BHEL for approval a list of T&Ps along with their fitness certificates. The tools & tackles shall not be removed from site without written permission of BHEL.	
15.3.8	The contractor should also submit network programs for the construction/erection of various items. These networks shall show the BHEL hold points (CHP), which have to be cleared by BHEL, or their authorized representatives before further erection can take place. These programs for the erection would clearly identify responsibilities of the contractor and BHEL. It is the responsibility of the contractor to get the Networks approved by BHEL within four weeks of the date of finalization of award of work/ placement of LOI.	
15.4	<b>CONSTRUCTION MANAGEMENT</b>	
15.4.1	Based on the approved program the contractor shall submit a program of construction/ erection/ commissioning for the implementation. These programs would be amplified showing start of erection and subsequent activities and shall form the basis for site execution and detail monitoring. The three monthly rolling program with the first month's program being tentative based on the site condition would be prepared based on these programs. The contractor shall also be involved along with BHEL to tie up detailed resources mobilization plan over the period of the contract matching with the performance targets.	
15.4.2	The program would be jointly finalized by the site in-charge of the contractor with BHEL project coordinator as well as the site-planning representative. The erection program will also identify sequential events matching financial turnover.	
15.4.3	The contractor is liable to furnish all documentary evidences towards payment of Works Contract Tax as and when required by BHEL.	
15.5	<b>WORK &amp; SAFETY REGULATIONS</b>	
15.5.1	The contractor shall ensure the safety of all workmen, materials and equipment either belonging to him or to others working at site. He shall observe safety rules and codes applied by the BHEL at site without exception.	
15.5.2	Passenger lift should have safety cage with multiple rope, i.e. with safety rope & limit switch.	
15.5.3	Safety nets with hand railings must be provided on all both inside & outside hanging platform of slip-form equipment & hanging platform from brickwork.	
15.5.4	Emergency vehicle must be provided & kept separately as stand-by.	

15.5.5	Non-conformity of safety rules and safety appliances will be viewed seriously and BHEL has right to impose fines on the contractor on each incident/each non-conformity as per details given below:	
	Safety measure	Fine (Rs)
15.5.5.1	Not wearing safety helmet at site.	Rs 200/-
15.5.5.2	Not wearing safety shoes at site.	Rs 200/-
15.5.5.3	Not wearing safety belt while working at higher elevation	Rs 500/-
15.5.5.3	Not providing lifeline of safety belt	Rs 500/-
15.5.5.4	Not using grinding goggles while doing grinding operations	Rs 50/-
15.5.5.5	Not using 24V supply for lighting in confined spaces.	Rs 500/-
15.5.5.6	Improper earthing of welding & other electrical machines.	Rs 500/-
15.5.5.7	Electrical plug not used for hand machines	Rs 100/-
15.5.5.8	Not slinging properly	Rs 200/-
15.5.5.9	Using damaged slings	Rs 200/-
15.5.5.10	Using frayed / broken welding cables	Rs 200/-
15.5.5.11	Non removal of scarp from platforms	Rs 500/-
15.5.5.12	Lifting cylinders without cage	Rs 500/-
15.5.5.13	Gas cutting without taking proper precautions or not using sheet below	Rs 500/-
15.5.5.14	Not maintainingg electrical winches properly	Rs 500/-
15.5.5.15	Shorting of fuse links by thick wire	Rs 500/-
15.5.5.16	Over speeding of vehicles within in site premise	Rs 200/-
15.5.5.17	Not having valid driving license for type of vehicle being driven	Rs 500/-
15.5.5.18	Not having valid registration for the vehicle	Rs 500/-
15.5.5.19	Not providing proper barricades/ caution boards	Rs 500/-
15.5.5.20	Not displaying SWL on the lifting equipment	Rs 200/-
15.5.5.21	Sub-contractor not attending safety meeting	Rs 1000/-
15.5.5.22	Improper ladder for climbing up	Rs 500/-
15.5.5.23	Improper scaffolding arrangement	Rs 500/-
15.5.5.24	Engaging child labour for construction work	Rs 1000/-
15.5.5.25	Using domestic LPG cylinder for gas cutting /welding operations	Rs 500/-
15.5.5.26	Not maintaining First Aid Box	Rs 500/-
15.5.6	Any other nonconformity noticed not listed above will also be fined. The decision of BHEL engineer is final on the above. The amount will be deducted from running bills of the contractor. The amount collected on the above will be recognize for giving award to the employee who could avoid accidents by following safety rules. Also, the amount will be spent for improving the safety at site.	
15.5.7	The contractor shall also be responsible for provision of all safety notices and safety equipment required both by the relevant legislation and BHEL, as he may deem necessary.	
15.5.8	The contractor will notify well in advance to BHEL of his intention to bring to the site any container filled with liquid or gaseous fuel or explosive or petroleum substance or such chemicals, which may involve hazards. BHEL shall have the right to prescribe the conditions, under which such container is to be stored, handled and used during the performance of the works and the contractor shall strictly adhere to and comply with such instructions. BHEL shall have the right at his sole discretion to inspect any such container or such construction plant/equipment for which material in the container is required to be used and if in his opinion, its use is not safe, he may forbid its use. BHEL shall entertain no claim due to such prohibition and BHEL shall not entertain any claim of the contractor towards additional safety provisions/conditions to be provided for/constructed as per the BHEL's instructions.	
15.5.9	Further, any such decision of the BHEL shall not, in any way, absolve the contractor of his responsibilities and in case, use of such a container or entry thereof into the site area is forbidden by the BHEL, the contractor shall use alternative methods with the approval of the BHEL without any cost implication to BHEL or extension of work schedule.	
15.5.10	Where it is necessary to provide and/or store petroleum products or petroleum	

	<p>mixtures and explosives, the Contractor shall be responsible for carrying-out such provision and/or storage in accordance with the rules and regulations laid down in Petroleum Act 1934, Explosives Act, 1948, and Petroleum and Carbide of Calcium Manual published by the Chief Inspector of Explosives of India. All such storage shall have prior approval of the BHEL. In case, any approvals are necessary from the Chief Inspector (Explosives) or any statutory authorities, the Contractor shall be responsible for obtaining the same.</p>
15.5.11	<p>All equipment used in construction and erection by contractor shall meet Indian/ International Standards and where such standards do not exist, the Contractor shall ensure these to be absolutely safe. All equipments shall be strictly operated and maintained by the Contractor in accordance with manufacturer's operation Manual and safety instructions and as per Guidelines/ rules of BHEL in this regard.</p>
15.5.12	<p>Periodical examinations and all tests for all lifting/ hoisting equipment &amp; tackles shall be carried-out in accordance with relevant provisions of Factories Act 1948, Indian Electricity Act 1910 and associated laws/ rules in force from time to time. A register of such examinations &amp; tests shall be properly maintained by contractor and will be promptly produced as &amp; when desired by BHEL or by the person authorized.</p>
15.5.13	<p>The contractor shall be fully responsible for the safe storage of his and his sub-contractor's radioactive sources in accordance with BARC/ DAE (Bhabha Atomic Research Center/ Department of Atomic Energy, Govt of India) rules and other applicable provisions. All precautionary measures stipulated by BARC/ DAE in connection with use, contractor would take storage and handling of such material.</p>
15.5.14	<p>The contractor shall provide suitable safety equipment of prescribed standard to all employees and workmen according to the need, as may be directed by BHEL who will also have right to examine these safety equipments to determine their suitability, reliability, acceptability and adaptability.</p>
15.5.15	<p>Where explosives are to be used, the same shall be used under the direct control and supervision of an expert, experienced, qualified and competent person strictly in accordance with the Code of Practices/ Rules framed under Indian Explosives Act pertaining to handling, storage and use of explosives.</p>
15.5.16	<p>The contractor shall provide safe working conditions to all workmen and employees at the Site including safe means of access, railings, stairs, ladders, scaffoldings etc. The scaffoldings shall be erected under the control and supervision of an experienced and competent person. For erection, the contractor only shall use good and standard quality of material.</p>
15.5.17	<p>The contractor shall not interfere or disturb electric fuses, wiring and other electrical equipment belonging to BHEL or other contractors under any circumstances, whatsoever, unless expressly permitted in writing by BHEL to handle such fuses, wiring or electrical equipment.</p>
15.5.18	<p>Before the contractor connects any electrical appliances to any plug or socket belonging to the other contractor or BHEL, he shall fulfill following.</p>
15.5.18.1	<p>Satisfy BHEL that the appliance is in good working condition.</p>
15.5.18.2	<p>Inform BHEL of the maximum current rating, voltage and phases of the appliances.</p>
15.5.18.3	<p>Obtain permission of BHEL detailing the sockets to which the appliances may be connected.</p>
15.5.19	<p>The BHEL will not grant permission to connect until he is satisfied that:</p>
15.5.19.1	<p>The appliance is in good condition and is fitted with suitable plug;</p>
15.5.19.2	<p>The appliance is fitted with a suitable cable having two earth conductors, one of which shall be an earthed metal sheath surrounding the cores.</p>
15.5.20	<p>No electric cable in use by contractor/ BHEL will be disturbed without prior permission. No weight of any description will be imposed on any cable and no ladder or similar equipment will rest against or attached to it.</p>
15.5.21	<p>No repair work shall be carried out on any live equipment. BHEL must declare the equipment safe and a permit to work shall be issued by BHEL before the contractor carries out any repair work. While working on electric lines/equipments whether live or dead, suitable type and sufficient quantity of tools will have to be provided by contractor to electricians/ workmen/ officers.</p>

15.5.22	The contractors shall employ necessary number of qualified, full time electricians/ electrical supervisors to maintain his temporary electrical installations.
15.5.23	The contractor shall employ trained safety officer to supervise day to day safety aspects of the equipments and workmen, who will co-ordinate with BHEL safety officer. In case of work being carried out through sub-contractors, sub-contractor's workmen/ employees will also be considered as the contractor's employees/ workmen for the above purpose.
15.5.24	The name and address of such safety officer of contractor will be promptly informed in writing to BHEL with a copy to safety officer-In charge before he starts work or immediately after any change of the incumbent is made during currency of contract.
15.5.25	In case any accident occurs during the construction/ erection or other associated activities undertaken by the contractor thereby causing any minor or major or fatal injury to his employees due to any reason, whatsoever, it shall be the responsibility of the contractor to promptly inform the same to BHEL in prescribed form and also to all the authorities envisaged under the applicable laws.
15.5.26	BHEL shall have the right at his sole discretion to stop the work, if in his opinion the work is being carried out in such a way that it may cause accidents and endanger the safety of the persons and/ or property, and/ or equipments. In such cases, the contractor shall be informed in writing about the nature of hazards and possible injury/ accident and he shall comply to remove shortcomings promptly.
15.5.27	The contractor shall not be entitled for any damages/ compensation for stoppage of work due to safety reasons above and the period of such stoppage of work will not be taken as an extension of time for completion of the facilities and will not be the ground for waiver of levy of penalty.
15.5.28	The contractor shall follow and comply with all safety rules of BHEL, relevant provisions of applicable laws pertaining to the safety of workmen, employees plant and equipment as may be prescribed from time to time without any demur, protest or contest or reservation. In case of any inconformity between statutory requirement and Safety Rules of BHEL referred above, the later shall be binding on contractor unless the statutory provisions are more stringent.
15.5.29	In case BHEL is made to pay such compensation then the contractor is liable to reimburse BHEL such amount in addition to compensation indicated above.
15.5.30	These insurance covers have to be taken prior to start of his work at subject project and he shall make available the Policy to Construction Manager, BHEL for necessary verification before commencement of work. However, irrespective of such verification/ acceptance, 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 Insurance Company for all matters regarding the insurance in his scope.
15.6	<b>HEALTH SAFETY &amp; ENVIRONMENT</b>
15.6.1	It is imperative on the part of the contractor to join and effectively contribute in joint measures such as tree plantation, environment protection, contributing towards social up-liftment, conversion of packing woods to school furniture, keeping good relation with local populace etc.
15.6.2	Round the clock experienced paramedical personnel with first aid facility & one ambulance at site to be arranged by the bidder at his own cost. No medical facility within/ near the site shall be provided by BHEL. However, BHEL shall provide one room (without furniture) for use as first aid.
15.6.3	deleted.
15.6.4	No borrow area for earth shall be arranged/ provided by BHEL.
15.6.5	All individual site erection, temporary approaches required for movement of cranes, trailers, trucks, transit mixers, dumpers, etc shall be arranged by the contractor at his own cost.
15.6.6	The contractor shall solely be responsible for safety, quality, & quantity of material after it is handed over and issued to contractor by the BHEL.
15.7	Further details of applicable HSE norms shall be as per HSE clause of Tender SCC.
<b>16.0</b>	<b>TEST CERTIFICATE FOR TOOLS &amp; PLANT</b>



	All T&P, lifting tackles & pulling devices to be deployed by the contractor must bear valid/ latest test certificates for their suitability, and documents shall be preserved at site.
<b>17.0</b>	<b>ISSUE OF TOOLS &amp; PLANT BY BHEL</b>
17.1	BHEL will provide crane free for erection of members above crane girder level for limited period. Bidder has to plan shall plan his activities accordingly in co-ordination with BHEL site engineers and submit the requirement of crane along with L-3 Schedule.
17.2	BHEL shall provide fuel, lubricants, Mobil, cadmium compound, hydraulic oil, air and fuel filter etc. on free of cost basis for this crane. Regular maintenance and Break down maintenance (not attributable to the contractor) of the BHEL crane is excluded from the scope of the contractor. However, necessary services as required for shortening / extending of crane boom are included in the scope of contractor.
17.3	BHEL shall provide crane operator for this crane free of cost. However, the contractor shall bear only overtime charges, if any, for the operator provided by BHEL for services provided beyond the prescribed working hours of cranes. Such OT deployment shall be with prior intimation and consent of BHEL.
17.4	In case of non-availability of high capacity crane to be provided by BHEL due to break down or any other reason, the contractor shall plan / augment / alter his activities to meet erection / commissioning targets in consultation with BHEL and no compensation will be admissible on above ground.
17.5	Consolidation of ground and arrangement of sleepers/sand bag filling etc. for safe operation/ Movement of equipment including cranes/trailers etc. shall be the responsibility of the contractor at his cost.
17.6	In the event of BHEL issued T&P, measuring instruments etc. the contractor and BHEL shall maintain joint protocol about the condition of all T&P, instruments etc. taken from BHEL's custody and return to BHEL after use. The contractor shall not use this equipment for purposes other than the scope of work given in this tender document. It is the responsibility of contractor to keep these equipment always in working condition and ensure their safe return in working condition to BHEL's store subject to normal wear & tear.
17.7	After use of T&P items issued by BHEL the same shall be returned to BHEL in good working condition subject to normal wear & tear failing which recoveries at the book value of the item or the market rate prevailing at the time of returning the items, whichever is higher shall be made from the payments due to the contractor from BHEL from this contract or from any other contract.
<b>18.0</b>	<b>INSURANCE</b>
18.1	BHEL shall arrange comprehensive MCE (marine cum erection) Insurance Policy for total project supply & services including balance of plant package covering transit risks & loss, destruction or damage during handling at site, storage, civil works, erection, testing and commissioning up to trial operation completion of each unit including theft, sabotage, fire, lightning and other natural calamities.
18.2	Bidder shall timely intimate despatches to the underwriter. The name of the underwriter and Policy No shall be intimated in due course of time.
18.3	Bidder shall be responsible for timely submission of loss/ damage/ theft to the underwriter, assistance in lodging & settlement of claim for losses/ damages/ theft/ lodging of FIR with police. Any consequential loss arising out of non-compliance of this stipulation will be borne by bidder.
18.4	It is bidder entire responsibility to insure bidder workmen against accident and injury while at work as required by the relevant rules and to pay compensation, if any, to bidder workmen as per workmen's compensation act. Bidder has also to insure his staff against accident/ injury. Bidder have to take insurance cover for his tools & plants, assets etc.
18.5	These insurance covers have to be taken prior to start of work at project and bidder shall make available the policy to Construction Manager, BHEL site 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 bidder. Regarding the aforesaid insurance cover, bidder shall directly deal with the Insurance Company for all matters regarding the insurance in his scope.
18.6	Bidder will take necessary precautions/ due care to protect the material at project site, while in his custody from any damage/ loss till the same is handed over to BHEL/ customer at project site. For lodging/ processing of insurance claim, bidder will submit necessary documents. BHEL will reserve the right to recover the loss from bidder as detailed below in case the damage/ loss is due to negligence/ carelessness on his part. In case of theft of material under his custody, the same shall be reported to police by bidder immediately and copy of FIR and subsequently police investigation report shall be submitted to BHEL/ customer for taking up with insurance. However, this will not relieve bidder of his contractual obligation for the materials in his custody.
18.7	It will be his responsibility to replenish the items lost/ damaged in time without hampering the schedule of work and without waiting for settlement of insurance claim. Amount received from the underwriters on settlement of insurance claim shall be passed on to bidder as and when available.
18.8	In case the claim is summarily rejected by the underwriters due to his WILFUL NEGLIGENCE and bidder fail to replenish the items lost/ damaged, the entire cost of repair/ replacement will be recovered from bidder.
18.9	Other conditions of Insurance shall be as per relevant clause of GCC.
<b>19.0</b>	<b>MATERIAL HANDLING (BHEL ISSUED MATERIAL)</b>
19.1	Part of structural steel (plate/ ISMB/ channel/ angle) only will be issued free of cost by BHEL for use in the work covered in this contract. All other materials required for proper completion of job shall be provided by contractor and quoted rates shall be inclusive of this.
19.2	Consignment of steel will be directly issued to the contractor as received by BHEL, on weight basis from its supplier, as per delivery challan of supplier.
19.3	It would be the responsibility of the contractor to keep in constant contact with BHEL/ site to find out the delivery status, arrival of the consignments and arrange for escort to accompany the truck/ trailer for transportation of above materials by BHEL'S supplier, as necessary. The lorry, truck way bill for the consignment as shall be received by BHEL would be handed over to the contractor immediately for unloading of materials including all arrangement for necessary gate passes etc. All arrangement for necessary gate passes etc shall be the responsibility of contractor.
19.4	Payment of all demurrages that may result due to contractor's fault/ delay would be the responsibility of the contractor. If BHEL have to make payment of demurrage together with freight, the amount so paid as demurrages for the reasons stated above, shall be recovered from the bills of the contractor. The decision of BHEL's engineer in this regard will be final and binding on the contractor. However the contractor has to clear all such charges, if any in this regard and complete the job without waiting for BHEL's decision.
19.5	It would be the responsibility of the contractor to sign on the delivery book acknowledgement slip of supplier/ transport authorities etc.
19.6	Consignments coming on Sundays and holidays are also required to be handled/ unloaded by the contractor. Since the offices and stores will probably remain closed on such days, it will be the responsibility of the contractor to contact BHEL engineers at their residence and obtain instructions.
19.7	Since the consignments are expected to arrive during any time of the day or night, contractor shall have, his workmen round the clock at site as well as other places as required to unload the materials immediately on arrival.
19.8	Unloading of materials at the storage yard or at places designated by BHEL, stacking & restacking, shifting & resifting, using contractor's own cranes, trailers and other equipments with the valid road permit for their operation, unloading and stacking etc shall be responsibility of the contractor under this contract. All materials/equipments shall be stacked, stored above ground level by use of concrete or wooden sleepers. No materials shall remain on ground at any time. All concrete sleepers required for stacking the materials shall be arranged by contractor (successful bidder of this package as per BOQ items. All other material handling equipments like winches, d-

	shackles, slings of various sizes, max puller, pulley blocks, jacks, trucks, tailors etc required for such material handling of steel, cements etc shall be arranged by contractor within quoted/accepted rates.
19.9	It will be the responsibility of the contractor to submit computerized account of all such consignments of materials received by them, daily to BHEL.
19.10	BHEL reserve the right to recover from the contractor any loss arising out of damage/ theft or any other causes of the materials issued to him at any point.
19.11	Open land (very limited space) for storage shall be provided by BHEL on free of cost basis. Temporary barbed wire fencing of the steel storage yard, batching plant area, reinforcement bending yard area etc are to be done by the contractor as per BOQ items and is included under the scope of his work. Contractor shall also remove grass, bushes, trees etc. wherever required off the land provided to him and shall make proper continuous up-keepment of the open yard/ land by removing grass, bushes trees etc and same is included under the scope of his work & no extra payment shall be made to the contractor in this regard. The bidder shall make complete arrangement of necessary security personnel, to safeguard all free issue materials in his custody. Materials issued will be used only for construction of permanent work. The contractor shall take care of material issued by BHEL and shall protect the same from theft, damage and weathering.
19.12	The contractor shall construct waterproof cement store (capacity minimum 500 MT or 500 sqm area) as indicated above for storing and stacking of cement, CGI/ asbestos roofing (slope) with brick masonry wall, PCC flooring. Materials required for the same shall be provided by contractor at his own cost. Cement has to be kept over wooden raised platform. Stacking of cement is to be done as per IS codes with proper illumination and locking arrangements.
19.13	The contractor shall in no case be entitled for any compensation or damages on account of any delay in supply or non-supply thereof for all or any such material.
19.14	Clotting of cement and excessive rusting of steel must be avoided. In case, due to any cause attributable to the contractor, such clotting of and/ or rusting of steel occur rendering the same unusable, then such quantity of cement/ steel shall be recovered from the interim payment at the penal rate specified in the tender.
19.15	No material shall be issued to the contractor except as those indicated above, i.e. cement and steel unless otherwise expressly provided for in the contract. Contractor will have to make his own arrangement at his own cost for procurement of any other material as required for the works and of such quality as acceptable to BHEL.
19.16	The contractor shall maintain proper store account for all the BHEL issued materials and shall give three copies of monthly computerised reconciliation statement of such account to the BHEL.
19.17	Contractor shall carry out in complete association with BHEL, material management functions and execution like day to day update of materials, issued to contractor, accounting for surplus/ scrap material returned etc. These functions shall also be carried out through computerised system utilizing suitable software. Contractor shall provide experienced software personnel to associate on dedicated basis for efficient discharge of the same.
19.18	The contractor shall solely be responsible for the safety & quality of material after it is handed over and issued to contractor by BHEL.
19.19	BHEL issued materials shall not under any circumstances taken out of the project site unless otherwise permitted by BHEL.
19.20	All the necessary lifting tackles, cranes, hydra, tools & plants including tractors, trailers, trucks, pulley blocks, jacks, winches, wire ropes etc, of suitable capacities and other equipments incidental to carry out this work shall have to be arranged by the contractor at his cost. BHEL engineer reserves the right to inspect lifting tackles and equipment before allowing their use. Such approval however shall not relieve the responsibility of the contractor to ensure safe handling of equipment taking the precautions to avoid any accident and damage to other equipment and personnel.
19.21	No separate rate will be applicable for the above job. The contractor will quote the rate for the items inclusive of all charges for the above job. The contractor shall organise despatch & transport steel materials through supplier and unload & receive the

	materials as above as per requirement decided by BHEL and in this case the decision of BHEL will be final.
19.22	Bidder's scope of handling of steel under the scope of this tender includes stacking/ storing of materials over concrete sleepers. Bidder scope shall include provision of concrete sleepers for this purpose and payment against the same will be made by BHEL as per relevant item of price schedule. After completion of the job bidder shall take back the sleepers. Bidder's quoted rate/ price shall be in consideration to this.
<b>20.0</b>	<b>ISSUE OF MATERIALS</b>
20.1	ISSUE OF STRUCTURAL STEEL
20.1.1	The steel shall be issued to the contractor free of cost on the following basis.
20.1.2	MS structural steel (plates, angle, channel, ISMB) materials – Weighment basis (unit – MT).
20.1.2	Structural steel issued by the BHEL shall be properly accounted for. The total quantity of steel required for the work will be calculated from the approved fabrication drawings and bill of materials. The measurement for payment as well as for accounting shall be based on the sectional weights as indicated in the following IS specifications. IS: 808-1989 - Beams, channels and angles IS: 1730-1961 - Plates
20.1.3	In case any such sectional weights are not available in the above documents, the manufacturer recommendation shall be binding.
20.1.4	The steel issued to the contractor shall be mainly in standard length and sections as received from the supplier. However, the contractor shall be bound to accept the steel in length as available in the project stores no claims for extra payment because of issue of non-standard length will be entertained.
20.1.5	MS flats as required in the fabrication of structures are to be arranged by the contractor as per BOQ items.
20.2	The contractor shall satisfy himself of the quality and quantity of the materials at the time of taking delivery from BHEL stores. No claims whatsoever will be entertained by BHEL because of quality or quantity after the materials are taken by contractor from BHEL stores.
20.3	The contractor shall submit to the engineer, a statement indicating estimated quantity of steel required at least two months in advance. In addition, the contractor shall also furnish the estimated requirement of steel during a month by the third week of the previous month indicating his requirement.
20.4	Bidders to ensure that no lamination materials are taken over by them from BHEL. Fabrication wastage, if any due to above, shall not be compensated by BHEL.
20.5	Bidder to note that all fasteners like MS/ HT/ HSFG bolts/ nuts, lock nuts, washers etc shall be supplied by the bidder as per applicable item of Price Schedule.
20.6	Bidder to note that cement and steel required for his enabling job like store/ site office etc shall be arranged at his own cost. All TG staging material shall be arranged by contractor at his own cost. Bidder shall do the design for its structure just immediately after receipt of TG deck drawing and obtain approval from BHEL.
<b>21.0</b>	<b>RETURN OF MATERIALS</b>
21.1	RETURN OF STEEL INCLUDING SCRAP
21.1.1	All surplus steel and all wastage materials will be taken back on weighment basis.
21.1.2	Surplus, unused and un-tampered steel shall be sorted section-wise and returned separately for a place directed by BHEL/ engineer within the project area. Return of such materials will not be entitled to any handling and incidental charges.
21.1.3	All wastage/ scrap (including wastage, unusable scrap) shall be returned to the stores on weighment basis and a receipt obtained for material accounting purposes. Return of such material will not be entitled to any additional cost due handling and transportation and incidental charge.
21.1.4	Scrap for reinforcement steel and structural steel shall be returned separately
<b>22.0</b>	<b>CONSUMPTION AND WASTAGE</b>
22.1	STRUCTURAL STEEL CONSUMPTION
22.1.1	The theoretical consumption of various sections shall be based on approved drawings. Weights shall be calculated considering the sectional weights as per Indian

	standard as mentioned in relevant clause. No extra shall be payable to the contractor for any deviation in weights for the two different procedures adopted for issue and calculation of the theoretical consumption including rolling tolerances.	
22.1.2	Actual consumption = Issue – Surplus.	
22.1.3	Surplus = Untampered, unused, uncut quantity of steel returned by the contractor to BHEL store.	
22.1.4	Wastage = Actual consumption – Theoretical consumption.	
22.2	<b>STRUCTURAL STEEL WASTAGE</b>	
22.2.1	Allowable wastage – 5 % (five percent) of the theoretical consumption shall be considered. Wastage is further classified as cut pieces and scrap measured as per actual weight basis. Invisible wastage (loss of materials due to gas cutting, straightening of edges etc) shall be limited to 0.5 % (zero point five percent) of theoretical consumption and shall be considered for reconciliation purposes only. But this invisible wastage shall be considered to be included in allowable wastage (i.e. five percent).	
22.2.2	Sl no	Structural steel materials
		Basis of issue & penal recovery
	S-1	Theoretical consumption (without considering any wastage, scrap or loss) as per specification & drg.
	S-2	Wastage limited to plus five percent (+5%) of the aforesaid theoretical consumption (S-1) towards allowable wastage.
	S-3	Wastage beyond five percent (5%) of the aforesaid theoretical consumption (S-1).
22.3	All wastage structural steel shall be returned to BHEL.	
<b>23.0</b>	<b>RECONCILIATION OF BHEL ISSUED MATERIALS</b>	
23.1	The contractor shall submit a reconciliation statement of cement and steel issued to him with each RA bill.	
23.2	At the time of submission of bills, the contractor shall properly account for the material issued to him as specified herein to the satisfaction of BHEL certifying that the balance materials are available with contractor's custody at site.	
23.3	At the time of submission of bills by the contractor, if it is noticed by BHEL that the wastage is high and calls recovery at the penal rate, then BHEL will proceed for recovery for the excess wastage as per penal recovery rates as specified.	
23.4	The approved drawings/ bar bending schedules are to be considered for the purpose of reconciliation of materials.	
<b>24.0</b>	<b>RECOVERY OF MATERIAL</b>	
24.1	If wastage exceeds the specified limit, the recovery of excess wastage shall be made from monthly RA bill at the penal rate stipulated below.	
24.2	<b>PENAL RATE OF MATERIALS</b>	
	Item	Penal rate (Rs)
24.2.1	Structural steel.	65,000/- per MT.
<b>25.0</b>	<b>CONSTRUCTION OF TEMPORARY OFFICE, STORES ETC</b>	
25.1	The contractor shall arrange at his own cost cleaning and grass removing of area allotted, construction of his temporary office/ stores, cement godown, etc. and also the watch and ward of all the above. Materials required for the same shall be provided by contractor at his own cost.	
25.2	BHEL contemplates to provide fabrication yard more that one places within plant premises. However; during execution, based on actual site conditions, requirement and layout and approaches, the above may change suitably.	
<b>26.0</b>	<b>TOOLS &amp; PLANTS (TO BE PROVIDED BY CONTRACTOR)</b>	
26.1	Tentative list of T&P to be deployed by contractor for successful completion of work is detailed below. This supersedes corresponding Annexure of Volume-1E	
26.2	It may be noted that the list is not exhaustive and is only for general guidance. The contractor is required to provide all necessary T&P (other than those specified to be provided by BHEL) measuring (calibrated) instruments & handing equipments for timely completion of total work as per contract. In case of project requirement, some	

	activities may have to pre-pone. In such cases the contractor may have to deploy additional T&P. Quoted rate shall be inclusive of such requirements. However, contractor shall submit deployment plan of all T&P along with tender bid.	
26.3	In the event of any failure of the part of the contractor and as a result progress of work suffered, BHEL may at his discretion also terminate the contract on this ground and take out any or whole amount of the contract from the scope of the contractor. In the event of failure of contractor to deploy necessary and sufficient T&P/ IMTEs. BHEL will be at liberty to arrange the same at the risk & cost of contractor including transportation cost of same from any of BHEL site/ other agency & charges as applicable shall be deducted from contractor's RA bill. Decision of BHEL in this regard will be final & binding on contractor.	
26.4	Following major T&Ps to be arranged by contractor within the time as indicated against each T&P.	
	Major T&P items	Mobilisation time (from date of intimation for starting the work)
26.4.1	One no Tyre Mounted / crawler cranes 40/45 T capacity	Within 60 days,
26.4.2	Two no 10/12 T capacity Hydra crane	1st Within 45 days.
26.4.3	2 nos drill machine (all cut)	Within 30 days.
26.4.4	4 nos MIG machine	Within 30 days.
26.4.5	7 nos welding rectifier	Within 30 days.
26.4.6	1 no trailer – 15T	Within 45 days.
26.4.7	2 no power driven HSFG bolt tightening m/c	Within 60 days.
26.4.8	1 no air compressor of capacity 500 cfm.	As per site requirement
26.4.9	2 nos curing pump – 1.5 /2 HP (pump for curing)	Within 30 days.
26.4.10	1 no pneumatic hammer.	As per site requirement
26.4.11	2,000 RM MS scaffolding pipe	As per site requirement
26.4.12	Power winch – 3T - 2 nos for structural erection	Within 50 days
26.4.13	Power winch – 5T - 1 nos for structural erection	Within 50 days
26.4.14	1 no total station with adequate arrangement for operators.	As per site requirement
26.4.15	1 nos auto level & staff	As per site requirement
26.4.16	Portable fire extinguishers as below: Soda acid – 5 sets. Dry chemical powder – 5 sets CO2 – 5 sets. Water & sand bucket (4 buckets in one stand) – 2 sets. Fire hose with nozzle (50 M length) – 2 sets.	Within 45 days
26.5	T&P shown in the above mentioned list are minimum requirement. Mobilisation period shown above for major T&Ps have to be adhered and no change will be permitted without written approval of Construction Manger/ BHEL. Further requirement will be reviewed time to time at site and vendors will provide additional T&P/ equipments to ensure completion of entire work within schedule time without any financial implication to BHEL. Vendor will give advance intimation & certification regarding capacity etc prior to dispatch of heavy equipments.	
26.6	All T&P and all IMTEs, which are required for successful and timely execution of the work covered within the scope of this tender, shall be arranged and provided by the contractor at his own cost in working condition.	
<b>27.0</b>	<b>CONSTRUCTION SCHEDULE</b>	
27.1	Entire work shall be carried out in accordance with the broad project milestone schedule as given in tender. The contractor shall ensure compliance with detailed project milestone schedule (approved by customer), which is integral part of the tender. Within 15 days of LOI, the contractor shall discuss with BHEL site engineer & furnish the (L-3) construction schedule indicating all detailed milestones on the basis of major activities and get it approved from BHEL engineer.	
27.2	Contractor shall submit daily work program based on above construction schedule.	
27.3	The contractor has to work round the clock in two shifts of 12 hrs each.	
27.4	Mix design for all concreting may be carried out either at site or from a reputed	

	institute; contractor has to ensure adding of admixture and minimizing of cement content in line with IS 456.
<b>28.0</b>	<b>COMPLETION PERIOD</b>
28.1	Entire work for civil & structural including reconciliation, completion of formalities for contract closing, winding up of site set-up, handing over, demobilization etc (common for both the units/ module/ block) shall be completed by 06 (Six) months from date of LOI(Letter of Intent).
28.2	The contractor shall mobilize to start the work within 7 days from the date of issue of LOI(Letter of Intent)
28.3	However, actual date of start of work will be certified by Construction Manager, BHEL site.
<b>29.0</b>	<b>LIQUIDATED DAMAGE</b>
<b>29.1</b>	<b>INTERMEDIATE MILESTONE</b>
29.1.1	In case delay in achieving the Milestone as mentioned in Clause 15.1.1.3 above, is solely attributable to the contractor, 0.5% per week of executable contract value, limited to maximum 2% of executable contract value, will be withheld.
29.1.2	In case delay in achieving the Milestone as mentioned in Clause 15.1.1.4 above, is solely attributable to the contractor, 0.5% per week of executable contract value, limited to maximum 3% of executable contract value, will be withheld.
29.1.3	Amount already withheld, if any against slippage of clause 15.1.1.3 & 15.1.1.4 above, shall be released only if there is no delay attributable to contractor in achievement of Milestone as mentioned in clause 15.1.1.8 above.
29.1.4	Amount to be withheld on account of slippage of identified intermediate milestone(s) shall be withheld out of respective milestone payment and balance amount (if any) shall be withheld @10% of RA Bill amount from subsequent RA bills.
29.1.5	Final deduction towards LD (if applicable), on account of delay attributable to contractor shall be based on final delay analysis on completion / closure of contract. Withheld amount, if any due to slippage of identified intermediate milestone(s) shall be adjusted against LD or released as the case may be.
29.1.6	In case of termination of contract due to any reason attributable to contractor before completion of work, the amount already withheld against slippage of intermediate milestones shall not be released and be converted into recovery.
29.2	Overall Completion
29.2.1	If the completion of work is delayed beyond the completion period referred above due to reasons attributable to the contractor, they shall pay to BHEL as penalty a sum @ 0.5% of contract prices per week of delay or part thereof subject to a maximum of 10% of the total contract value.
29.2.2	All other terms shall be as per the provision of GCC in this regard.
29.3	In case of LD recovery, the applicable GST shall also be recovered from the contractor.
<b>30.0</b>	<b>CERTIFICATE TOWARDS COMPLETION</b>
	The work under the scope of contractor shall be deemed to have been completed in all respects only when so certified by BHEL. Decision of BHEL in this regard shall be final and binding on the contractor.
<b>31.0</b>	<b>GUARANTEE</b>
31.1	Even though the work will be carried out under supervision of BHEL, the contractor will be responsible for the quality of workmanship, quality of materials/ items and design for which the contractor is responsible.
31.2	The contractor shall guarantee the work executed under the scope of the contract for a period of 12 (twelve) months from the date of start of guarantee period as certified by the engineer (i.e. on completion of total work under scope and/ or taking over by BHEL) and shall rectify free of cost all defects due to faulty supply or work done. In case the contractor fails to repair/ replace the defective works within the time specified by the engineer, BHEL may proceed to undertake the repairs/ replace such defective works at contractor's risk and cost without prejudice to any other rights and recover the same from security deposit/ other dues.
<b>32.0</b>	<b>INTEREST BEARING RECOVERABLE ADVANCE (IBRA) / MOBILIZATION</b>

	<b>ADVANCE</b>
	Not applicable for this tender.
<b>33.0</b>	<b>OVER RUN CHARGES</b>
	No over run charges shall be paid to the contractor in the event the completion period is extended for any reason whatsoever.
<b>34.0</b>	<b>REVISION ON ACCEPTED CONTRACT RATE</b>
	No revision of rates shall be applicable in the event completion period is extended for any reason whatsoever.
<b>35.0</b>	<b>PRICE VARIATION CLAUSE</b>
	Not applicable for this tender.
<b>36.0</b>	<b>SECURITY DEPOSIT &amp; PERFORMANCE BOND</b>
36.1	Security deposit shall be as per relevant clause of GCC.
36.2	Performance bond is not applicable for this tender.
<b>37.0</b>	<b>TAXES AND DUTIES</b>
37.1	All taxes excluding GST & BOCW Cess (as specified elsewhere in the tender) but including, Charges, Royalties, any State or Central Levy and other taxes for materials if any obtained for the work and for execution of the contract shall be borne by successful bidder and shall not be payable extra by BHEL. Any increase of above at any stage during execution of contract, including extension of the contract, shall have to be borne by successful bidder contractor. Bidder's quoted/ accepted rates/ price shall be inclusive of all such requirements.
37.2	GST along with Cess (as applicable) legally leviable & payable by successful bidder as per GST Law shall be paid by BHEL, extra. Hence, bidder shall not include GST along with Cess (as applicable) in their quoted rates/ price.
37.3	Successful bidder shall furnish proof of GST registration with GSTN Portal covering the services under this contract. Registration should also bear endorsement for the premises from where the billing shall be done by successful bidder on BHEL for this project / work.
37.4	Since GST on output will be paid by BHEL separately as enumerated above, bidder's your quoted rates / price should be after considering the Input Credit under GST law at bidder's end.
37.5	TDS under Income Tax shall be deducted at prevailing rates on gross invoice value from the running bills (RA bills) unless exemption certificate from the appropriate authority / authorities is furnished.
37.6	TDS under GST (if / as & when applicable later) shall be deducted at applicable rates on gross invoice value from the running bills (RA bills). However, as on date no TDS under GST is applicable.
37.7	Bidder shall note that GST Tax Invoice complying with GST Invoice Rules (Section 31 of GST Act & Rules referred thereunder) wherein the 'Bill To' details shall encompass following. BHEL GSTN – Refer attached GSTN code table of BHEL. Name - BHARAT HEAVY ELECTRICALS LIMITED Address - Shall be intimated later. Specific details of BHEL GSTN, Name and Address as stated above, have been specified elsewhere in the tender.
37.8	Successful bidder to intimate immediately on the day of removal of goods (in case of any supply of goods) to BHEL along with all relevant details and send a scanned copy of Tax Invoice to BHEL through following communication mode for enabling BHEL to meet its GST related compliances. Portal address. and Email address – Shall be intimated later. Specific details of above shall be intimated to successful bidder by BHEL at appropriate juncture.
37.9	In case of delay in submission of above mentioned documents on the date of despatch, BHEL may incur penalty / interest for not adhering to Invoicing Rules under GST Law. The same will be liable to be recovered from successful bidder, in case such delay is not attributable to BHEL.
37.10	In case of raising any Supplementary Tax Invoice (Debit / Credit Note), successful bidder shall issue the same containing all the details as referred to in Section 34 read with Section 31 of GST Act & Rules referred there under.
37.11	Successful bidder shall comply with the Time Limit prescribed under the GST Law and



	rules thereof for raising of the Tax Invoice. If any supply of goods is applicable, successful bidder shall also ensure prompt delivery of goods after despatch.
37.12	Bidder shall note that in case GST credit is delayed / denied to BHEL due to delayed / non receipt of goods and / or Tax Invoice or expiry of the timeline prescribed in GST Law for availing such ITC, or any other reasons, not attributable to BHEL, GST amount shall be recoverable from successful bidder along with interest levied/ leviable on BHEL, as the case may be.
37.13	Successful bidder shall upload the invoices raised on BHEL in GSTR-1 within the prescribed time as given in the GST Act. Bidder shall note that in case of delay in declaring such invoice in your return and GST credit availed by BHEL is denied or reversed subsequently as per GST Law, GST amount paid by BHEL towards such ITC reversal as per GST law shall be recoverable from the successful bidder along with interest levied / leviable on BHEL.
37.14	Way Bill: Successful bidder to arrange for way bill / e-waybill for any transfer of goods for the execution of the contract. Successful bidder has to make their own arrangement at their cost for completing the formalities, if required, with Issuing Authorities, for bringing materials, plants & machinery at site for execution of the works under this contract, Road Permit / Way Bill, if required, shall be arranged by successful bidder and BHEL will not supply any Road Permit/ Way Bill for this purpose.
37.15	Any new taxes & duties, if imposed subsequent to due date of offer submission as per NIT & TCN, by statutory authority during contract period (including extension, if the same is not attributable to you), shall be reimbursed by BHEL on production of relevant supporting document to the satisfaction of BHEL. However, you shall obtain prior approval from BHEL before depositing new taxes and duties.
37.16	Benefits and / or abolition of all existing taxes must be passed on to BHEL against new taxes, if any, proposed to be introduced at a later date.
<b>38.0</b>	<b>INTERIM PAYMENT</b>
38.1	For all items of work as per Volume-III, Price Schedule, interim payment shall be limited to 95 % of the gross value of interim bill on item rate basis. The balance 5 % retained from each RA bill shall be payable along with final bill. All admissible recovery/ adjustments etc shall be made from the interim payable amount. However, this 5 %, retained from each RA bill, may be released against submission of performance bank guarantee, to be kept valid till final bill & guarantee period in prescribed proforma, subject to (i) Receipt of certificate that all works are completed in all respects. Submission of bank guarantee towards performance guarantee is separate and the bank guarantee towards security deposit cannot be utilized for this purpose. The security deposit will be refunded as per GCC. For release of final bill and release of SD-BG, the details of terms and conditions has been elaborated in GCC.
38.2	Out of this 95 %, 0.5 % of gross bill amount shall be paid in the following manner on certification by BHEL engineer after compliance of each of following activity in each month. In case of non-fulfilment of respective activity by vendor in each month, no payment shall be made by BHEL against corresponding activity and no claim of bidder at a later date, whatsoever, in this regard shall be entertained by BHEL.
38.2.1	0.2 % shall be paid on compliance of house keeping of vendor's working area and store/ office areas.
38.2.2	0.1 % shall be paid on compliance of general illumination of vendor's working area and stores, office area.
38.2.3	0.1 % shall be paid on compliance of applicable OHSAS requirement as per guidelines of BHEL/ PSER and as specified in the tender.
38.2.4	0.1 % shall be paid on compliance of applicable safety requirement as per guidelines of BHEL/ PSER and as specified in the tender.
38.3	Applicable GST, which can be claimed at any point, shall be released to you upon compliance of following:
38.3.1	You declaring such Invoice in his GSTR-1
38.3.2	Receipt of Goods / services and Tax Invoice by BHEL

38.3.3	Confirmation of payment of GST thereon by you on GSTN Portal
38.3.4	Above is subject to receipt of goods/ service and tax invoice thereof along with vendor declaring invoice in their return and paying GST within timeline prescribed for availing ITC by BHEL.
38.4	BHEL Site at its discretion may further split up the above percentages and effect payment to suit the site condition, cash flow requirement and according to the progress of work.
<b>39.0</b>	<b>METHOD OF MEASUREMENT</b>
	IS:1200 in conjunction of IS:3385 shall be adopted. In case the item of measurement is not available in the IS:1200, the standard procedure adopted in CPWD shall be adopted. In case the same is also not available in CPWD, the measurement of the work done will be based on the mutual agreement between BHEL and contractor. In all the above cases, interpretation of BHEL will be final and binding to the contractor.
<b>40.0</b>	<b>EXTRA/ ADDITIONAL ITEMS OF WORK</b>
40.1	Miscellaneous work like tit bit modification required in existing structure and not covered in Schedule 3 & 4 of price schedule, shall be paid on man-hour basis as per clause 2.15.5 of GCC.
40.2	Rates for Extra Works arising due to the following: (1) Non availability in BOQ (Rate Schedule) (2) Change in Specifications of materials / works (3) Rectification / modification / dismantling & re-erecting etc. shall be finalised as per clause 2.15.7 of GCC.
<b>41.0</b>	<b>CONTRACT PRICE</b>
41.1	The bidder shall quote their rates strictly in accordance with prescribed rate schedule of Volume-III (latest revision).
41.2	The quantities of various items mentioned in the Price Schedule, Volume-III (latest revision) are approximate, based on very preliminary information and may vary to any extent or deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of the work executed under any part of the this contract including extra items, if any, remains within +/- 15 % (plus/ minus fifteen percent) of the awarded price as per LOI/ WO and as per GCC.
41.3	However, the contractor shall inform BHEL in case quantity variation of any item crosses +50% (plus fifty percent) limit during execution and obtain prior approval/consent of CM,BHEL for before execution of further quantity for this item.
<b>42.0</b>	<b>DESIGN OFFICE AND FABRICATION DRAWING</b>
42.1	Based on design drawings of structures , to be issued to the contractor from time to time by BHEL, contractor has to prepare & submit the detail fabrication / shop drawing including tabulated form of bill of materials (BOM), joint calculations within 15 days of receipt for comments / approval of BHEL at the office of BHEL/ PE& SD, Hyderabad. BHEL reserve the right to assess the capability of the agency to be deployed by contractor for preparation of such fabrication drawing and prior approval from BHEL Engineering office, Hyderabad, is required for appointment of such agency.
42.2	Since time is the essence of the contract, the contractor must indicate the location of their design office where from such detailed activities will be made operative. It is preferred that the contractor have establishment / liaison office at Hyderabad with a co-ordinator for better co-ordination with BHEL/ PE&SD.
42.3	Contractor shall submit progress report pertaining to fabrication drawing, by 7th of each month, drawing-wise, section-wise cumulative Bill of materials for which engineering drawing has been issued to them and status of fabrication drawing.
<b>43.0</b>	<b>FABRICATION / GALVANISING</b>
43.1	All the fabrication of structural steel items (except nuts/ bolts) shall be done in fabrication yard inside project premises. Bidders to note that all fasteners like MS / HT / HSFSG bolts, nuts, lock nuts, washers etc shall be supplied by bidder as per technical specification / drawings and BOQ items. Payment shall be made as per price schedule & TCC.
43.2	Bidder, at his own cost, shall supply electrodes required for fabrication, erection of

	structural steel as per specification and approval of BHEL.
43.3	However, in case of exigency as considered fit by BHEL, BHEL may permit the contractor to get some specific portion of fabrication / galvanizing work done at qualified shop (s) outside project premises. For steel to be issued to the contractor for such purpose, 50% of the value of such steel as worked out as per BHEL's procurement rates shall be furnished by the contractor in the form of BG. Such BG shall be returned depending on receipt of fabricated / galvanized steel back to site.
<b>44.0</b>	<b>OTHER TERMS</b>
44.1	All other term & conditions of this specification, not mentioned above shall be governed by the pertinent provisions of GCC.