



**BHARAT HEAVY ELECTRICALS LIMITED**  
**PROJECT ENGINEERING MANAGEMENT, NOIDA**

Date-14-May-24

**CORRIGENDUM- 02**

PROJECTs	:	2X800MW NTPC LARA STPP-STAGE II
PACKAGE	:	COMPRESSED AIR SYSTEM
ENQUIRY NO	:	GEM/2024/B/4886084 Dated- 24.04.2024
SUBJECT	:	PRE-BID CLARIFICATION + DUE DATE EXTENSION

Type of Corrigendum			
Technical Corrigendum -	<input checked="" type="checkbox"/>	Commercial Corrigendum -	<input checked="" type="checkbox"/>

Bidders are requested to go through the following -

- Refer attached BHEL Replies to Pre-Bid Clarifications
- Due date is being extended from 15.05.2024 to 20.05.2024 (03.00PM). Bid opening shall be done at 03:30 PM on the due date.

All the other terms and conditions of the tender enquiry remain unchanged. All the bidders are requested to quote accordingly.

Yours faithfully,

For and on behalf of BHEL

**Nitin  
Kumar**

Digitally signed by  
Nitin Kumar  
DN: cn=Nitin Kumar,  
o=BHEL, ou=PEM,  
email=nitin.kumar@b  
hel.in, c=IN  
Date: 2024.05.14  
16:51:37 +05'30'

**Nitin Kumar**  
**Manager/BOP**

## BHEL Replies to Pre-Bid Clarifications

PROJECT: LARA SUPER THERMAL POWER PROJECT STAGE-II (2 x 800 MW) EPC PACKAGE PACKAGE: COMPRESSED AIR SYSTEM		Date: 09.05.2024																																																							
CLARIFICATION LIST																																																									
S. No.	Page No.	Clause No.	Description	Bidder's Clarification	BHEL reply																																																				
<p><b>General Comments</b></p>																																																									
1	4			<p><b>SCOPE OF THIS PACKAGE COVERS THE FOLLOWING:</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>S.No.</th> <th>PARAMETERS</th> <th>REQUIREMENT</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Supply including Design, Engineering &amp; Manufacturing of</td> <td>YES</td> </tr> <tr> <td>a)</td> <td>Main Supply</td> <td>YES</td> </tr> <tr> <td>b)</td> <td>Consumables</td> <td>YES</td> </tr> <tr> <td>2</td> <td>Painting</td> <td>YES</td> </tr> <tr> <td>3</td> <td>Inspection &amp; Testing</td> <td>YES</td> </tr> <tr> <td>4</td> <td>Lodging</td> <td>YES</td> </tr> <tr> <td>5</td> <td>Transportation &amp; Delivery to Site</td> <td>YES</td> </tr> <tr> <td>6</td> <td>Transportation-Handling &amp; Storage in the Plant</td> <td>YES</td> </tr> <tr> <td>7</td> <td>Erection &amp; Commissioning</td> <td>YES</td> </tr> <tr> <td>8</td> <td>Supervision of Erection &amp; Commissioning</td> <td>NO</td> </tr> <tr> <td>9</td> <td>Training of BHEL/NTPC personnel</td> <td>YES</td> </tr> <tr> <td>10</td> <td>Training of BHEL/NTPC personnel</td> <td>YES</td> </tr> <tr> <td>11</td> <td>Mandatory Spares</td> <td>YES</td> </tr> <tr> <td>12</td> <td>O &amp; M Service</td> <td>YES</td> </tr> <tr> <td>13</td> <td>O &amp; M Spares</td> <td>YES</td> </tr> <tr> <td>14</td> <td>Handover of CAS system</td> <td>YES</td> </tr> </tbody> </table>	S.No.	PARAMETERS	REQUIREMENT	1	Supply including Design, Engineering & Manufacturing of	YES	a)	Main Supply	YES	b)	Consumables	YES	2	Painting	YES	3	Inspection & Testing	YES	4	Lodging	YES	5	Transportation & Delivery to Site	YES	6	Transportation-Handling & Storage in the Plant	YES	7	Erection & Commissioning	YES	8	Supervision of Erection & Commissioning	NO	9	Training of BHEL/NTPC personnel	YES	10	Training of BHEL/NTPC personnel	YES	11	Mandatory Spares	YES	12	O & M Service	YES	13	O & M Spares	YES	14	Handover of CAS system	YES	<p><b>Painting</b> - Compressor and dryers paint shall be as per OEM std, suitable for the application. For piping and other accessories which are in AC scope, final paint shade shall be as per tender requirement. Painting scheme shall be as per OEM std. Details can be shared in post order.</p> <p><b>Inspection &amp; Testing</b></p> <p>a. Compressor - At shop will be tested as per NTPC approved QAP. At Site only Pressure &amp; Power will be measured</p> <p>b. Dryer - Imported from China, hence not applicable. At Site Dew Point will be measured</p> <p>c. Receiver - At sellers works as per NTPC QAP</p> <p>d. Compressor &amp; Dryer Local Control Panel - OEM std</p> <p>e. Field Instruments, Valves, Pipes &amp; Fittings - Routine test reports will be shared.</p> <p>Note - Travel &amp; Accommodation of Third Party Inspector in Purchaser scope</p> <p><b>Transportation, Handling &amp; Storage in Plant</b> - Material will be shipped to Site by Bidder, further Internal Storage / Security / Insurance will be in Purchaser Scope</p> <p><b>Erection &amp; Commissioning</b> -</p>	<p><b>Painting</b> - Painting requirements are clearly mentioned in tender specification. Please refer page no.89 of specification.</p> <p><b>Inspection &amp; Testing</b> - Inspection &amp; testing requirements are clearly mentioned in tender specification. Please refer page no. 80 of specification.</p> <p><b>Transportation, Handling &amp; Storage in Plant</b> - Bidder to comply specification requirement.</p> <p><b>Erection &amp; Commissioning</b> - The scope demarcation is clearly mentioned in tender specification. Please refer page no.59 of specification. .</p>
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2	5	11.0	All hot vessels/pipelines/ valves shall be insulated to restrict the outside temperature within 60 deg.C or less with mineral wool (or equivalent), GI wire netting and aluminum cladding/cover.	<p>Glasswool with 50mm thickness insulation with AL cladding</p>	<p>As per the clause, the equivalent insulation material to restrict the outside temperature within 60 deg.C is also acceptable.</p>																																																				
3	5	20.0	All travelling expenses including provisions of all necessary transport to and from Site, lodging allowances and other payments to the CAS supplier's employees shall be the sole responsibility of the CAS supplier.	<p>Travel &amp; Accommodation charges of third party inspector in Purchaser Scope</p>	<p>This specification requirement is clear w.r.t travelling expenses. The third party inspector charges for Travel &amp; Accommodation are not in bidder scope inline with technical specification.</p>																																																				
4	5	24.0	E-Learning Package: e-learning packages for each equipment & for complete compressed air system is in CAS supplier scope (Refer Annexure- A).	<p>Training will be provided at site, E-learning is not available</p>	<p>Bidder to comply specification requirement.</p>																																																				
5	5	29.0	All equipment name plates, instruction plates, etc. shall be bilingual with Hindi inscription first, followed by English. Alternatively, two separate plates one with Hindi and the other with English inscriptions may be provided.	<p>Compressor &amp; Dryer name plate shall be in English</p>	<p>Bidder to comply specification requirement.</p>																																																				
6	6	35.0	All the materials stored in the open or dusty location must be covered with suitable weatherproof and flame-proof covering material wherever applicable.	<p>Internal Storage / Security / Insurance will be in Purchaser Scope</p>	<p>Bidder to comply specification requirement.</p>																																																				

		CLARIFICATION LIST			
S. No.	Page No.	Clause No.	Description	Bidder's Clarification	BHEL reply
7	6	37.0	<p>As the transit of compressor to project site and also the storage of Compressors at project site is in CAS supplier scope.</p> <p>CAS supplier shall ensure the protection of Compressors during transit and storage at site.</p> <p>A.) In order to prevent corrosion during shipping following needs to be ensured and for this a note to be included in QAP's of Compressors</p> <p>1. Compressor to be tested with Oil (as per OEM recommendation), a film of which remains behind on shafts, gears and bearings.</p> <p>2. Silica gel or equivalent adsorbent bags, to be placed inside compressor to absorb any traces of moisture. The compartments are closed off airtight as per OEM recommendation.</p> <p>3. The vent holes are closed off with moisture repellent adhesive tape.</p> <p>4. Instruments &amp; Microprocessor panel is protected as per OEM recommendation.</p> <p>B.) Steps pre Installation</p> <p>1.) Periodically, renewing the silica gel bags/ equivalent material at least once in six months or as recommended by OEM, whichever is less.</p> <p>2.) Periodically, renewing the preservative oil-film by rotating the main drive coupling by hand during a few minutes in correct rotation direction, this will ensure re-distribute the oil film on bearings balls, rollers and drive gears. Same to be repeated at least once in a month or as recommended by OEM, whichever is less.</p> <p>C.) Steps post Installation</p> <p>C.1.) Installation &amp; commissioning of Sequential panel is a must in order to avoid long idleness of compressors.</p> <p>C.2.) Automatic provision shall be provided to replace wet air inside compressor with the dry air as per OEM recommendation.</p>	<p>Compressor can be stored within 6 months of Date of Dispatch. Further, ACI recommend to Commission the machine at site.</p>	<p>BHEL to comply specification requirement.</p>
8	7	41.0	<p><b>EXCLUSIONS</b></p> <p>Paint for House - Civil Building</p> <p>Paint for</p> <p>EOT Crane - BT Cap</p> <p>Power Cable, lugs &amp; glands at BHEL end equipment.</p> <p>Ventilation</p> <p>Fire Protection</p>	<p>Exclusions</p> <p>a. Civil &amp; Structural work</p> <p>b. Earthing &amp; Lighting works</p> <p>c. Supply / Laying / Termination of LT &amp; HT Cable</p> <p>d. Internal movement / Storage / Security / Insurance</p> <p>e. Construction Power &amp; Water</p> <p>f. HT / LT Panels</p>	<p>The scope is clearly mentioned in tender specification. Please refer page no. 7 &amp; 28 of specification.</p>
9	7	2.0	<p>Integrated microprocessor based control system along with suitable operator interface shall be provided for each Instrument Air Compressor, Service Air Compressor &amp; their Dryers. All profibus based instruments like PT, DPT, TT, and other instruments inside &amp; outside the compressor skid shall also be hooked-up to this system. Further, critical signals shall be monitored through soft link between combox (used for integrating the soft communication among various compressors) and DCS (DCS in BHEL scope). MODBUS Protocol shall be used to establish connectivity with DCS. In addition to the soft link, provision for hardwired START, STOP and LOAD &amp; UNLOAD commands from DCS to all the compressors &amp; their status feedbacks to DCS shall also be provided. Bidder to furnish the configuration diagram of control system showing communication with DCS along with the bid. Bidder to furnish signal exchange list between DCS and compressed air system's control system in BHEL format</p>	<p>Compressor &amp; Dryer provided with Local Controller for Monitoring &amp; Controlling. Instruments within the Skid shall be as per OEM std. Instruments outside the skid will be connected to Purchaser DCS system, programming at DCS will be in Purchaser Scope</p> <p>Signals of compressor to DCS</p> <p>a. General Warning</p> <p>b. General Shutdown</p> <p>c. Running</p> <p>Remote Commands of compressor from DCS</p> <p>a. Start / Stop</p> <p>b. Load / Unload</p> <p>Dryer - NA (Controlled through Compressor Start / Stop)</p> <p>Softlink Connectivity through Gateway with Modbus RTU / Profibus VO DP Protocol</p>	<p>Bidder to comply specification requirement.</p>
10	7	9.0	<p>Bidder to include all the instruments required for the package along with fittings, accessories and valve manifold. All fittings shall use metric threads. Use of process actuated switches shall be avoided unless unavoidable</p>	<p>All instruments will be directly fitted to process connection with manifold &amp; isolation needle valves through pipes</p>	<p>Bidder to comply specification requirement.</p>

		CLARIFICATION LIST	
S. No.	Page No.	Clause No.	Description
			<b>Bidder's Clarification</b>
			<b>BHEL reply</b>
11	7	10.0	Vibration monitoring system envisaged for motors of compressors shall be in bidder's scope as per OEM design. Also, for mounting of vibration sensors/probe, bidder to provide vibration pad for mounting of sensors and a notch/slot for mounting of key phasor.
			Being low speed machine vibration monitoring system is not required.
			VMS for compressor motor is in BHEL scope of supply. BHEL shall provide vibration input signal to compressor panel. However, bidder shall ensure tripping of compressors in case of undue vibration, necessary signals in this regard shall be generated from compressor panel to HT Swgr. Cabling scope shall be as per page no. 28 & 29 of specification. Further, VMS required for Compressors shall be as per OEM design.
12	7	11.0	Profibus DP based IMC in LV SWGR/MCC (BHEL's scope) shall be provided.
			Not in Bidder scope
13	7	12.0	Redundancy of instruments within skid shall be provided by bidder as per OEM standard. For all control instruments outside skid, dual redundancy of the sensors shall be provided by the bidder.
			Redundancy of instruments within skid is not available Instruments outside skid will be supplied as per P&ID-PE-DG-508-555-A001. Dual redundancy is not required.
14	8	13.0	Bidder to provide Junction Boxes in field for termination of all the instruments.
			All instruments outside skid will be wired upto Junction box further cabling to DDCMIS in Purchaser scope
15	8	16.0	All the transmitters supplied by Bidder shall be IIE/IJR mounted. The IIE/IJRS shall be in Bidder's scope of supply.
			All Transmitters shall be Locally mounted. IIE/IJR not considered
16	8	19.0	All field instruments/analyzers/actuators/sov/control valves etc. shall be hooked with DDCMIS based control system as per requirement mentioned elsewhere in the specification.
			All instruments outside skid will be wired upto Junction box further cabling to DDCMIS in Purchaser scope
17	8	20.0	The necessary root valves, impulse piping, drain cocks, gauge-zeroing cocks, valve manifolds and all the other accessories required for mounting/erection of these local instruments shall be furnished, even if not specifically asked for, on as required basis. Double root valves shall be provided for all pressure tapping where the pressure exceeds 40 Kg./sq.cm.
			All instruments will be directly fitted to process connection with manifold & isolation needle valves through pipes
18	8	23.0	230 V AC UPS/ 415 V AC power supply shall be provided by BHEL at single point. Further, distribution to various instruments/equipment of the system shall be in bidder's scope. Bidder to include necessary power distribution board in his scope. Any power supply other than the above, if required by any instrument/equipment has to be derived by the bidder from the above supply & all necessary hardware for the same shall be in bidder's scope. Further, bidder to furnish UPS load data during detailed engineering in BHEL format.
			Purchaser to provide separate LV power supply to compressor LCP & Dryer LCP.
19	8	25.0	All instruments are cat-III items except Profibus type transmitters. Quality plan of profibus type transmitter shall be submitted by bidder.
			For Profibus Transmitters approval Cat II can be considered. Test reports will be shared.
20	8	27.0	Bidder's presence is required for 3 Man days (Excluding travel time) at EDN Bangalore during FAT of DDCMIS for certifying correctness & completeness of implementation of Control logic. Intimation regarding FAT shall be given 2 days in advance. All the expenses like boarding, lodging and travel, air fare etc. shall be in bidder's scope.
			Field Instruments are only for monitoring, hence implementation of logic is not required. Compressor & Dryer will be controlled through Controller with instruments mounted in skid.
21	8	29.0	Bidder shall furnish Instrument Schedule, Control Scheme, I/O list, Drive list, Cable Schedule, Cable interconnection, Instrument/SOV/Analyzers Installation diagram, Instrument/Analyzer datasheets, JB grouping, SOV grouping, Annunciation list, List of Instruments/devices for Profibus/HART, configuration diagram for Profibus based actuators/instruments in BHEL approved format. Also, editable database format like MS Excel, MS Access etc. of these documents shall also be provided by Bidder.
			All required documents in PDF format will be shared
22	8	32.0	24 V DC supply for actuation of coil in switchgear shall be drawn from compressor panel.
			Applicable for Closing & Tripping coil of breaker
23	8	33.0	Junction Box for profibus shall be pre-issued by bidder. Erection and termination of cables in junction box shall be done by bidder.
			All instruments outside skid will be wired upto Junction box further cabling to DDCMIS in Purchaser scope
			Noted. Bidder to comply specification requirement. The cabling requirement is clearly mentioned in tender specification. Please refer page no. 28 & 29 of specification.



		CLARIFICATION LIST	
S. No.	Page No.	Clause No.	Description
39	17	21.5	<p>The following indications shall be made available in the control panels for repeating the same in main plant Control System Panels.</p> <p>(a) Status of each compressor                      (b) Instrument air pressure low/high                      (c) Service air pressure low/high                      (d) Dew point of instrument air                      (e) Status of each ADP</p>
40	17	21.7	<p>Automatic motor overload control system shall be included to permit continuous operation of compressors at minimum ambient air without exceeding the name plate rating of the motor.</p>
41	17	21.8.c	<p>The alarms and shutdown scheme mentioned below are suggestive and shall be provided as per manufacturer's standard practice meeting the safe operational requirement of the equipment/system each compressor:</p> <p>(a) "Air temperature high" at inlet to last stage - Alarm &amp; trip                      (b) "Low lube oil pressure" - Alarm &amp; trip                      (c) "High Lube oil supply temperature" - Alarm &amp; trip                      (d) "High oil filter differential pressure" - Alarm                      (e) "Low lube oil level in lube oil sump" - Alarm                      (f) "High inlet air filter differential pressure" - Alarm &amp; trip                      (g) "Low cooling water flow to air compressor" - Alarm</p>
42	17	21.9.a	<p>Sequential operation of the adsorber towers &amp; air compressors shall be controlled automatically with a provision for manual take over.</p>
43	17	21.9.b	<p>Change over of tower from drying mode to regeneration mode shall happen automatically if the dew point is high at the outlet of ADP sensed by the dew point (using aluminium oxide probe) meter/sensor. Automatic operation during regeneration, starting and stopping of blowers, starting and stopping of heaters, etc shall be timer controlled. During the process, in case, operation is taken over manually from the panel through push button or selector switch, the sequential operation shall start with the manual initiation for each of the steps.</p>
44	17	21.9.c	<p>The control system shall provide the (as minimum) alarms, "High Reactivation air temperature", "Low Reactivation air temperature", "Low cooling water flow", "Low air pressure at the outlet of ADP" and "High dew point at the outlet of ADP". Adequate number of temperature elements etc. shall be provided for measurement and monitoring of the same.</p>
45	18	23.0	<p>CAS supplier to note that RTD/BTD of HT motor of air compressor shall be terminated to temperature scanner / microprocessor (one for each compressor to be provided by CAS Supplier) mounted on compressor itself. Interlocks and protection for RTD/BTD of compressor motor has to be provided from compressor panel itself.</p>
			<p><b>Bidder's Clarification</b></p> <p>Below signals are available in Compressor LCP / Dryer LCP, can be hooked up with DDCMIS through Modbus TCP / Profibus V0 DP through Gateway module. Hardwired Dryer signals are not available</p> <p>(a) Status of each compressor - Running status available for compr                      (b) Instrument air pressure low/high - Local indication as outlet pr in MK5                      (c) Service air pressure low/high - Local indication as outlet pr in Mk5                      (d) Dew point of instrument air - At dryer outlet in Mk5</p> <p>Motor starter &amp; its protections is in Purchaser scope.</p>
			<p>a,b,c,d,f) Noted                      e) Oil Level Indicator is Provided                      g) Not available</p>
			<p>Rotary HOC Dryer offered, sequential operation is not available. Dryer will be controlled through Compressor Load / Unload Command. Manual takeover through controller can be done but it will operate based on Compr Load / Unload Command</p>
			<p>Dryer will be controlled through Compressor Load / Unload Command. Manual takeover through controller can be done but it will operate based on Compr Load / Unload Command</p>
			<p>As per OEM std</p>
			<p>Purchaser to share Motor GAD, Technical Datasheet, Performance curves, Auxiliary TB drawings during pre-bid to check mounting feasibility</p>
			<p><b>BHEL reply</b></p> <p>Bidder to comply specification requirement.</p> <p>The scope is clearly mentioned in tender specification. Please refer page no. 28 of specification.</p> <p>Bidder to comply specification requirement.</p> <p>The referred clause is applicable for Twin tower type air dryer.</p> <p>The referred clause is applicable for Twin tower type air dryer.</p> <p>Bidder to comply specification requirement. Any additional instrument if required shall be provided outside the skid.</p> <p>The motor GA shall be furnished during detail engineering after finalization of compressor BKW.</p>

CLARIFICATION LIST

S. No.	Page No.	Clause No.	Description	Bidder's Clarification	BHEL reply
46	18	24.0	Control and Instrumentation – Individual compressor control shall be through compressor mounted microprocessor based control panel. Each compressor shall be interfaced with DCS through gateway/ converter for start, stop, load and unload from common control room (CCR) including giving input for developing software at DCS (by BHEL EDN) and hardware link for status monitoring, start/stop, load/unload from CCR. Interface module for the overall control of compressed air system through DDCMIS shall be provided by CAS Supplier	Communication Gateway provided for monitoring of compressor & dryer Signals of compressor to DCS a. General Warning b. General Shutdown c. Running Remote Commands of compressor from DCS a. Start / Stop b. Load / Unload Dryer - NA (Controlled through Compressor Start / Stop)	Bidder to comply specification requirement.
47	18	25.0	Sequential panel for ensuring equal no. of running hours of each IA & SA set of compressors shall be provided by CAS Supplier.	Equalizer for equalization of compressor running hours shall be provided.	Bidder to comply specification requirement.
48	18	27.0	HT motors for Instrument Air and Service Air Compressors, which are not in bidder's scope of supply, bare motors only shall be supplied as free issue by BHEL to successful bidder at its Works. HT motors shall be of BHEL make. The responsibility for satisfactory operation for combined performance of compressors & motors shall rest with the bidder only as if, the drive motors also have been supplied by the bidder. Also, once the motors are delivered at successful bidder's works / factory, any damage to motor shall be bidders' responsibility and rectification work shall be carried by bidder at its own cost. Further, insurance of these motors after delivered at bidder's works shall be in bidder scope in line CAS package insurance, as per insurance terms & conditions defined under GCC.	HT Motor should be supplied by BHEL at Bidder works. Refurbishment to be done before dispatch, if applicable.	The specification requirement is clear wrt scope of compressor motor.
49	18	31.0	Paint required for painting of all items under the package for corrosion protection and to meet color coding required by customer.	Compressor and dryers paint shall be as per OEM std, suitable for the application. For piping and other accessories which are in AC scope, final paint shade shall be as per tender requirement. Painting scheme shall be as per OEM std. Details can be shared in post order.	Pl. refer our reply at point no. 1 above.
50	18	32.0	SCOPE OF SERVICES: Scope of services by CAS supplier shall include but not necessarily limited to the following: 1.) Erection & Commissioning of Compressed Air System (Refer Annexure-C). 2.) Unloading, Storage, handling and transportation at site. 3.) Pre-commissioning & Commissioning activities for Compressed Air System. 4.) Trial operation, PG Test & handover of Compressed Air System.	Refer Sr No.1	Pl. refer our reply at point no. 1 above.
53	18	37.0	Valve material - Compressed air & Cooling water application - Valve body material shall be cast carbon steel or forged carbon steel for sizes 65 mm NB & above and Gun metal for sizes 50 NB and below.	Ball valve for Air line, CS body & SS Ball, flange end, Class 150, rest OEM std Gate valve for Water line, CS body, flange end, Class 150, rest OEM std	Bidder to comply specification requirement.
54	19	Anex - C	OPERATION & MAINTENANCE MANUALS	O&M Manual of Compressor , Dryer & Air receiver shall be shared for information	Bidder to comply specification requirement.
55	28		Power cables, control cables and screened control cables for a) both end equipment in BHEL's scope b) both end equipment in vendor's scope c) one end equipment in vendor's scope	a. Compressor main motor HV cable Supply / Laying / Termination in Purchaser scope b. Compressor / Dryer LCP LV Cable Supply / Laying / Termination in Purchaser scope c. Equilizer Supply / Laying / Termination in Purchaser scope d. Field Instruments Wired upto JB, further cabling to DDCMIS in Purchaser scope	The cable scope is clearly mentioned in tender specification. Please refer page no. 28 of specification.

PROJECT: LARA SUPER THERMAL POWER PROJECT STAGE-II (2 x 800 MW) EPC PACKAGE  
 PACKAGE: COMPRESSED AIR SYSTEM

Date: 09.05.2024

CLARIFICATION LIST

S. No.	Page No.	Clause No.	Description	Bidder's Clarification	BHEL reply
57	62		LOAD DATA (ELECTRICAL)		Noted.
58	63		iii) Suitable protection shall be included in the HT Switchgear logic to prevent frequent start stop of the compressor HT motors.	In Purchaser scope	The scope is clearly mentioned in tender specification. Please refer page no. 28 of specification.
59	79		QUALITY PLAN & QUALITY ASSURANCE	<p>a. Compressor - At shop will be tested as per NTPC approved QAP. At Site only Pressure &amp; Power will be measured</p> <p>b. Dryer - Imported from China, hence not applicable. At Site Dew Point will be measured</p> <p>c. Receiver - As per NTPC QAP</p> <p>d. Field Instruments, Valves, Pipes &amp; Fittings - Routine test reports will be shared.</p> <p>e. Compressor &amp; Dryer Local Control Panel shall be as per OEM std</p> <p>Note - Travel &amp; Accommodation in Purchaser scope</p>	Bidder to comply specification requirement.
60			Additional Queries	Project timeline to be shared by Purchaser	Bidder to comply the delivery schedule provided by BHEL for the project.



# BHARAT HEAVY ELECTRICALS LIMITED

## PROJECT ENGINEERING MANAGEMENT, NOIDA

Bidders to note the following Additional Terms and Conditions for subject tender-

1. Tender Type	<b>Open Tender (Domestic-Indian)</b>	
2. Package	<b>COMPRESSED AIR SYSTEM</b>	
3. Project	<b>2 X 800 MW LARA STPP, STAGE-II</b>	
4. End Customer	<b>NTPC</b>	
5. Executing Agency	<b>BHEL-PSWR</b>	
6. Nature of Package (Divisible/Non-Divisible)	<b>Non-Divisible</b>	
7. Technical Scope	As per Technical specification No: PE-TS-508-555-A001	
8. Schedule of Pre-Bid Discussion	Based on Bidder's request, Pre-Bid meeting shall be arranged.	
9. PVC	APPLICABLE Please refer PVC Annexure enclosed in GeM bid	
10. CIF APPLICABLE	NO	
11. QUANTITY VARIATION	AS PER GCC BOP (+/-10%)	
12. REVERSE AUCTION	<b>NA</b> <b>Price will be finalized by traditional price bid opening</b>	
13. CUSTOMER APPROVAL REQUIRED	<b>YES</b>	
14. Eligibility of Local Supplier as per Make in India Guideline	<b>Only Class I Supplier (with local content 60% and above)</b>	
15. HSE Guideline	<b>Applicable</b> <b>Same may please be downloaded from BHEL PEM Website - <a href="https://pem.bhel.com/Current_Tender.aspx">https://pem.bhel.com/Current_Tender.aspx</a></b>	
16. Prequalification Requirement	Financial PQR- YES	Technical PQR- YES
17. Delivery terms for Supply portion	FOR Despatch Station	
18. Bid Security/ Earnest Money Deposit (EMD)	<b>EMD is applicable. EMD amount shall be Rs. 6 Lakh.</b>  EMD is to be submitted by the all bidders along with their bids (except Micro and Small Enterprises (MSEs) or Startups as recognized by Department for Promotion of Industry and Internal Trade (DPIIT)).  <b>Modes of deposit</b>  The EMD may be accepted only in the following forms: i) Electronic Fund Transfer credited in BHEL account (before tender opening)  BHEL-PEM account details are as follows:  Bank name, State Bank of India Account No: 39922687394 IFSC: SBIN0017313 BRANCH-CAG II NEW DELHI  ii) Banker's cheque/ Pay order/ Demand draft, in favour of BHEL-PEM, Noida (along with the offer).	



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	<p>iii) Fixed Deposit Receipt (FDR) iv) Bank Guarantee from any of the Scheduled Banks (refer Annexure A along with GeM Bid/NIT for BG Format) v) Insurance Surety Bonds.</p> <p><b>Bidders to note that if original EMD (in form of Banker's cheque/ Pay order/Demand draft/FDR/BG/Insurance Surety Bonds) is not received within 5 days from Part I bid opening date, offer submitted will be liable for rejection.</b></p> <p><b>Validity period of EMD</b></p> <p>The EMD shall remain valid for a period of 45 (forty-five) days beyond the final bid validity period.</p> <p>EMD shall not carry any interest</p> <p><b>Forfeiture of EMD</b></p> <p>I. A bidder's EMD will be forfeited if the bidder withdraws or amends its/his tender or impairs or derogates from the tender in any respect within the period of validity of the tender or if the successful bidder fails to furnish the required performance security within the specified period mentioned in the Tender.</p> <p>II. EMD by the tenderer to be withheld in case any action on the bidder is envisaged under the provisions of extant "Guidelines on Suspension of business dealings with suppliers/ contractors (abridged version of guidelines is available on <a href="http://www.bhel.com">www.bhel.com</a>)" and forfeited/ released based on the action as determined under these guidelines.</p> <p><b>Return of EMD</b></p> <p>I. Bid securities of the unsuccessful bidders shall be returned to them after expiry of the final bid validity period and latest by the 30th day after the award of the contract. However, Bid securities of unsuccessful bidders during first stage i.e. technical-commercial evaluation etc. shall be returned within 30 days of declaration of result of first stage i.e. technical-commercial evaluation.</p> <p>II. Bid security shall be refunded to the successful bidder on conclusion of the order/ receipt of a performance security.</p>
19. Performance Security (PS)	<p>I. Initially <b>10%</b> of the contract value (total order value in case of GeM POs excluding PVC/total Ex-works price in case of outside GeM POs excluding PVC). However, 5% of the contract value (as above) will be released after completion of Main Supply based on certification by Project Group/Purchaser</p> <p style="text-align: center;">OR</p> <p>II. 5% of the contract value (total order value in case of GeM POs excluding PVC/total Ex-works price in case of outside GeM POs excluding PVC). Additional 5% of the contract value will be retained from first bill &amp; subsequent</p>



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	<p>bill(s) of the same contract. The retention amount will be released after completion of Main Supply based on certification by Project Group/Purchaser</p> <p><b>Validity of PS</b> Initial validity of performance security shall be 34 months from LOA date (Considering delivery period of 14 months + 18 months guarantee period + 2 months claim period is already mentioned in GTC cl no. 7.ii GeM 3.0). Further, extension if any shall be as per GeM Terms.</p> <p><b>Modes of deposit</b> Performance security may be furnished in the following forms:</p> <ul style="list-style-type: none"><li>a) Local cheques of Scheduled Banks (subject to realization)/ Pay Order/ Demand Draft/ Electronic Fund Transfer in favour of BHEL.</li><li>b) Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL.</li><li>c) Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL).</li><li>d) Securities available from Indian Post offices such as National Savings Certificates, Kisan Vikas Patras etc. (held in the name of Contractor furnishing the security and duly endorsed/ hypothecated/ pledged, as applicable, in favour of BHEL).</li><li>e) Insurance Surety Bond.</li></ul> <p>(Note: BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith)</p> <p>Performance Security is to be furnished within 14 days from the date of PO/LOA and it should remain valid for a period of 60 (sixty) days beyond the date of completion of all contractual obligations of the supplier, including warranty obligations.</p> <p><b>Remarks for PS</b></p> <ul style="list-style-type: none"><li>a) The performance security will be forfeited and credited to BHEL's account in the event of a breach of contract by the supplier.</li><li>b) Performance security should be refunded to the contractor without interest, after he duly performs and completes the contract in all respects but not later than 60(sixty) days of completion of all such obligations including the warranty under the contract.</li></ul> <p>The Performance Security shall not carry any interest.</p>
20. Breach of contract, Remedies and Termination	In case of Breach of Contract, BHEL shall recover 10% of the contract value from the Vendor using following instruments:



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	<p>(i) encashment of security instruments like EMD, Performance Security with with executing agency (PS-Regions/PEM as applicable) against the said contract</p> <p>(ii) balance amount (if value of security instruments is less than 10% of the contract value) from other financial remedies i.e. available bills of the Vendor, retention amount etc. with executing agency (PS-Regions/PEM as applicable)</p> <p>(iii) balance amount from security instruments like EMD, Performance Security and other financial remedies i.e. available bills of the Vendor, retention amount etc. with other units of BHEL</p> <p>(iv) if recovery is not possible then legal remedies shall be pursued</p> <p>The balance scope shall be got done independently without Risk &amp; Cost of the failed supplier/ contractor. Further, levy of liquidated damages, debarment, termination, de-scoping, short-closure, etc., shall be applied as per provisions of the contract.</p>
21. Integrity Pact Applicability -	YES
22. <b>Bidders can to download detailed technical specification number- PE-TS-508-555-A001</b> at <a href="http://www.pem.bhel.com">www.pem.bhel.com</a> and <a href="http://www.bhel.com">www.bhel.com</a>	
23. Bidders are requested to refer clause no 26.0 (Make in India) of GCC-BOP.	<p>“For this procurement, the local content to categorize a supplier as Class I local supplier/ Class II local supplier/ Non Local supplier and purchase preference to Class I local supplier is as defined in Public Procurement (Preference to Make India), Order 2017 dated 16.09.2020 issued by DPIT. In case of subsequent order issued by nodal ministry changing the definition of local content for item in NIT, the same shall be applicable even if issued after issue of this NIT but before opening of part-II bids against this NIT.” This package is not divisible in nature. The margin of purchase preference shall be as per order dtd. 16.09.2020. <b>For this tender, offer from only class-1 local suppliers (meeting minimum 60% local content requirement) shall be considered.</b></p> <p>Bidders are required to provide the following along with the part-1 bid:</p> <ul style="list-style-type: none"><li>• Provide a certificate (in line with attached draft) giving the percentage of local content.</li><li>• Provide the details of the location(s) at which the local value addition shall be made.</li></ul>
24. Please furnish land border certificate as per enclosed format dully signed and stamped by Director or Company Secretary or authorised person by Board of the Company.	
25. In line with cl. No. 12 of (ITB) BOP-GCC, following Independent External Monitors (IEMs) have been appointed by BHEL.	<p>Shri Otem Dai, IAS (Retd.) (<a href="mailto:iem1@bhel.in">iem1@bhel.in</a>)</p> <p>Shri Bishwamitra Pandey, IRAS (Retd.) (<a href="mailto:iem2@bhel.in">iem2@bhel.in</a>)</p> <p>Shri Mukesh Mittal, IRS (Retd.) (<a href="mailto:iem3@bhel.in">iem3@bhel.in</a>)</p>
26. Delivery Schedule shall be as follows-	<ul style="list-style-type: none"><li>• Main Supply (along with commissioning spares) – 14 (Fourteen) Months from the date of LOA.</li><li>• Mandatory Spares - Mandatory Spares and Tools &amp; tackles (if any) are to be delivered along with the last consignment of main supply within the contractual delivery period.</li><li>• E&amp;C- Within 06 months from the date of availability of front. Site front availability will be reckoned as the date when site informs vendor for mobilization of manpower &amp; resources.</li><li>• Design &amp;Engineering - Design/Engg. Services - Drawing/ documents submission schedule shall be as per Technical Specification- PE-TS-508-555-A001</li><li>• AMC - Personnel for AMC Services shall be deputed within 10 days of intimation.</li></ul>



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For PVC calculation, contractual period for E&C shall be considered as 20 months from the date of LOA.

Note: Above delivery conditions are to be complied by bidder strictly.

Delivery on GeM portal shall be selected as 999 days. Same shall be indicative to suffice the GeM portal requirement.

**27. Payment Terms - As per GCC BOP Rev-00. Provision of offline payment in GeM shall be utilized.**

**28. Evaluation Criteria - Total Package Price (including freight and taxes)**

Bidder has to quote the total package price of complete scope, as per technical specification, in GeM. Price break up of total package price shall be provided by bidder in price format uploaded in GeM.

In case of discrepancy between total package price and price break up, total price quoted on GeM shall prevail and break up shall be corrected accordingly.

**29. Bidders to note that-**

**Total Erection & Commissioning charges (excluding GST) should be minimum 10% of the total quoted price of main equipment supply (including freight & excluding GST) and erection & commissioning (excluding GST), failing which the break-up of prices shall be adjusted accordingly for ordering. However, while doing adjustments, vendor quoted prices for mandatory spares, PG test charges, O&M spares, O&M charges, etc. will not be changed.**

**30. In case of single qualified bid, price bid of single qualified bidder shall be opened.**

31. In the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following order of precedence:

- i. Amendments to Purchase Order/ Work Order/ Framework Agreement
- ii. Purchase Order/ Work Order/ Framework Agreement
- iii. Letter of intent (LOI)/ Letter of Award (LOA)
- iv. Clarifications agreed between Buyer and Seller as regards to the tender or the bidding conditions
- v. The final set of deviations acceptable to purchaser with loading as specified in relevant section.
- vi. Corrigenda to NIT, with those of later date having precedence over those of earlier date
- vii. Enquiry letter along with Buyer specific ATC and annexures except documents listed in point no (vii) to (ix) below
- viii. Technical specifications
- ix. Special Conditions of Contract (SCC)
- x. GeM GTC latest version applicable as on enquiry date.

**Bidders to note the following Additional Terms and Conditions for subject tender-**

1. Insurance Deductibles and Excess:

For Marine Cover: Rs 20,000/ -.

For Storage /Erection and Testing Cover:

a. Normal Excess: 5 % of the claim amount subject to a minimum of Rs. 2.25 Lakh.

b. Testing Excess: 5% of the claim amount subject to minimum of Rs. 6.0 Lakh.

Act of God Perils: - 10% of the claim amount subject to minimum of testing period excess.

Fire / Explosion Claims: 20% of the claim amount subject to minimum of testing period excess

Extended Maintenance Cover/ Defect Liability Cover: As applicable for testing period excess.

Third Party Liability: The policy excesses (normal/testing periods) shall apply for third party liability property damage claims also. For third party liability claims arising out of acts of GOD perils. The excess applicable to AOG claims shall apply.



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"The above mentioned insurance deductibles/excess are tentative in nature and may change after award of contract which will be applicable within quoted price".

2. Vendors shall submit billing documents for payment directly to BHEL. Payment will be released within days as mentioned below after submission of complete documents:
  - i. 90 days for non MSME as per MSMED Act
  - ii. 45 days for vendors qualified and registered as Micro and Small Enterprises MSEs as per MSMED Act
  - iii. 60 days for vendors qualified as Medium Enterprises as per MSMED Act.

Notes:

1. Vendors are required to issue Tax Invoice inclusive of PVC value (if applicable) wherever indices are available. In case PVC indices not available, vendors to submit PVC invoices on availability of applicable indices.
  2. Any negative PVC, if not adjusted in earlier payments, will be adjusted at the time of remaining payments.
3. Bidder to note that this is an **Open Tender enquiry** & PBO/RA participation shall be subject to following condition:
    - a. **Qualifying Technical & Financial Pre-Qualification Requirement.**
    - b. **Techno-commercial acceptance of offer by BHEL-PEM.**
    - c. **Approval of bidder by End Customer: - Same shall be taken up with end customer based on the latest credentials/reference list furnished by bidder in the format. Accordingly, bidders are requested to submit credential along with their technical bid.**

The bidders who are not registered with BHEL-PEM may apply for registration in BHEL-PEM through Registration Portal available at [www.pem.bhel.com](http://www.pem.bhel.com) -->vendor section-->online supplier registration. All credentials and/or documents duly signed & stamped related to registration has to be uploaded on the website & submit the application for registration. One set of hard copy filled-up SRF downloaded from Online Registration Portal duly signed & stamped has to be submitted.

4. The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the firms debarred across BHEL, shall be rejected. The list of firms debarred across BHEL is available on BHEL web site [www.bhel.com](http://www.bhel.com).

1.0 Integrity commitment, performance of the contract and punitive action thereof:

1.1. Commitment by BHEL: BHEL commits to take all measures necessary to prevent corruption in connection with the tender process and execution of the contract. BHEL will during the tender process treat all Bidder(s) in a transparent and fair manner, and with equity.

1.2. Commitment by Bidder/ Supplier/ Contractor:

1.2.1. The bidder/ supplier/ contractor commit to take all measures to prevent corruption and will not directly or indirectly influence any decision or benefit which he is not legally entitled to nor will act or omit in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India.

1.2.2. The bidder/ supplier/ contractor will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection



## BHARAT HEAVY ELECTRICALS LIMITED PROJECT ENGINEERING MANAGEMENT, NOIDA

with the award of the contract and shall adhere to relevant guidelines issued from time to time by Govt. of India/ BHEL.

1.2.3. The bidder/ supplier/ contractor will perform/ execute the contract as per the contract terms & conditions and will not default without any reasonable cause, which causes loss of business/ money/ reputation, to BHEL.

If any bidder/ supplier/ contractor during pre-tendering/ tendering/ post tendering/ award/ execution/ post-execution stage indulges in malpractices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India, then, action may be taken against such bidder/ supplier/ contractor as per extant guidelines of the company available on [www. bhel.com](http://www.bhel.com) and/or under applicable legal provisions”.

5. Bidders to ensure that Third party/customer issued certificates being submitted as proof of PQR qualification should have verifiable details of document/certificate issuing authority such as name & designation of Issuing Authority and its organization contact number and e - mail Id etc. In case the same found not available, Purchaser has right to reject such document from evaluation.
6. Bidders to comply Govt. of India, Ministry of Power, order no-25-111612018-PG dated 02/07/2020 regarding mandatory testing of all the imported items/equipment's/components.
7. This item/Package falls under the list of items defined in Para 3 of Ministry guideline ref no.F.20/2/214-PPD(Pt.) dated.20-09-2016 (in respect of procurement of items related to public safety, health, critical security operations and equipment's, etc) & hence no relaxation of PQR for start-up/MSME vendors is envisaged for the items/Package”
8. Bidders may visit site/ work area and study the job content, facilities available, availability of materials, prevailing site conditions including law & order situation etc. before quoting for this tender. They may also consult this office before submitting their offers, for any clarifications regarding scope of work, facilities available at sites or on terms and conditions. No additional claim shall be entertained by BHEL in future, on account of non-acquaintance of above.
9. The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines
10. A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity's interests. The bidder found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:
  - a) they have controlling partner (s) in common;' or
  - b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or
  - c) they have the same legal representative/agent for purposes of this bid; or
  - d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; or
  - e) Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid, or



## BHARAT HEAVY ELECTRICALS LIMITED PROJECT ENGINEERING MANAGEMENT, NOIDA

- f) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorize only one agent/dealer. There can be only one bid from the following:
1. The principal manufacturer directly or through one Indian agent on his behalf; and
  2. Indian/foreign agent on behalf of only one principal,'
- or
- g) A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid, or
- h) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business. "
11. Bidder to quote non-zero freight %.
12. "Self-declarations/ auditor's/ accountant's certificates submitted by the manufacturer/ supplier may be verified randomly by the committee constituted as per MoP Order 28-07- 2020. In case of false documents/misrepresentation of the facts requisite action against such manufacturer/ supplier will be taken based on the recommendation of the Committee."
13. **Bidder to agree with all the clauses except (clause no-3.0, 6.0 to 9.0, 13.0, 15.0 & 25.0 of ITB of GCC-BOP, 11.0 & 27.0 of GCTC of GCC-BOP) of GCC BOP (available on [www.pem.bhel.com](http://www.pem.bhel.com)) & SCC Rev-00 of the project.**
14. All other correspondence thereof shall be addressed to the undersigned by name & designation and sent at the following address:

Sanjeev Kumar/Dy. Engineer– BOP  
M/s Bharat Heavy Electricals Ltd.,  
Project Engineering Management,  
Power Project Engineering Institute,  
HRD & ESI Complex,  
Plot No 25, Sector-16 A, Noida-201301  
E-MAIL: [sanjeev\\_k@bhel.in](mailto:sanjeev_k@bhel.in)  
Ph. No. 9958175655

Vinod Kumar/Sr. DGM-BOP  
M/s Bharat Heavy Electricals Ltd.,  
Project Engineering Management,  
Power Project Engineering Institute,  
HRD & ESI Complex,  
Plot No 25, Sector-16 A, Noida-201301  
E-MAIL: [vinod.kumar@bhel.in](mailto:vinod.kumar@bhel.in)  
Ph. No. 9873711252

## **2X800 MW NTPC LARA STPP STAGE-II-COMPRESSED AIR SYSTEM**

### **PRICE ADJUSTMENT FORMULA FOR SUPPLY AND MANDATORY SPARES PORTION**

Reference: Circular No. 34 of 2021-22 issued by SS&P, Ref:AA:SSP:PP:PVC dated 23/03/2022

(1) The price adjustment formula is defined for price components related to Supply including commissioning spares & Mandatory Spares Portion.

(2) The amount of price adjustment shall be computed as under:

$$EC = EC1 - EC0$$

EC1 will be computed as follows:

$$EC1 = EC0 \{F + a \times A1m / A0m + Lb \times L1 / L0\}$$

Where

EC = Adjustment in Ex-Works supply Price.

EC1 = Adjusted Amount of Ex-Works supply Price.

EC0 = Ex-Works supply Price as per LOA/ PO.

(i) 'F' shall be fixed portion of the Ex-Works supply Price and shall be considered as 0.15.

(ii) 'a' shall be co-efficient which shall be considered as 0.6

(iii) A1m & A0m shall be Wholesale Price Index for "MANUFACTURE OF BASIC METALS" as published in RBI Bulletin, Sl.no. 1.3.14.

(iv) 'Lb' shall be co-efficient for labour component in the Ex-Works Component of the supply Price which shall be considered as 0.25

(v) 'L' shall be consumer price index for industrial workers as published by RBI in RBI Bulletin, S.N. 1, Base year 2016=100 (Extract of website is pasted below for reference).

(vi) For the indices,

Subscript '0' refers to indices of the Base Month which shall be taken as the month before the month of the price bid opening.

Subscript '1' refers to indices of the month before the month in which delivery is required to be made as per the Purchase Order or its amendments issued. The latest available indices are to be extrapolated to the above defined month wrt the base month.

Source link of RBI bulletin: [https://rbi.org.in/Scripts/BS\\_ViewBulletin.aspx?Id=20964](https://rbi.org.in/Scripts/BS_ViewBulletin.aspx?Id=20964)

Note:

- 1) PVC shall be applicable only beyond original overall completion schedule as per LOA. PVC shall be applicable only if the delay is not attributable to contractor/ vendor. However even if the delay is attributable to vendor then also the negative price variation shall be passed on to BHEL.
- 2) The price variation shall be limited to (+) 10% of Ex-Works Supply Price including commissioning spares & Mandatory spares.

### **PRICE ADJUSTMENT FOR SERVICE PART (E&C)**

- (i) The Contract price shall be subject to price adjustment during performance of the Contract to reflect changes in the cost of labour in accordance with the provisions described below:
- (ii) The price adjustment provisions shall be applicable for price components relating to service part (E&C) as per price break-up furnished by the Contractor.
- (iii) Only following components of the Contract Price will be subject to Price adjustment:
  - (a) Service part (E&C) component of Contract Price.
- (vi) The indices for price adjustment shall be as elaborated hereunder.
- (v) The price adjustment formula for the components of the Contract Price, as mentioned at Sl.No. (iii) above shall be as stipulated hereinafter.

#### **a) Indian Rupee Portion of the Installation Services**

ER = ER1 – ER0

ER1 will be computed as follows:

$$\mathbf{ER1 = ER0 (0.15 + L_b \times (L_1/ L_0))}$$

Where:

ER = Adjustment to Erection & Commissioning price component of contract price expressed in Indian Rupees payable to the contractor for each billing.

ER1 = Adjusted amount of Erection & Commissioning price component of contract price expressed in Indian Rupees payable to the Contractor.

ER0 = Value of the Erection & Commissioning work done in the billing period, which shall be calculated as under:

For the purpose of computing ER0, each Erection & commissioning bill (service part) during the E & C period up to the 'Completion of the Facilities' shall be calculated as described in this document.

L<sub>b</sub> – Coefficient of labour (for all categories) content in the Indian Rupee portion of the erection & commissioning =0.85

L=Indian field labour index namely, all India consumer price index for industrial workers (All India Monthly Average) as published labour bureau, Shimla, Government of India.

For the indices, subscript '0' refers to indices as on date of completion of delivery as per LOA.

Subscript '1' refers to indices as applicable for the month of execution of the E&C work

Note:

- 1) PVC shall be applicable only beyond original overall completion schedule as per LOA. PVC shall be applicable only if the delay is not attributable to contractor/ vendor. However even if the delay is attributable to vendor then also the negative price variation shall be passed on to BHEL.
- 2) The price variation shall be limited to +10% of total E&C price (excluding taxes).



## PRE - QUALIFYING REQUIREMENTS

PROJECT:

2X800 MW LARA

PACKAGE:

COMPRESSED AIR SYSTEM

### CRITERIA FOR EVALUATION - FINANCIAL :

	Amount (in Rs.)
Average annual financial turnover during the last Three Financial Years should not be less than Rs.Two Crore Eighteen Lakh only	2,18,00,000.00

#### Notes:-

a) The bidder has to submit financial accounts (audited, if applicable comprising of Audit report, Balance Sheet, Profit & Loss A/c Statement and Notes/Schedules pertaining to Turnover/Sales/Revenue), for last three years (or from the date of incorporation, whichever is less) as on tender due date to review the above criteria. In case the incorporation of vendor is less than 3 years, average annual financial turnover shall be calculated based on available information as below:-

i) If the accounts are available for  $\leq 1$  Financial Year, the Average Annual Turnover shall be calculated based on available information divided by 1 (One).

ii) If the accounts are available for  $>1$  but  $\leq 2$  Financial Years, the Average Annual Turnover shall be calculated based on available information divided by 2 (Two).

iii) If the accounts are available for  $>2$  but  $\leq 3$  Financial Years, the Average Annual Turnover shall be calculated based on available information divided by 3 (Three).

b) Foreign bidder is to submit a latest report from reputed third party business rating agency like Dun & Bradstreet, Credit reform etc. in addition to the documents mentioned at point (a) above for review of above criteria.

c) Other Income shall not be considered for arriving at Annual Turnover/Sales. For evaluation purpose, turnover figure excluding taxes shall be considered.

d) For evaluation of foreign bidder, exchange rate (TT selling rate of SBI) as on scheduled date of tender opening (Part-I bid in case of two part bid) shall be considered.

e) Bidder who is 50% or above subsidiary of any other company including those registered outside India and does not meet any of the above Financial Criteria, such bidder may be qualified based on credentials of its holding company provided such holding company meets the above PQR criteria. In such case, the Bidder would be required to furnish a Letter of Support from its Holding Company, pledging unconditional and irrevocable financial support for the execution of the Contract by the Bidder in case of award.

f) In cases where audited results for the last financial year as on the date of Techno Commercial bid opening are not available, a Certificate would be required from CEO/CFO stating that the financial results of the Company are under audit as on the date of Techno-commercial bid opening and are not available.



**TECHNICAL SPECIFICATION  
LARA STPP STAGE-II (2X800 MW)  
COMPRESSED AIR SYSTEM**


**PE-TS-508-555-A001**

**Rev. No. 00**

**Date: MAR. 2024**

**PRE-QUALIFYING REQUIREMENTS  
(TECHNICAL)**

**BHEL-PEM-MAUX**  
**PRE-QUALIFICATION CRITERIA**

	<b>PROJECT: LARA STPP STAGE-II (2X800 MW)</b> <b>PACKAGE: COMPRESSED AIR SYSTEM</b> <b>PRE-QUALIFICATION REQUIREMENT</b>	<b>PE-TS-508-555-A001</b>	
		<b>DATE</b>	<b>12/04/2024</b>
		<b>Rev No.</b>	<b>00</b>

<b>1.</b>	<ul style="list-style-type: none"> <li>The bidder should have designed, manufactured, supplied, erected/supervised erection and commissioned/supervised commissioning of at least one (1) number non-lubricated oil free screw type air compressor of minimum capacity 20 NM3/min or at least one (1) number centrifugal air compressor of minimum capacity 50 NM3/min and at rated discharge pressure of 8 kg/cm2 (g), which should have been in successful operation for minimum one (1) year as on 03.03.2023.</li> <li>The Air Drying Plant (A.D.P) shall be supplied from such manufacturers who have manufactured and supplied at least one (1) number Air Drying Plant of capacity 50 NM3/min or more and the type same as offered, which should have been in successful operation.</li> </ul>
<b>2.</b>	<p>The Bidder has to submit following supporting documents meeting above mentioned pre-qualifying requirement: Copy of minimum one(1) performance certificate (in English) from end user along with copy of related Purchase Order (PO) or Letter of Intent(LOI) or letter of Award (LOA) or Work Order (WO).</p>
<b>3.</b>	<p>Bidder shall submit design documents to substantiate technical parameters specified in PQR, if the same is not mentioned in performance certificate / purchase order.</p>
<b>4.</b>	<p>Bidder to submit all supporting documents in English. If documents submitted by bidder are in language other than English, a self-attested English translated document should also be submitted.</p>
<b>5.</b>	<p>Notwithstanding anything stated above, CUSTOMER/BHEL reserves the right to assess the capabilities and capacity of the Bidder to perform the contract, should the circumstances warrant such assessment in the overall interest of the Employer.</p>
<b>6.</b>	<p>Consideration of offer shall be subject to customer's approval of bidders, if applicable.</p>
<b>7.</b>	<p>After satisfactory fulfilment of all the above criteria / requirement, offer shall be considered for further evaluation as per NIT and all the other terms of the tender.</p>
<b>8.</b>	<p>The bidder shall meet PQR based on its own credentials. Bid from joint venture (JV) company / Consortium bid is not acceptable.</p>

**Sub :** Sub-Qualifying Requirements for the Compressed Air System stipulated in Clause No. 4.7 of Sub-Section-IA, Part-A, Section-VI of Technical Specification of Bidding Documents.

Sl.No.	Item	Plant 1
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**A) Air Compressor**

In line with the Sub-qualifying requirements stipulated in Clause 4.7 of Sub-Section-IA, Part-A, Section-VI, we / our sub-vendor confirm that we/our sub-vendor have designed, manufactured, supplied, erected /supervised erection and commissioned/supervised commissioning of atleast one (1) no. non-lubricated oil free screw type air compressor of minimum capacity 20 NM3/min each or atleast one (1) no. centrifugal air compressors of minimum capacity 50 NM3/min each and at rated discharge pressure of 8 Kg./cm2(g) which have been in successfull operation for atleast one (1) year.

1. Name of the Project and its address where the system is installed .....
  2. Name of the Client with address, name of Contact person(s) with tel.no. & fax no. ....
  3. Order No. and date
  4. Purchase order enclosed Yes/No
  5. Name of the Manufacturer & Address
  6. Date of commissioning of the compressors
  7. No. of Compressors supplied
  8. Whether the scope of work executed for the aforesaid compressors included the following
    - a) Designed Yes/No
    - b) Manufactured Yes/No

Signature of authorized signatory.....

Sl.No.	Item	Plant 1
	c) Supplied	Yes/No
	d) Erected/supervised erection	Yes/No
	e) Commissioned/supervised commissioning	Yes/No
9.	Brief Technical particulars of the Compressors (Bidder to fill)	
	a) whether the compressor supplied was non lubricated oil free screw/centrifugal type air compressor	
	b) Make & Model	
	c) Capacity	
	i) Flow (NM3/Min)	
	ii) Discharge pressure [Kg/cm2/(g)]	
10.	Whether atleast <b>one (01)</b> compressor have been in successful operation for a period of not less than one (01) year.	
11.	Whether documentary evidence in support of above enclosed?	Yes/No

**B) Air Drying plant**

We/our sub-vendor further declare that the Air Drying Plant (ADP) to be supplied under the package shall be sourced from manufacturer(s) M/s..... who have manufactured and supplied atleast one (1) no. Air Drying Plant each of capacity 50 NM3/min or more and the type same as offered, which have been in successful operation. The experience details of manufacturer are as follows :

Sl.No.	Item	Plant 1
1.	Name of the Project and its address where the system is installed	.....
2.	Name of the Client with address, name of Contact person(s) with tel.no. & fax no.	.....
3.	Order No. and date	
4.	Purchase order enclosed	Yes/No
5.	Name of the Manufacturer & Address	
6.	Date of commissioning of the Air drying unit	
7.	No. of Air drying unit supplied	
8.	Whether the scope of work executed for the aforesaid Air drying unit included the following	
	a) Manufactured	Yes/No
	b) Supplied	Yes/No
9.	Brief Technical particulars of the Air Drying unit (Bidder to fill)	
	a) Type	
	b) Flow (NM3/Min)	

Signature of authorized signatory.....

Sl.	Item	Plant 1
10.	Whether atleastone (01) air drying plants have been in successful operation.	
11.	Whether documentary evidence in support of above enclosed?	Yes/No

Date :

(Signature).....

Place :

(Printed Name).....

(Designation).....

(Common seal).....

Signature of authorized signatory.....

**PROJECT GROUP I**  
**POWER SECTOR – PROJECT ENGINEERING MANAGEMENT**  
**BHARAT HEAVY ELECTRICALS LIMITED**

**SPECIAL CONDITIONS OF CONTRACT (SCC) Rev.00**  
**2 X 800 MW NTPC LARA STPS STAGE - II – EPC**  
**(JOB NO. 508)**

These Conditions shall be read and construed along with latest applicable (i.e. BOI or BOP) General Conditions of Contract (GCC) enclosed along with the tender enquiry. In case of any conflict or inconsistency, the conditions given in SCC shall prevail over the GCC.

Sl. No.	Title	Description
1.	Project Name	2 X 800 MW NTPC LARA STPS STAGE - II – EPC
2.	Nature of project & Type of Bidding	Mega Power Project Competitive Bidding
3.	Customer Order Ref No	Supply: - CS-9587-001R-2-FCNOA-7332, dtd 29.08.23 Services: - CS-9587-001R-2-SCNOA- 7333. dtd 29.08.23 Mandatory Spares: -CS-9587-001R-2-SCNOA- 7333, Dtd 29.08.23
4.	BHEL's Customer	NTPC
5.	NTPC LARA GST No.	22AAACN0255D4Z5
6.	Customer Consultants	NA
7.	Buyer and Paying Authority	a. For packages where BHEL PEM will issue the Purchase Order - BHEL PEM will be the paying authority. b. For packages where BHEL-PEM will issue only the LOA and Purchase Order shall be issued by BHEL PSWR - BHEL PSWR Site will be the paying Authority.
8.	Consignee Address (Bill To)	<b>FOR SUPPLY PACKAGES:</b> BHEL, Power Sector-Project Engineering Management, Power Project Engineering Institute, Plot No. 25, Sector-16A, Noida, Uttar Pradesh-201301. BHEL-PEM GSTIN: 09AAACB4146P2ZC  <b>FOR TURNKEY PACKAGES (where BHEL-PEM will issue only the LOA and Purchase Order shall be issued by BHEL-PSWR):</b>  Construction Manager, BHEL site office, 2 X 800 MW NTPC LARA STPS STAGE - II P.O. - PUSSORE, VILLAGE-CHHAPORA, RAIGARH CHHATTISGARH-496440 BHEL-PSWR - GSTIN No. - 22AAACB4146P1ZP
9.	Delivery Address (Ship To)/BHEL Site office address	Construction Manager, BHEL site office, 2 X 800 MW NTPC LARA STPS STAGE - II P.O. - PUSSORE, VILLAGE-CHHAPORA, RAIGARH CHHATTISGARH-496440 BHEL-PSWR - GSTIN No. - 22AAACB4146P1ZP

10.	Location of Plant	<p>The project is located in Raigarh district of Chhattisgarh State. The project is located south-east of Raigarh town near village Lara, bounded by villages Lara, Chhapora &amp; Lohakhan and on the western side of Odisha State boundary.</p> <p>Nearest Road- NH-200 (Raigarh–Sarangarh) via Kondatarai.  Nearest Railway: Raigarh Railway is approximately 30 kms.  Nearest Airport: Raipur is about 250 km</p>
11.	Mode of Dispatch	By Rail/Road/Sea on door delivery and freight pre-paid basis
12.	Packages for which CIF value considered	NIL
13.	BHEL GSTIN Details	<p><b>For supply packages:</b> BHEL-PEM is registered in the State of Uttar Pradesh with GSTIN <b>09AAACB4146P2ZC</b></p> <p><b>For Turnkey packages:</b> BHEL-PSWR – GSTIN - 22AAACB4146P1ZP</p>
14	QR Code Affixing Requirement for SPMS ( <b>Mandatory Requirement</b> )	<p>Vendor to mandatorily required to furnish detailed shipping/packing list to BHEL in format as per Annexure 1 of this SCC. BHEL shall provide QR codes for each boxes/bundle/shipping sections etc.</p> <p>Vendor is mandatorily required to print the generated QR in half of A4 size printer using a normal printer. One copy of this QR code must be attached to the respective box/bundle/gunny bag/shipping section etc. The other copy of the QR code must be enclosed with the documents sent along with the consignment. After reaching at site, QR code shall be scanned at gate and material shall be received by site.</p> <p>Further, vendor to ensure that</p> <ol style="list-style-type: none"> <li>All the items being dispatched in the consignment/LR are listed in the packing list.</li> <li>Proper precautions are taken while affixing to ensure that the “Fixed QR Code” should not damage during transit.</li> <li>QR code is correctly fixed to all the box/bundles/loose items being dispatched in consignment. Any delay arising thereof due to incorrect tagging/missing tags shall be to vendor’s account.</li> </ol> <p>BHEL shall provide QR code within 2-3 days of submission of shipping/packing details (as per Annexure-1) by vendor. Vendor to plan dispatches accordingly without affecting the delivery schedule.</p>
15A	Transit Insurance	<p>Transit Insurance in vendor scope , unless specified in NIT.</p> <p>In case, Transit Insurance is specified in BHEL Scope in NIT - Insurance details shall be provided by BHEL-PEM.</p> <p>For each dispatch, vendor shall inform the following to the Underwriter under intimation to BHEL-PEM and BHEL Site office:</p> <ul style="list-style-type: none"> <li>Policy No.</li> </ul>

		<ul style="list-style-type: none"> <li>• Consignee Name.</li> <li>• Consignment Details (items with their weights and value (in INR).</li> <li>• Project Name and P.O. No.</li> <li>• LR No. and date, Dispatch origin and destination details, Invoice No.</li> </ul> <ul style="list-style-type: none"> <li>• Vendors to intimate the underwriters quoting the insurance Policy details.</li> </ul>
15B	Insurance of unloading, storage, handling, erection and commissioning	<p><b>For Turkey Packages:</b></p> <p>Insurance of unloading, storage, handling, erection and commissioning shall be in BHEL Scope</p> <p>Insurance Deductibles and Excess:</p> <p>For Marine Cover: Rs 20,000/-</p> <p>For Storage /Erection and Testing Cover:</p> <p>a. Normal Period: 5 % of the claim amount subject to a minimum of Rs. 2.25 Lakh.</p> <p>b. Testing Period: 5% of the claim amount subject to minimum of Rs. 6.0 Lakh.</p> <p>Act of God Perils: - 10% of the claim amount subject to minimum of testing period excess.</p> <p>Fire / Explosion Claims: 20% of the claim amount subject to minimum of testing period excess</p> <p>Extended Maintenance Cover/ Defect Liability Cover: As applicable for testing period excess.</p> <p>Third Party Liability: The policy excesses (normal/testing periods) shall apply for third party liability property damage claims also. For third party liability claims arising out of acts of GOD perils. The excess applicable to AOG claims shall apply.</p> <p>“The above-mentioned insurance deductibles/excess are tentative in nature and may change after award of contract which will be applicable within quoted price”.</p>
16.	Dispatch intimation	<p>Yes, in writing, not less than 30 (Thirty) days prior to date of shipment and dispatch details to be sent to:</p> <ul style="list-style-type: none"> <li>• BHEL Site office (address as mentioned at Sl. No. 9)</li> <li>• BHEL PEM Noida (address as mentioned in NIT for PO issued by PEM)</li> <li>• BHEL PSWR (For PO Issued by BHEL PSWR)</li> </ul>
17.	Demurrage charges	Demurrage charges shall be paid by supplier/vendor only. No claim shall be acceptable to BHEL in this regard.
18.	Unloading, Storage & Movement of material at site	<ul style="list-style-type: none"> <li>• By BHEL site office for supply packages (where only supply is in vendor's scope).</li> </ul>

		<ul style="list-style-type: none"> <li>By vendors for Turnkey (where Supply and E&amp;C is in vendor scope)</li> </ul> <p><b>Note:</b> The Supplier shall furnish LR wise Gross Wt. of the consignment for the purpose of handling the consignment by BHEL Site Contractor. Please note that unloading of materials at Site shall sometimes may take 3-5 days. As such, transporters to be advised suitably before dispatch of materials in this regard. Also, no claim on a/c of delay in unloading before this period shall be entertained. Prior intimation as mentioned in sl. no. 15 above is solicited.</p>
19.	Taxes & Duties (For Domestic Vendor)	As per Notice Inviting Tender (NIT).
20.	Taxes & Duties (For Order Directly to Foreign Bidders)	In case of foreign vendors, quoted prices & Dispatches shall be on C & F Port – Kolkata Basis and Taxes & Duties in the country of dispatch shall be borne by Foreign vendor.
21.	Inspection Agency	<p>Inspection of packages shall be carried out by agency as per below Inspection category of packages:</p> <p><b>Cat-I:</b> Inspection shall be done jointly or separately by NTPC and BHEL or BHEL's TPIA.</p> <p><b>Cat-II:</b> Inspection shall be done by BHEL only.</p> <p><b>Cat-III:</b> Certificate of Compliance shall be furnished by Vendor.</p> <p><b>Note:</b> Please note, for Cat I &amp; II items BHEL reserve the right to carry inspection by themselves or through nominated third party inspection agency (TPIA). Third party inspection agency, if any, shall be informed after award of contract.</p>
22.	Inspection procedure	<p><b><u>For Domestic supplies:</u></b></p> <p>As per Notice Inviting Tender (NIT).</p> <p><b><u>For Foreign supplies</u></b></p> <p>In case of Foreign supplies, if NTPC approved 3rd party inspection agency does not participate in the inspection, test certificates &amp; inspection reports duly accepted by the agreed Inspection agency shall be submitted in soft copy to BHEL-PEM. The same shall be reviewed by BHEL PEM and then, sent to NTPC for clearance.</p> <p>The dispatch clearance (MDCC) by NTPC/ BHEL as applicable shall be given to the foreign supplier or representative in India after acceptance of above test certificates and photographs as per above.</p>
23.	Material Dispatch Clearance Certificate (MDCC) Issuing Agency	<p>MDCC shall be issued by BHEL only after receipt from NTPC.</p> <p>It is the responsibility of vendor to furnish all requisite documents like Material Test Certificates, Inspection Reports etc. required for obtaining of NTPC MDCC by BHEL</p>
24.	Mandatory Spares	Delivery of mandatory spares shall be as per NIT

25.	Construction Facilities to Vendor	<p><b>Construction Power:</b> Construction Power is chargeable as per customer contract which can be provided at single point source post establishment of Construction Power grid by PSWR. Further distribution is to be done by concerned vendor.</p> <p><b>Construction water:</b> Construction water is not available within project premises. Therefore, construction water is to be arranged by vendor.</p>
26	Storage Infrastructure by Vendor	For Turnkey packages: Space for office will be provided free of charge as per availability in consultation with customer.
26A	Storage Infrastructure by Vendor	<p>For Turnkey packages (Fuel Oil Handling and Storage System, Compressed Air System, Air conditioning System, Ventilation system, DM Plant, Condensate Polishing Unit, Pretreatment Plant, Mill Reject System, Effluent Treatment Plant and Sewage Treatment Plant packages)</p> <p>(a) Vendor shall compulsory make covered storage shed of minimum size of 15 feet x 15 feet for storage of valuable Electrical/ Electronic items/ Instruments etc.</p> <p>(b) Vendor shall compulsory make office of size 10 feet x 10 feet for site Engineer/ Staff along with facility of Computer/ Laptop/ Printer for protocol preparation and submission to BHEL.</p> <p>(c) Alternately, vendor can provide container of suitable size for above purpose, i.e. (a) and (b).</p>
26B	Storage space by BHEL	<p>For Turnkey package supplies - BHEL shall provide the 1 no. closed storage shed for C&amp;I and critical items storage free of charge.</p> <p>Mandatory spare of Turnkey package shall be stored in BHEL provided close storage shed.</p>
27.	Safety Officer and Quality Engineer by Vendor	<p>For Turnkey packages, vendor shall deploy one number Safety Officer and one number Quality Engineer during total E&amp;C period.</p> <p>In case of failure of above, BHEL shall deploy it and appropriate charges shall be deducted from vendor due payments.</p> <p>The charges for Non-deployment of Safety officer and Quality Engineer is Rs. 50,000.00 per man-month for each staff. This charge amount is exclusive of GST</p>
28.	Packing Identification & Marking [If not specified in NIT]	<p>Each box shall be marked with Capital Letters in "Red" indicating the PEM SUPPLY (Main Supply/Commissioning Spares/Mandatory Spares) for 2 X 800 MW NTPC LARA STPS Stage-II – II project.</p> <p>NOTE: Main supply item and items for commissioning spares must be packed separately. Each package delivered under the Contract shall be marked by supplier and such marking must be distinct and in English language (all previous irrelevant markings being carefully obliterated).</p> <p>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 Supplier, PEM P.O. reference number, with a distinctive number of mark sufficient for purposes of identification.</p> <p>Besides above necessary, packing shall bear a special marking 'TOP', 'BOTTOM', 'DO NOT TURN OVER', "KEEP DRY", "HANDLE WITH CARE", etc</p>

		<p>IMPORTANT: -</p> <ul style="list-style-type: none"> <li>• Two copies of respective standard manufacturer's erection instruction/operation instruction manual shall be kept in each package / container for immediate reference by BHEL site and same shall be reflected in packing slip also.</li> <li>• The Packing list details for the consignment must be put inside the Box/Boxes.</li> </ul> <p>Items like pumps, Valves, Hoists, Cranes etc shall essentially have O&amp;M Manuals and E&amp;C guidelines duly enclosed in the packing box. Certificate to such effect shall also be reflected in packing slip.</p> <p>Mandatory spares shall be properly packed separately in separate box painted in Red, <b>indicating Mandatory Spares in bold letters</b> and each spare shall be properly tagged giving details i.e. item number of the equipment in line with the CUSTOMER approved BBU for Mandatory spares &amp; Number per item (to match the description given in the packing slip) to facilitate their- proper identification by end customer/ BHEL Site. One Copy of Packing list must be put inside the Box along with Manufacturing drawing no. reference, Catalogue reference etc.</p>
28.	Submission of Final Drgs/ Docs along with O&M Manual, Type Test Certificates (if any)	<p><b>No. of O&amp;M Manuals</b></p> <p>As per applicable GCC / Tender documents/Kick-off meeting.</p> <p>If not specified anywhere, Vendor to submit final approved O&amp;M Manual in 12 Hard copies and 4 No of CD ROMs/DVDs/Pen drive.</p>

	Prepared by	Checked / Reviewed by	Approved by
Name	Netrapal Singh	Awadhesh Singh	GC Thakur
Designation	Manager/ PG-I-1	Sr. Manager & SH-2/ PG-I-1	Sr DGM & DH/ PG-I-1
Signature			

#### Enclosures

Annexure 1 – Format of packing list/shipping list for QR code generation as per SCC Clause no. 14

### ANNEXURE-1

SN O	Cust omer	Contract No	Type	PG MA	P G M A D	DU Des	Dis patch Qty.	Unit	BB U No.	BB U S no.	Box No.	Packing List No.	Material Required For (Set1/ Set-2)	NS	Remarks
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	NTP C	CS-9 587- 001 R-2- FCN OA- 7332 , dtd 29.0 8.23	<BOI * > <*BHEL shall indicate whether BOI or BHEL Inhouse manufacture >	<Vendor to fill BHEL packag e code >	BHEL PSEMOIAD	<Vendor to fill up Item wise description >	<Vendor to fill up d atch quantity >	<Vendor to fill up UOM>	to fill up BBUNo. provided by BHEL>	<Vendor to fill up BBUNo. provided by BHEL>	<Vendor to fill up box no.>	<Vendor to fill up Packing list number>	Vendor to indicate Material is for Unit-1 or Unit-2	<Nature of Supply: Vendor to indicate whether Item is Main supply or mandatory spares >	Remarks if any		