

Bharat Heavy Electricals Limited

(A Govt. Of India Undertaking)
Power Sector – Southern Region



SPECIAL CONDITIONS OF CONTRACT **FOR 2 X 660 MW ENNORE SEZ SUPERCRITICAL TPS**

These Conditions shall be read in conjunction with General Condition of Contract (GCC) enclosed alongwith the tender enquiry. In case of any conflict or inconsistency, the requirement of Special Conditions of Contract (SCC) shall prevail over the GCC.

1.0	Project Name	2 x 660 MW ENNORE SEZ SUPERCRITICAL TPS UNITS- 1 & 2 at ASH DYKE OF NCTPS
2.0	Ultimate Customer	TAMILNADU GENERATION AND DISTRIBUTION CORPORATION LIMITED [TANGEDCO]
3.0	Location of Plant	Location: Plant will be located at Ash dyke of North Chennai Thermal Power Station, near Voyalur village, approx. 35 km from Chennai, Tamil Nadu, India. Access by: Location co-ordinates: 80° 18' E to 80° 19' E Longitude 13° 17' N to 13° 18' N Latitude Nearest Village: Voyalur Nearest Town & City: Chennai (35 Km) Nearest Railway Station: Ashipattu Pudunagar (~5 Km) Nearest Airport: Chennai (~60 Km) Nearest Seaport: Ennore (~5 Km) Nearest Road access: All weather road from Pattamandri on the Thiruvottiur – Ponneri district highway Site Elevation: (+) 10.0 m above Mean Sea Level
4.0	Delivery Address(Ship to)	ENNORE SEZ SUPERCRITICAL TPS 2 x 660 MW, VayalurVillage,Chennai,Tamil Nadu
5.0	Consignee Address (Bill To)	BHEL GSTN - 33AAACB4146P2ZL NAME - BHEL Site Office ADDRESS - 2 X 660 MW Ennore SEZ STPP,Vayalur BR PO,Minjur PO,TAMILNADU - 601203
	Notes	Consignee address (Bill To) in Invoice & LR should be strictly as per Sl. No. 05. Place of supply along with name of state to be clearly indicated by vendor in invoice. Delivery address (Ship To) in Invoice and LR should be as per Sl. No. 04. Invoice should clearly specify “Billing from” and “Shipping from” addresses. It is Vendor's responsibility to ensure availability of trucks well in advance for dispatch of material to meet contractual delivery requirement. Delivery Order shall be carried by transporter along with other dispatch documents.
6.0	Buyer and Paying Authority	Buyer and Paying Authority shall be <u>BHEL-PSSR</u> .

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7.0	Mode of Dispatch	By Road/Rail/Sea on Door Delivery and Freight Pre-Paid Basis.
8.0	Road Permit Required	E-way bills / Transit passes / Road Permits, if required for materials / T&P etc., brought into the project site is to be arranged by the Contractor only.
9.0	Transit Insurance	In BHEL Scope Vendor shall inform the following details of dispatches to the Underwriter (refer details below) under intimation to BHEL-PSSRand BHEL Site office: (1) Policy No. (2) Consignee Name. (3) Consignment Details (items with their weightsand value (in INR)). (4) Project Name and P.O. No. (5) LR No. and date,Dispatchorigin anddestination details, Inv. No.
	Policy No.	Marine policy: 500300/21/15/02/00000005 SCE Policy: 500300/44/15/04/40000004
	Name of the Insurance Company	UNITED INDIA INSURANCE CO. LTD.
10.0	GST No.	33AAACB4146P2ZL
11.0	Customer GST & PAN No	TANGEDCO provisional GST no.- 33AADCT4784E1ZCPAN No. - AADCT4784E
12.0	Unloading at site	By Vendor at their own cost
	Storage at site	By Vendor at their own cost
	Movement of Material within Site	By Vendor at their own cost

1. Name of Job

- 1.1. Providing, installing and handing over of two coal covered sheds covering three coal stock piles using tubular steel sections conforming to IS 1161 / IS 4923 and Steel structural sections conforming to IS 2062-2006, Roof monitor if required shall be provided on full length as per the requirement. Scope is inclusive of Designing, supplying, fabrication, welding, handling, assembling & erection in position of tubular space frame structure, cladding sheets (roof and side sheeting) and handing over to customer.

2. Broad Scope of work

- 2.1. Designing also includes:
- 2.1.1. Preparation, submission and obtaining approval of design basis report, Preparation and submission of super structure designs and drawings of cover sheds, which includes steel structure connection designs & details along with obtaining approval for the same.
- 2.1.2. Preparation and submission of sub structure designs and drawings of cover sheds i.e., design pile layout, pile cap & pedestal design along with obtaining approval for the same.

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- 2.1.3. Preparation & submission of design, documents and drawings to BHEL / TANGEDCO, obtaining approvals from M/s Desein Consulting Services and & TANGEDCO (customer).
- 2.1.4. Preparation of manufacturing drawings, submission of Quality Plan viz. manufacturing quality plan & field quality plan, erection sequence and methodology.
- 2.1.5. Fixing of lightening protection to shed including supply of fixing fasteners. However, supply of lightening protection strip is in BHEL scope.
- 2.2. Steel structural sections conforming to IS 2062-2006 (or latest revision) and tubular steel sections conforming to IS 1161 / IS 4923 shall be procured only from the approved vendor list as given in Annexure-I.
- 2.3. Execution of RCC works i.e., Pile, Pile cap & Pedestal is in the scope of BHEL. Grouting of column bases is in the scope of the contractor. Packing plates as per requirement shall be provided by the contractor. All minor adjustments up to (+/-) 25 mm of foundation level, dressing, chipping of foundation surface enlarging the pockets in foundations and grouting of equipments etc. as may be required for the erection of equipments / plants shall be carried out by the Contractor.
- 2.4. Structure shall be designed as per the design criteria furnished elsewhere in the specification.
- 2.5. Supply and fabrication works includes structural steel sections, tubes/pipes, plates, steel cones, props / end connectors / node connectors, side runners, purlins, cladding sheet (roof and side sheeting), gussets, bolts (only galvanised bolts (permanent bolts) to be used for all erection works), foundations bolts, templates for foundation bolts (five numbers templates - for handing it over to civil agency for using it for erection of foundation bolts), fasteners, splice plates, base plates, stiffeners, gutters, rain water down comers, wind ties and other supporting systems, etc., all complete required for successful erection & handing over of space structure for the adequate loads as per specifications elsewhere in this tender. Foundation bolts & templates shall be supplied immediately after approval of the drawings to enable civil agency to timely execute the fixing of foundation bolts in pedestals / columns.
- 2.6. Scope is also inclusive of transportation, threading, machining, straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes if any and other consumables, alignment, fasteners, erection bolts & nuts (if any required - weight of erection bolts, nuts and welds not payable extra and deemed to have been included in the offer), assembly, edge preparation, preheating (if any required as per codes & specifications), post heating, testing of welders, inspection of welds, visual inspection, non-destructive and special testing, rectification and correction of defective welding works, production test plate, inspection and testing, erection scheme, protection against damage in transit, stability of structures, installation of temporary structures, setting column bases, surface preparation by means of manual or mechanical power tools as per relevant codes & specifications, touch-up painting, rectification, dismantling and removal of all temporary structures (weight of temporary structures not payable), etc all complete as specified elsewhere in this

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tender document. Leads and lifts up to all height, tools and plant, all necessary scaffolding, cranes of all capacities required as per the erection requirement, other supporting equipment like small capacity cranes, hydras, trailers, trucks, tractors etc. required for completion of work shall be arranged by the bidder.

- 2.7. General Structural arrangement of the shed and location of column to be furnished to BHEL along with the technical bid. Concrete Pedestal shall be 1.5 M above the finished ground level. Spacing of the shed column shall not be less than 8m and more than 9m.
- 2.8. Rain water down comer shall be considered to drain the water collected between two sheds and shall be directed to peripheral drain of coal stock pile.
- 2.9. Basic Clear Dimensions to be maintained is given below and the same is furnished in the annexure No A-1 –II (Drawing No. IS-1-CE-688-303-C523 R0):

Sl.No	Structure	Length in meters	Width in meters	Height in meters
1	Covered Shed for coal stock pile – 2nos	80	97.50	26 (min.)

- 2.10. Profile of the shed shall be selected in such a way that the structure shall not interfere with machines and their clearances. Clear clearance of 1.5 meters has to be maintained from the equipment / machines.
- 2.11. Note:
- 2.11.1. Drawings issued vide Annexure No. A-1-I (Drawing No. PE-DG-412-100-M001 R05), A-1-II (Drawing No. IS-1-CE-688-303-C523 R0) and A-1-III (Drawing No. IS-1-CE-688-100-C006 R5 Sheet 1 of 3, Sheet 2 of 3 and Sheet 3 of 3) are for tender purpose only. No additional financial implication will be entertained by BHEL at a later date on account of any alteration to this, except otherwise specifically addressed in the tender.
- 2.11.2. The works to be performed under this contract, consist of providing all labour, supervision, material, scaffolding, construction equipments, tools and plants, temporary works, supplies including POL (i.e. Petroleum, oil & lubricants), transportation and all incidental items not shown or specified but reasonably implied or necessary for the proper completion of work in all respects. Testing of all materials, preparation of fabrication drawings etc. are included in the scope of works.
- 2.12. The bidder should fully apprise himself of the prevailing conditions at the proposed site, climatic conditions including monsoon pattern, local conditions, soil strata and site specific parameters and shall include for all such conditions and contingent measures in the bid, including those which may have not been specifically brought out in the specifications.
- 2.13. The work to be done under this specification comprises of design, engineering, manufacturing, assembly, inspection, testing at manufacturer's/ sub-vendor's

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works, painting, proper packing, transportation, delivery, handing over at site of structure as stated above & detailed in the specification & elsewhere in tender documents.

- 2.14. The intent of this specification is to provide services for execution of the project according to most modern and proven techniques and codes. The omission of specific reference to any method, equipment or material necessary for the proper and efficient services towards installation of the structure shall not relieve the successful bidder of the responsibility of providing such services/ facilities to complete the work or portion of work awarded to him. The quoted/ accepted rates/ price shall deem to be inclusive of all such contingencies. Any mismatch/ defect found due to mistake in fabrication/ erection shall have to be rectified by successful bidder free of cost. Inspection by BHEL/ customer does not relieve successful bidder of their responsibility of executing quality erection.
- 2.15. The work to be carried out under scope of this specification, covers complete work of handling including receipt of the material, transportation to site, temporary storage& preservation prior to erection, if required, cleaning, preservative painting, erection, alignment, welding, levelling, adjustment etc. The work shall conform to dimensions & tolerances given in various drawings & documents. If any portion of works is found to be defective in workmanship & not conforming to drawings/ documents or other stipulations, the successful bidder shall dismantle and redo the work duly replacing the defective materials at their own cost, failing which recoveries, as determined by BHEL (i.e. supply and/or installation is to be carried out at risk & cost of contractor along with BHEL overhead as applicable), shall be effected from successful bidder's bills.
- 2.16. It is not the intent of this specification to specify herein all the details of erection and commissioning. However, the system shall conform in all respects to high standards of quality & workmanship for performing the required duties in a manner acceptable to purchaser, who will interpret the meaning of drawings and specifications and shall be entitled to reject any work or material, which in his judgments, is not in full accordance herewith. Rejected and other defective equipment, materials and Plant shall be satisfactorily replaced with proper replacements. The costs and expenses associated with such repairs and replacements shall be to the account of Successful bidder and not reimbursable.
- 2.17. The scope of work broadly covers as per specification & elsewhere in the document but shall not be limited to the following:
- 2.17.1. Detail design of covered sheds ~~work~~ as per specification.
 - 2.17.2. Preparing the manufacturing quality plan.
 - 2.17.3. Complete manufacturing of all the structures, testing and assembly as per specification at manufacturer's/ sub vendor's premises.
 - 2.17.4. Providing requisite sets (both hard & soft copy) of engineering drawings, as-built drawing, plant handbook, storage, preservation & painting manual, erection manual, etc as specified elsewhere in the tender.
 - 2.17.5. Arranging inspection of equipment and accessories etc at manufacturer's/ sub vendor's premises.

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- 2.17.6. Packing & transportation of goods from manufacturer's works/ sub vendor's works within the quoted/ accepted rates/ price.
- 2.17.7. Any equipment not specified here but required to make the equipment complete shall be under the scope of the successful bidder.
- 2.17.8. Transportation of materials on FOR destination/ site basis and door delivery of materials at site.
- 2.17.9. The bidder shall act as "Transporter" of the materials after Transfer of Ownership of the materials at the registered place of the Bidder. However, the Bidder shall continue to act as custodian of the materials and in case of any loss in transit, appropriate recovery shall be made from the Bidder.
- 2.17.10. Unloading of materials at railway station/ transporter's godown/ railway siding/ inside or outside the project area, transportation to successful bidder's stores, assessment of lost/ damaged items in transit/ storage erection & commissioning, arranging the Insurance claims and replacement of lost/ damaged items. The successful bidder shall be responsible for making good the losses/ damages for cases for which BHEL is unable to lodge Insurance claim. If BHEL is unable to recover the full cost from Insurance company against any claims, the balance including deductible franchise wherever applicable, will be recovered from the successful bidder.
- 2.17.11. Transport of material to their respective places of erection and erection of the complete plant & equipment as supplied under this tender.
- 2.17.12. Deployment of all skilled and unskilled manpower required for erection, supervision of erection, watch & ward, commissioning and other services to be rendered under this specification.
- 2.17.13. Deployment of all erection tools & tackle, construction machinery, transportation vehicles and all other implements in adequate number and size, appropriate for the erection work to be handled under scope of this tender except otherwise specified.
- 2.17.14. Supply of all consumables, eg welding electrodes, cleaning agents, diesel oil, lubricant etc as well as materials required for temporary supports, scaffolding, etc as necessary for such erection work, unless specified otherwise.
- 2.17.15. Providing support services for the successful bidder's erection staff, eg, construction of site offices, temporary stores, residential accommodation and transport to work site for erection personnel, watch and ward for security and safety of the materials under the successful bidder's scope and to be arranged at their own cost, etc, as required.
- 2.17.16. Preparing schedules and furnishing progress report in requisite mode & number.
- 2.17.17. Removal of the scrap generated at site.
- 2.18. All other points shall be as per the terms & conditions and specification along with aforesaid references together with amendments incorporated thereto.
- 2.19. Following shall be the responsibility of successful bidder and have to be provided within finally accepted rates/ prices:
 - 2.19.1. Provision as required of all types of labour, supervisors, engineers, watch and ward, tools & tackles, calibrated IMTEs (Inspection, measuring and testing equipment) as specified and otherwise required for the work, consumables for erection, testing and commissioning including material handling.
 - 2.19.2. Proper out-turn as per BHEL plan and commitment.

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- 2.19.3. Completion of work as per BHEL schedule.
2.19.4. Good quality and accurate workmanship for proper performance of the equipment.
2.19.5. Repair and rectification.
2.19.6. Preservation/ re-conservation of all components during storage/ erection/ commissioning till handing over.
- 2.20. Construction of Temporary Office, Stores etc.: The successful bidder shall arrange at his own cost the construction of his temporary office, stores, fabrication yards, labour colony etc. and also the watch & ward of all above
- 3. SITE VISIT**
- 3.1. Bidder should visit site and acquire full knowledge & information about prevailing site conditions and in & around plant premises together with all the statutory, obligatory, mandatory requirements of various authorities before submission of the bid.
- 4. Facilities & Consumables in the Scope of Contractor / BHEL (Scope Matrix)**

Sl.No	Description	Scope to be taken care by		Remarks
		BHEL	Bidder	
1	PART I			
1.1	ESTABLISHMENT			
1.1.1	FOR CONSTRUCTION PURPOSE:			
1.1.1.1	Open space for office	Yes		Free
1.1.1.2	Open space for storage	Yes		Free
1.1.1.3	Construction of bidder's office, canteen and storage building including supply of materials and other services		Yes	
1.1.1.4	Bidder's all office equipments, office / store / canteen consumables		Yes	
1.1.1.5	Canteen facilities for the bidder's staff, supervisors and engineers etc		Yes	
1.1.1.6	Fire fighting equipments like buckets, extinguishers		Yes	
1.1.1.7	Fencing of storage area, office, canteen etc of the bidder		Yes	
1.1.2	FOR LIVING PURPOSES OF THE BIDDER			
1.1.2.1	Open space		Yes	
1.1.2.2	Living accommodation		Yes	
1.2	ELECTRICITY			
1.2.1	Electricity For construction purposes			Chargeable Basis.

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1.2.1.1	Single point source	Yes		As provided by TANGEDCO
1.2.1.2	Further distribution for the work to be done which include supply of materials and execution		Yes	At bidder's own cost
1.2.2	Electricity for the office, stores, canteen etc of the bidder which include:		Yes	
1.2.2.1	Distribution from single point including supply of materials and service		Yes	
1.2.2.2	Supply, installation and connection of material of energy meter including operation and maintenance		Yes	Calibration certificate to be provided
1.2.2.3	Duties and deposits including statutory clearances for the above		Yes	
1.2.2.4	Demobilization of the facilities after completion of works		Yes	
1.2.3	Electricity for living accommodation of the bidder's staff, engineers, supervisors etc on the above lines		Yes	
1.3	WATER SUPPLY			
1.3.1	For construction purposes:			Chargeable Basis
1.3.1.1	Making the water available at single point	Yes		Refer Note B
1.3.1.2	Further distribution as per the requirement of work including supply of materials and execution		Yes	
1.3.2	Water supply for bidder's office, stores, canteen etc			
1.3.2.1	Making the water available at single point		Yes	
1.3.2.2	Further distribution as per the requirement of work including supply of materials and execution		Yes	
1.4	LIGHTING			
1.4.1	For construction work (supply of all the necessary materials) At office storage area At the preassembly area At the construction site /area		Yes	
1.4.2	For construction work (Execution of the lighting work / arrangements) At office storage area At the preassembly area At the construction site /area		Yes	
1.5	COMMUNICATION FACILITIES for site operations	-		
1.5.1	Telephone, Fax, internet, internet, email etc		Yes	
2	PART II			
2.1	ERECTION FACILITIES			

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2.1.0	Engineering works for construction			In consultation with BHEL
2.1.1	Providing the erection drawings for all the equipments covered under this scope		Yes	
2.1.2	Drawings for construction methods		Yes	
2.1.3	As-built drawings – wherever deviations observed and executed and also based on the decisions taken at site		Yes	In consultation with BHEL
2.1.4	Shipping lists etc for reference and planning the activities		Yes	In consultation with BHEL
2.1.5	Preparation of site erection schedules and other input requirements		Yes	In consultation with BHEL
2.1.6	Review of performance and revision of site erection schedules in order to achieve the end dates and other commitments		Yes	In consultation with BHEL
2.1.7	Weekly erection schedules		Yes	In consultation with BHEL
2.1.8	Daily erection / work plan		Yes	
2.1.9	Periodic visit of the senior official of the bidder to site to review the progress so that works are completed as per schedule. It is suggested this review by the senior official of the bidder should be done once in every two months.		Yes	
2.1.10	Preparation of preassembly bay		Yes	

A. Construction Power:

- Construction power will be provided to the contractor at one single point within the plant area by BHEL on chargeable basis as per the prevailing rates of TANGEDCO under LT tariff VI at the nearest substation.
- The present LT tariff VI rate of TANGEDCO is
 - Consumption charges at Rs.12.00 per unit
 - Maximum demand (MD) charges as applicable per month
 - Low Power Factor (LPF) charges
 - Electricity Tax on total amount
 - Any other miscellaneous charges charged by M/s TANGEDCO pertaining to construction power supply.
- The TANGEDCO tariff and tax may vary from time to time and the same is applicable for the bidder. The required digital Energy meter (CT Type) for measuring the consumption and MD shall be provided and installed by the contractor. Any dispute regarding consumption, the BHEL engineer's decision is final.
The contractor shall make his own arrangement for further distribution (as required within plant boundary and outside plant boundary) with necessary isolator / LCB etc.

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- 4 Necessary "Capacitor Banks" to improve the Power factor to a minimum of 0.9 shall be provided by the contractor at his cost. Penalty if any levied by customer on this account will be recovered from contractor's bills.
- 5 Provision for distribution of electrical power from the given single central common point to the required places with proper distribution boards, approved cables and cable laying including supply of all materials like cables, switch boards, pipes etc., observing the safety rules laid down by electrical authority of the State / BHEL / their customer with appropriate statutory requirements shall be the responsibility of the tenderer / contractor.
- 6 BHEL is not responsible for any loss or damage to the contractor's equipment as a result of variations in voltage / frequency or interruptions in power supply.
- 7 Contractor has to make their own arrangements for electricity requirement for labour colony at their cost. Any duty, deposit involved in getting the Electricity for contractors use i.e. Office shed, labour colony etc shall be borne by the bidder.
- 8 As there are bound to be interruptions in regular power supply, power cut/ load shedding in any construction sites, contractor should make his own arrangement for alternative source of power supply through deployment of adequate number of DG sets at their cost during the power breakdown / failure to get urgent and important work to go on without interruptions. No separate payment shall be made for this contingency.

B. Construction Water:

Water required for construction purposes will be provided at one single point within the plant area on chargeable basis from the nearest storage tank located inside the plant area at the prevailing rates of TANGEDCO / Metro water. The required water meter for measuring the consumption shall be provided and installed by the contractor. The required pumps & accessories, pipes for drawing water from the storage tank and further distribution will be arranged by the contractor at their cost.

The water charges may vary from time to time as per TANGEDCO / Metro water conditions, however the prevailing water charge is Rs.191.00 per 1000 litres. Any dispute regarding consumption, the BHEL engineer decision will be final

Incase of non-availability of water, the contractor shall make his own arrangements of water suitable for construction purpose to have uninterrupted work. No separate payment shall be made for any contingency arrangement made by contractor, due to delay / failure for providing water supply. Contractor has to make his own arrangements for his water requirement for his labour colony at his cost.

C. Open space:

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 Civil /mechanical/ electrical contractors and the storage of plant machineries and materials. The existing land shall be shared by all erections agencies. Land will be allocated with certain time frame and to the extent available/ considered necessary, and will be reviewed by BHEL depending upon the area availability. Area within plant premises for fabrication, office, storage area etc. for construction purpose shall be provided as per availability free of cost. The contractor will be responsible for handing back all lands, as handed over to him by BHEL.

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Contractor has to make his own arrangements for labour colony at his cost. The contractor to construct labour colony as per his requirements after obtaining approval of formalities from statutory body. The contractor shall provide adequate water arrangement for drinking/washing/bathing with required toilets, drainage system, lighting facilities etc. in labour colony. Suitable paved area to be provided in the labour colony. The Contractor shall provide adequate arrangements for electricity requirements for labour colony.

D. LIGHTING FACILITY:

Adequate lighting facilities such as flood lamps, hand lamps and area lighting shall be arranged by the contractor at the site of construction, and contractor's material storage area etc. at his cost.

E. DEWATERING

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, excluding the situation of flood, shall be considered by BHEL. In case of situation of flood (as declared by local administrative authority or as assessed by BHEL Site In – Charge), necessary measures for flood mitigation/ flood control/ water ingress control/ evacuation of water logged portion will be taken by BHEL.

5. TACKLING PANDEMIC

5.1. Special arrangements to be made for tackling pandemic – Contractor shall make arrangements for stay of workers within their premises as far as possible and/ or adjacent building and for implementation of STANDARD OPERATING PROTOCOL (SOP) as per government order. The transportation of workers to work place shall be arranged by the contractor in dedicated transport by ensuring social distance. Any person violating the pandemic measures published vide government order time to time will be liable to be proceeded for legal action as per the government order. Following shall be observed in work place:

- 5.1.1.1. All work places shall have adequate arrangements for temperature screening and provide sanitizers at convenient places.
- 5.1.1.2. Work places shall have a gap of one hour between shifts and will stagger the lunch breaks of staff, to ensure social distancing.
- 5.1.1.3. Use of AROGYA SETU will be encouraged for all employees both private and public.
- 5.1.1.4. Contractor shall sanitize their work place between shifts.
- 5.1.1.5. Large meetings to be prohibited. Spitting shall be strictly prohibited. Wearing of face cover is compulsory.
- 5.1.1.6. Government order (state/ center) being issued time to time for protective measures of pandemic shall be complied with strictly until government (state/ center) declares end of pandemic.

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5.1.1.7. Standard operating procedure for social distancing for workplace and offices

The following measures shall be implemented by contractor for their office and workplaces:

1. All areas in the work premises including the following shall be disinfected completely using user friendly disinfectant mediums:
 - a. Entrance gate of work place, office, if any
 - b. Cafeteria and canteens, if any
 - c. Meeting room, conference halls/ open area available/ verandah/ entrance gate of site, bunkers, porta cabins, buildings, etc.
 - d. Equipments and lifts
 - e. Washroom, toilet, sink, water points, etc
 - f. Wall/ all other surfaces
2. For workers coming from outside, special transportation facility shall be arranged without any dependency on the public transport system. These vehicles should be allowed to work only with 30-40% passenger capacity.
3. All vehicles and machinery entering the premise should be disinfected by spray mandatorily.
4. Mandatory thermal scanning of everyone entering and exiting the work place to be done.
5. Medical insurance for the workers to be made mandatory.
6. Provision for hand wash & sanitizer preferably with touch free mechanism shall be made at all entry and exit points and common areas. Sufficient quantities of all the items should be available.
7. Work places shall have a gap of one hour between shifts and will stagger the lunch breaks of staff, to ensure social distancing.
8. Large gatherings or meetings of 10 or more people to discouraged. Seating at least 6 feet away from others on job sites and in gatherings, meetings and training sessions.
9. Not more than 2/4 persons (depending on size) will be allowed to travel in lifts or hoists.
10. Use of staircase for climbing should be encourages.
11. There should be strict ban of gutka, tobacco, etc. and spitting should be strictly prohibited.
12. There should be total ban on non-essential visitors at sites.
13. Hospitals/ clinics in the nearby areas, which are authorized to treat COVID-19 patients, should be identified and list should be available at work place all the times.

6. Inspection Agency (Domestic supplies)

- 6.1. Vendor shall give inspection call in line with approved QAP / Customer Hold Points to Regional BHEL-CQS center / Third Party Inspection Agency (TPIA) (as informed by BHEL) on "BHEL CQS Website"; with a copy of inspection call to BHEL-PSSR for arranging Customer/Third Party participation (wherever applicable), with an advance notice of 15 days for participation in inspection/ Joint inspection on the proposed date. The MDCC shall be issued by customer/BHEL based on the BHEL-CQS/TPIA report OR Joint inspection report of BHEL CQS/TPIA & Customer (wherever applicable)

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7. Inspection Agency (Imported supplies)

- 7.1. In case of Imported Supplies advance notice of 30 days for participation in inspection (if applicable, in line with approved QAP / Customer Hold Points) to be given.
- 7.2. The Test Certificates & Inspection reports duly accepted by the Foreign Vendor Inspection agency in line with approved QAP/Customer Hold Points shall be submitted to BHEL-PSSR, CHENNAI. The above Inspection reports & Test certificates shall be reviewed by BHEL-PSSR in line with the Technical Specifications & Approved Data sheets and then sent to customer for their clearance. The customer dispatch clearance (MDCC) will be given to the Foreign Vendor or their representative in India through BHEL-PSSR after acceptance/clearance of above test certificates by Customer.

8. Dispatch Documents required

- 8.1. 75% of the payment (as per clause 23, SI No. 3 of SCC) shall be released against dispatch of material from registered place of dispatch of supplier. This payment shall be released on submission of the following documents:
 - 8.1.1. For materials originating from Indian Territory
 - 8.1.1.1. GST complaint Invoice in original & duplicate
 - 8.1.1.2. Test certificate in original
 - 8.1.1.3. Copy of Inspection Report (if applicable)
 - 8.1.1.4. MDCC (Material Dispatch Clearance Certificate)
 - 8.1.1.5. Original copy of Lorry Receipt(LR)/Railway Receipt(RR)
 - 8.1.1.6. Packing List
 - 8.1.1.7. Copy of letter, addressed to insurance company intimating dispatch.
 - 8.1.2. For materials originating from non-Indian Territory
 - 8.1.2.1. Three (3) original and Seven (7) copies of clean bill of landing or One (1) clean original Airway Bill & Four (4) copies, in case of air freight.
 - 8.1.2.2. One (1) original and Six (6) copies of signed Invoices (Paying Authority along with TIN No. should be Mentioned).
 - 8.1.2.3. One (1) original and Seven (7) copies of Packing List (clearly showing number of packages, gross weight and net weight).
 - 8.1.2.4. Six (6) copies of certificate of country of origin.
 - 8.1.2.5. Eight (8) copies of Customer/BHEL MDCC.
 - 8.1.2.6. Six (6) copies of inspection certificate, if any, issued by the customer/his authorized representative.
 - 8.1.2.7. Six (6) copies of certificate from the vendor to the effect that drawings and catalogues for customs clearance purpose have been kept with the packages for shipment.
 - 8.1.2.8. Six (6) copies of certificate from the vendor to the effect that the contents in each case are not less than that entered in the invoices and guaranteed as new and as per the relevant technical specifications.
 - 8.1.2.9. Shipping Specification – One (1) copy.
 - 8.1.2.10. Quality Certificate – One (1) copy.
 - 8.1.2.11. Approved Test Certificates if any. - Six (6) copies.
 - 8.1.2.12. Guarantee Certificate – One (1) Original + One (1) copy.
 - 8.1.2.13. Inspection Reports – One (1) Original + One (1) copy.
 - 8.1.2.14. Copy of letter, addressed to insurance company intimating dispatch

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9. Material Receipt Certificate (MRC)

- 9.1. The vendor shall obtain Material Receipt Certificate from the project site, duly signed by Customer and BHEL-Site after receipt & physical verification of the material at site.

10. Taxes & Duties (to be updated by FAX)

- 10.1. All bidders/vendors to note that this project is a Non-Mega power Project. However, Essentiality certificate shall be issued by TANGEDCO (customer) for availing concessional custom duty under Project Import Regulations.
- 10.2. Essentiality certificate shall be issued by TANGEDCO through BHEL for the items to be imported by the vendor for specified items, limited to CIF content mentioned in the offer/order, for availing concessional custom duty.
- 10.3. The bidder has to indicate in their offer, the import contents (if any) i.e. list of items along with qty., currency of import, country of import & CIF value.
- 10.4. Availability of CIF for packages, if any, shall be intimated in NIT.
- 10.5. Bidder has to note that in order to derive the total Landed Cost to BHEL, evaluation shall be done excluding GST quoted by bidders. However, same shall be re-confirmed during techno-commercial evaluation of bids.

11. Packing, Identification & marking

- 11.1. The supplier shall include and provide for securely protecting and packing the materials so as to avoid loss or damage during handling & transport by air, sea, rail and road.
- 11.2. All packing shall allow for easy removal and checking at site. Special precaution shall be taken to prevent rusting of steel and iron parts during transit by sea. Gas seals or other materials shall be adopted by the Contractor for protection against moisture during transit.
- 11.3. The number of each package in a shipment shall be shown in fraction, numerator showing number of the package and the denominator showing total number of packages in a lot / consignment. The packages number shall be generally prepared in the sequence in which they will be required for erection.
- 11.4. Each package delivered under the Contract shall be marked by and at the expense of the supplier and such marking must be distinct and in English language (all previous irrelevant markings being carefully obliterated). Such marking shall show the description and quantity of contents, the name and address of consignee, the gross weight and net weight of the package, the name of the Contractor with a distinctive number of mark sufficient for purposes of identification. All markings shall be carried out with such materials as to ensure quickness of drying, fastness and indelibility. Each equipment or parts of equipment shall, when shipped or railed or otherwise dispatched be tagged with reference to the assembly drawings and corresponding part numbers. Each bale or package shall contain a packing note quoting specifically the name of the Contractor, the number and date of contract and the name of the office placing the contract, nomenclature of the stores and include a schedule of parts for each complete equipment giving the part numbers with reference to the assembly drawing and the quantity of each part, drawings nos. and tag numbers.

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- 11.5. Besides wherever necessary, packing shall bear a special marking "TOP", "BOTTOM", "DO NOT TURN OVER", "KEEP DRY", "HANDLE WITH CARE" etc.
- 11.6. All packing cases, containers (excluding marine container), packing and other similar materials shall be new.
- 11.7. Notwithstanding anything stated in this clause, the Contractor shall be entirely responsible for loss, damage or depreciation or deterioration to the materials & supplies due to faulty and/or insecure packing.
- 11.8. Two copies of packing list should be kept in case/package No. 1 of each consignment of the goods and four copies in each case (three inside the box and one copy in a special packet at the outer side of the Box).
- Name and address of Consignee:
 - Project reference:
 - Contract No.:
 - Packing No.: (1/10, 2/10, 3/10 when there are 10 packages for one consignment)
 - Net Weight/Gross Weight:
 - Port of Loading:
 - Destination Port:
12. **Submission of Final Drawing / Documents along with O&M Manual, Type Test Certificates (if any)**
- 12.1. As per GCC/ Technical specification/ Kick-off meeting.
13. **Inspection by Customer at works (foreign and India)**
- 13.1. 1 man week that shall be splittable by the Customer into any number of visits. All expenses on this account is to be borne by the Contractor.
14. **Divisible Contract**
- 14.1. Bidder shall note that separate orders shall be placed for a) Supply part (SCH-1-SUPPLY - Price schedule), (b) Services part (SCH-2 –INSTALLATION - Price schedule). Contract Performance Bank Guarantee (CPBG) shall be calculated for respective orders separately and successful bidder shall submit accordingly.
- 14.2. Notwithstanding anything stated elsewhere in the tender, the contract has to be awarded on the basis of supply & service contract (divisible contract) on single source responsibility. In the mode of contracting on the basis of supply & service, the supply portion of the contract will correspond to the price of supply part of price schedule, and service portion of contract will correspond to the price of service part of price schedule
- 14.3. But the two contract shall not in any way dilute the responsibility of the successful bidder for the successful completion of job as per tender and both contracts shall contain a cross-fall breach clause, namely that a breach in one contract shall automatically be classified as a breach on other contract which will confer a right on BHEL to terminate the other contract at the risk and cost of the successful bidder along with BHEL overhead.
- 14.4. The title of ownership of goods to be supplied shall pass on to the owner on dispatch ex-works/ FOR destination. However, till the scope is completed in all respect and

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the plant/ equipment is taken over, the goods shall remain with the custody of the successful bidder.

15. EVALUATION OF BID

- 15.1. Bidders should quote prices as per format provided in the tender. Bids shall be evaluated based on total price quoted (supply & services) including any loading of price as mentioned in technical specification/ SCC/ Price Schedule, as applicable.
- 15.2. **Currency of bidding shall be in INR only.**

16. TIME SCHEDULE

- 16.1. The date of commencement of erection work at site shall be mutually agreed between bidder and BHEL Engineer In-Charge.
- 16.2. During the total period of contract, the contractor has to carry out the activities in a phased manner as required by BHEL and as per the program of milestone events.

17. SCHEDULE OF SUPPLY

- 17.1. The successful bidder shall complete the supply of materials within **10 (Ten) months** from the date of placement of PO as per the below mentioned schedule:

S. No.	Activity	Time schedule
1	Submission of Design Basis Report	1 month from date of placement of PO for supply portion
2	Preparation of design, drawing and submission of the same for approval and submission of MQP (manufacturing quality plan) for approval	2 months from date of placement of PO for supply portion
3	Completion of third party inspection at manufacturing shop as per approved MQP	Progressively by 8 months from date of placement of PO for supply portion
4	Completion of supply of all materials	10 months from date of placement of PO for supply portion

18. SCHEDULE OF EXECUTION

- 18.1. The successful bidder shall complete the erection work within 7 (Seven) months from date of commencement of work at site in line with PO placed for erection work as per the below mentioned schedule:

S. No.	Activity	Time schedule
1	Completion of pre-assembly and erection	Progressively by 6 months from date of commencement of work at site in line with PO placed for erection work
2	Reconciliation and handing over to BHEL	7 months from date of commencement of work at site in line with PO placed for erection work

19. EXTENSION OF TIME FOR COMPLETION

- 19.1. If the completion of work as detailed in the scope of work gets delayed beyond the contract period, the contractor shall request for an extension of the contract and BHEL at its discretion may extend the Contract.

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- 19.2. Based on the monthly reviews jointly signed, the works balance at the end of original contract period less the backlog attributable to the contractor shall be quantified, and the number of months of 'Time extension' required for completion of the same shall be jointly worked out. Within this period of 'Time extension', the contractor is bound to complete the portion of backlog attributable to the contractor. Any further 'Time extension' or 'Time extensions' at the end of the previous extension shall be worked out similarly.
- 19.3. However, if any 'Time extension' is granted to the contractor to facilitate continuation of work and completion of contract, due to backlog attributable to the contractor alone, then it shall be without prejudice to the rights of BHEL to impose penalty / LD for the delays attributable to the contractor, in addition to any other actions BHEL may wish to take at the risk and cost of contractor.
- 19.4. A joint programme shall be drawn for the balance amount of work to be completed during the period of 'Time Extension', along with matching resources (with weightages) to be deployed by the contractor as per specified format. Review of the programme and record of shortfall shall be done every month of the 'Time extension' period in the same manner as is done for the regular contract period.
- 19.5. During the period of 'Time extension', contractor shall maintain their resources as per mutually agreed program.
- 19.6. At the end of total work completion as certified by BHEL Engineer, and upon analysis of the total delay, the portion of delay attributable to (i) Contractor, (ii) Force majeure conditions, and (iii) BHEL, shall be worked out. The total period of time extensions shall be the sum of (i), (ii) and (iii) above and shall be equal to period between the scheduled date of completion and the actual date of completion of contract. LD shall be imposed / levied for the portion of delay attributable to contractor and recoverable from the dues payable to the contractor.
- 20. MOBILISATION**
- 20.1. The Contractor has to subsequently augment his resources in a prudent manner to achieve the COMPLETION SCHEDULES as specified in the contract.
- 20.2. The above time allowed for completion of work (as per clause 17 and clause 18) includes Sundays and Holidays. Detailed program to be prepared by the tenderer taking in to consideration of the COMPLETION SCHEDULES /site decision on drawings flow (latest) and submitted for BHEL's approval.
- 20.3. In order to meet above schedule in general, and any other intermediate targets set, to meet customer / project schedule requirements, contractor shall arrange & augment all necessary resources from time to time on the instructions of BHEL.
- 20.4. In case the project is to be advanced, work in the scope of the contractor is to be advanced to meet the project requirement. No extra payment whatsoever shall be paid on this account.
- 21. SUBMISSION OF L3 SCHEDULE**
- 21.1. The Successful bidder shall prepare L1 schedule/ network of engineering, manufacturing, testing, and procurement of sub-vendor items, as per completion schedule given in this document. This network must conform to the overall project schedule.
- 21.2. Based on L1 network the successful bidder will prepare L2 network which will indicate exhaustive list of activities of engineering, procurement of raw materials,

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manufacturing, testing, procurement of sub-vendor items, and dispatch as per completion schedule given in this document. This network must include all milestone and key activities for each subsystems/ components in the areas of engineering (wherever applicable), procurement, manufacture (wherever applicable), dispatch, erection/ commissioning.

- 21.3. Based on L2 network The successful bidder will develop L3 network, which will indicate micro details of each activity of L2 network and also show customer/ BHEL hold points, responsibility of the customers/ BHEL and Successful bidder.
- 21.4. The contractor shall submit a detailed L3 schedule within 15 days of placement of LOI in consultation with BHEL. The detailed L3 schedule shall be approved by BHEL and same shall be implemented. Bidder shall submit L3 schedule in MS Projects to meet the agreed project schedule.
- 21.5. The schedule shall be acceptable to BHEL for meeting their mile stone targets/schedule.
- 21.6. The successful bidder shall prepare and submit to BHEL monthly progress report indicating progress on key activities, management summary for critical activities, list of actions requiring attention of BHEL in CD (compatible to BHEL software) and also in requisite number of hard copies. The input & output data for all such schedule shall be furnished to BHEL in a manner compatible with BHEL software available at site. A copy of progress report must be submitted to Construction Manager/ BHEL/ site and Project Manager/ BHEL/ Chennai latest by 7th of every month covering the detailed progress achieved in the previous month.
- 21.7. The progress report shall indicate the progress achieved against planned with reasons indicating delays, if any, and shall give the remedial actions which The successful bidder intends to take to make good the slippage or lost time, so that further works again proceed as per the original program and the slippage's do not accumulate and affect the overall program.
- 21.8. 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 target. The program of subsequent week shall also be presented by Successful bidder for discussions. The Successful bidder shall constantly update/revise his work program to meet the overall requirement.
- 21.9. Periodic progress reviews on the entire activities of execution in respect of supply and works in scope of Successful bidder will be held once in a month. These meetings will be attended by reasonably higher officials of the Successful bidder and will be used as a forum for discussing all areas where progress needs to be sped up. The Successful bidder shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.
- 21.10. Successful bidder has to provide electronic/ computerized storing & re-production/ printing/ plotting of various data, log sheets, protocols, measurements etc. These may be stored in virus free CD & handed over to BHEL as per requirement.

22. QUALITY ASSURANCE

- 22.1. All materials, components and equipment covered under this specification shall be procured, manufactured, and tested at all the stages, as per a comprehensive Quality Assurance Program. An indicative program of inspection/tests to be carried out by the successful bidder for some of the major items is given in the quality assurance program. This is however not intended to form a comprehensive program

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- as it is the responsibility of the successful bidder to draw up and implement such program duly approved by BHEL. The detailed quality plan for manufacturing should be drawn up by the Successful bidder and will be submitted to BHEL for approval.
- 22.2. Manufacturing Quality Plans and Field Quality Plans will detail out all the equipment & components, various tests/ inspection to be carried out as per requirement of specification & standards mentioned therein and the quality practices & procedures, etc to be followed by The successful bidder 's quality control organization during various stages of materials procurement, manufacturing, assembly, handling, erection and final testing/ performance testing.
- 22.3. Quality audit/ approval of the results of tests and inspection will not prejudice the right of BHEL to reject equipment not giving the desired performance after erection and shall not in any way limit the liabilities and responsibilities of the successful bidder in earning satisfactory performance of equipment as per specification.
- 22.4. Repair/ rectification procedures to be adopted to make any job acceptable shall be subjected to the approval of BHEL/ owner.
- 22.5. The Successful bidder shall furnish copies of reference documents/ plant standards/ acceptance norms/ tests and inspection procedures etc. as referred in Quality Plans along with Quality Plan. These Quality Plans and reference documents/ standards etc. will be subject to BHEL/ owner's approval without which manufacturing will not proceed. These approved documents will form part of the contract. In these approved Quality Plans, BHEL/ authorized representative shall identify customer hold points, test/ checks which shall be carried out in presence of BHEL/ owner's representative and beyond which work will not proceed without consent of BHEL/ owner. All deviations to the specifications, approved Quality Plan and Applicable standards must be documented and referred to BHEL for approval & disposition.
- 23. Terms of payment for supply portion**
- 23.1. Billing Break Up (BBU) shall be submitted by the contractor and shall be approved by BHEL.

Note:

Guideline for proposal of billing break up -

SL. NO.	Description	% payment on pro-rata basis	
		Against activity	Cumulative
1.	Approval of DBR (Design Basis Report)	2%	2%
2.	Preparation, finalization & approval of design & drawing as well as QAP	8%	10%
3.	Third party inspection & issuance of MDCC on pro-rata basis along with on-transit insurance	75%	85%
4.	Receipt of material at site and production of MRC on pro-rata basis	10%	95%
5.	Preservation of material supplied and utilization in erection on pro-rata basis (i.e. final acceptance certificate, which is to be issued by BHEL after completion of warranty period. However, if desired by vendor, this 5% may be released by BHEL against submission of equivalent amount bank	5%	100%

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	guarantee as per performance bank guarantee format to be kept valid till warranty period, subject to the following: i) Receipt of certificate that all works are completed in all respects ii) Reconciliation of materials/ T&P/ MME (Monitoring and measuring equipment) iii) Completion of final bill formalities and iv) Handing over to BHEL		
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Note: In case of consortium, payments shall be made to the Prime bidder only.

24. Terms of payment for erection portion

SL NO.	Description	% payment on pro-rata basis	
		Against activity	Cumulative
1.	Pre-assembly and erection of supplied materials on pro-rata basis	95%	95%
2.	Final acceptance certificate, which is to be issued by BHEL after completion of warranty period. However, if desired by vendor, this 5% may be released by BHEL against submission of equivalent amount bank guarantee as per performance bank guarantee format to be kept valid till warranty period, subject to the followings: i) Receipt of certificate that all works are completed in all respects ii) Reconciliation of materials/ T&P/ MME (Monitoring and measuring Equipment) iii) Completion of final bill formalities and iv) Handing over to BHEL	5%	100%

Note: In case of consortium, payments shall be made to the Prime bidder only.

25. Currency of payment

25.1. All payment by BHEL for supply and service portion, shall be done in INR only.

26. T&PS TO BE DEPLOYED BY CONTRACTOR

26.1. Following Major T&Ps to be arranged by contractor within the indicated time

S.N	Major T&P items	Broad Mobilizing time from date of start of erection work
1	4 Nos 100T Crawler crane of having minimum boom length 60m or higher capacity as per requirement for erection.	2 Nos. before start erection activity Balance 2 nos. within 1 month from start of erection activity.

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2	2 nos pick & carry crane(12/ 14 T capacity)	2 Nos. Before start of erection activity
3	Welding rectifiers	As per site requirement.
4	20 T trailer	As per site requirement.
5	Sufficient quantity of ladders for approach up to the top of each erected structure.	As per site requirement.
6	2nos. mobile lighting mast (These towers shall have 4x1000W metal halide lights.)	Within 30 days of commencing erection
7	Portable fire extinguishers	As per site instruction, Before starting of erection work

Note:

T&P and the mobilization shown in the above mentioned list is tentative requirement considering parallel working. However, Mobilization schedule and quantity/ numbers of T & Ps, and period of deployment as mutually agreed at site for major T&Ps, have to be adhered to. Numbers/ time of requirement will be reviewed time to time at site and contractor will provide required T&P/ equipment's to ensure completion of entire work within schedule/target date of completion without any additional financial implication to BHEL. Vendor will give advance intimation & certification regarding capacity etc. prior to dispatch of heavy equipment's. Also on completion of the respective activity, demobilization of T&P in total or in part can be done with the due approval of engineer in charge. Retaining of the T&P's during the contract period will be mutually agreed in line with construction requirement.

- 26.2. 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.
- 26.3. All T&P, lifting tackles and pulling devices to be deployed by the successful bidder must bear valid/ latest test certificates for their suitability, and documents shall be preserved at site.
- 26.4. In case of expiry of validity of any such test certificate during construction, successful bidder shall arrange for revalidation of the same well in advance, so that the construction activities do not suffer on account of non-availability of such Test certificates.
- 26.5. In the event of non-mobilization of Tools, Plants, Machinery, Equipment, Material or non-availability of the same owing to breakdown and as a result progress of work suffers, BHEL reserves the right to make alternative arrangement (available or higher capacity) and hire charges shall be recovered as per BHEL norms. applicable as under:
- 26.5.1. Case 1: BHEL provides its own Capital T&P: If BHEL provides owned T&P then BHEL, hire charges (as per BHEL norms) will be recovered from the contractor as per the prevailing BHEL Corporate hire charges applicable (as enclosed in annexure-C1,annexure-C2,annexure-T I,annexure-T II,) as per following cases:

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- 26.5.1.1. In case the T&P is specifically listed in “T&Ps to be deployed by Contractor”, ‘Rates of hire charges applicable to outside agencies other than contractors working for BHEL’ (annexure-C2 and annexure-T II) will apply.
- 26.5.1.2. In case the T&P is not specifically listed in “T&Ps to be deployed by Contractor”, ‘Rates of hire charges applicable to contractors working for BHEL’ (annexure-C1 and annexure-T I) will apply.
- 26.5.1.3. The hire charges of Capital Tools & Plants are exclusive of operating expenses e.g., Operator, fuel & Consumables and the same shall be arranged by the contractor at his cost.
- 26.5.2. Case 2: BHEL provides hired T&P: In all cases other than that specified in Sl No. 24.5.1 above, actual expenses incurred by BHEL along with applicable overheads will be back-charged to the contractor.
- 26.6. In the event of need of change of type of any of major T&Ps, approval shall be taken from BHEL Engineer in-charge prior to mobilization. The decision of Number of T&P required due to replacing the enlisted T&P as per above table, shall be taken after analysing the production capacity and suitability of both the T&Ps.
- 26.7. In addition to the above, any other tools and plants required for execution of the above work are in contractor’s scope.
- 26.8. Contractor shall have at all times experienced operators and technicians for routine and breakdown maintenance of the equipment. Any delay in rectification of defects will warrant BHEL rectifying the defect and charging the cost to the contractor.
- 26.9. In construction projects of this magnitude it is possible that all the areas / approaches may not be ready. In such cases consolidation of ground and arrangement of sleeper’s / sand bag filling etc for safe operation / movement of equipment including cranes / trailers etc shall be the responsibility of the contractor at his cost. No compensation on this account shall be payable.
- 26.10. Crane operators deployed by the contractor shall be tested by BHEL before they are allowed to operate the cranes.
- 26.11. The age of the contractor deployed cranes upto 150 T should be within 15 years as on date of deployment. Contractor has to provide documentary proof for the age of the crane at the time of deployment to the BHEL Engineer.
- 26.12. CRANE OPERATOR FOR CRANES PROVIDED BY CONTRACTOR
- 26.12.1. Must be capable of independently operating hydraulic/ mechanical crawler/ tyre mounted cranes of respective categories.
- 26.12.2. Must have minimum 2 years’ experience in operation of hydraulic/ mechanical crawler/ tyre mounted cranes in respective categories & hold valid HMV/ TRANS license. Should be able to read and interpret the operation and maintenance manual, boom load chart, boom angle and other indicating devices.
- 26.12.3. Operator shall have latest physician’s certification for their physical fitness in vision with/ without lenses & adequate hearing with or without hearing aid
- 27. MATERIAL HANDLING**
- 27.1. Open land as available shall be provided by BHEL on free of cost basis as provided by TANGEDCO. Contractor shall maintain one centralized fenced store cum fabrication yard, as applicable in accordance with site condition, at his own cost. Hard surfacing, as applicable in accordance with site condition, of this yard and all

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- round drain shall be carried out by the contractor at his own cost within the quoted rate. The bidder shall make complete arrangement of necessary security personnel, to safeguard all such materials in his custody.
- 27.2. Periodic audit of system of purchasing, storing and issue, etc. will have to be carried out by the vendors, as applicable. BHEL will also audit the same, as applicable.
- 27.3. The Contractor must ensure proper preservation of the supplied material till completion of erection and handing over activities.
- 27.4. All structural steel shall be stacked plate size wise and thickness wise. Tubular sections, Beams, channels and angles shall be stacked separately on sleepers.
- 27.5. Materials shall not, under any circumstances, be taken out of the project site unless otherwise permitted by BHEL.
28. **PVC and ORC**
- 28.1. Price Variation Compensation (PVC) is not applicable
- 28.2. Over Run Compensation (ORC) is applicable only for the installation portion as per guidelines given below:
- 28.2.1. Over Run Compensation (ORC) is payable for works done during the extension period, by way of rate revisions for periods beyond original contract period subject to the following terms and conditions.
- 28.2.2. Rates for the installation portion shall be increased by 5% for the first twelve months of one or more extensions beyond original contract period. For the next twelve months of further extensions if any, rates shall be increased as above by 5% over the previous twelve months, and similarly for each subsequent twelve months extension.
- 28.2.3. The amount of increase payable per month due to rate revisions is subject to a minimum of Rs 1,00,000/- per month and a maximum of Rs 5,00,000/- per month.
- 28.2.4. If there is any delay, for reasons attributable only to the contractor, then the work shall be executed by the contractor at the rates applicable for the period the work was planned.
- 28.2.5. Payment of ORC shall be regulated as follows:
- 28.2.5.1. Contractor is entitled to Over Run Compensation (ORC) only for the portion of backlog attributable to BHEL.
- 28.2.5.2. 50% of the compensation as per clause 28.2.3 is allocated for deployment of resources agreed as per the joint programme drawn vide clause 19.4. Payment shall however be based on the actual deployment of resources for the month as certified by BHEL, as per weightages assigned therein
- 28.2.5.3. 50% of the compensation as per clause 28.2.3, is allocated for achieving of planned progress agreed as per the joint programme drawn clause 19.4. Payment shall be on pro rata basis for actual achieved quantities
- 28.2.5.4. Total Over Run Compensation shall be limited to 10% of the contract value for the installation portion.
- 28.2.6. Contractor shall not be entitled for any Over Run Compensation (ORC) for the portion of backlog attributable to the contractor. Such works shall be executed at the rates applicable for the period the work was planned.

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SPECIAL CONDITIONS OF CONTRACT **FOR 2 X 660 MW ENNORE SEZ SUPERCRITICAL TPS**

29. Contract Performance Bank Guarantee

29.1. Standalone bidder/ Prime bidder along with consortium partner(s) have to submit individual Contract Performance Bank Guarantee (as per Annexure-IV of GCC) amounting to 10% of the total order/contract value (excluding taxes, duties & freight). In case of consortium, each CPBG as submitted by Prime bidder and consortium partner(s) shall be in the proportion of value of work being executed individually as indicated in their consortium agreement. The prime bidder shall submit CPBG (Contract Performance Bank Guarantee) equivalent to 1% of the total contract value in addition to the individual CPBGs to be submitted by all consortium partners including prime bidder, as dealt above.

29.2. All remaining terms & conditions shall be as per clause 11.0 “**Contract Performance Bank Guarantee**” of General commercial terms and conditions of GCC.