# CONTINUOUS AMBIENT AIR QUALITY MONITORING SYSTEM (CAAQMS) FOR ENNORE PROJECT

# **Pre- Qualifying Requirement (PQR):**

- 1. The firm of Bidder should have in existence in past 3 years as on date of bid opening. Bidder Average Annual Turnover (Last 3 Years): 1.5 Crore. Supporting documents certified by CA to be provided.
- 2. The bidder shall offer the analyzers "i.e. SO<sub>2</sub>, NOx, CO, CO<sub>2</sub>, O<sub>3</sub>, PM10 & PM2.5" which have been supplied, erected and commissioned in a O2 Nos. Thermal Power Plant with unit rating 210 MW or above and this system should be working satisfactorily for a minimum period of one year as on BHEL bid opening date. The bidder shall submit copy of "PO placed/ Dispatch documents/Commissioning Report/End User certificate with details of end user concerned official for supply, satisfactory operation of the commissioned equipment" in support of above.
- 3. Offered CO<sub>2</sub> analyzer, which are not meeting PQR point no. 2, is also acceptable if measurement principle is same as CO analyzer. In such case, PQR of equivalent CO analyzer, as per point 2 above, would be acceptable against offered CO<sub>2</sub> analyzer.
- 4. For Bidders offering upgraded / latest models of analyzer in point 2, 3 above, PQR of equivalent previous models is acceptable. For offered analyzers, OEM shall certify that offered model is upgraded version of earlier model meeting PQR in point 2, 3 above. The bidder shall submit Reference List of Projects wherein offered analyzers are supplied & commissioned.
- 5. The bidder shall have experience for installation, execution & commissioning of CAAQMS in last 5 years. The bidder shall submit copy of "PO placed on bidder, Dispatch documents, Commissioning Report with details of end user concerned official".
- 6. In case the bidder is sourcing analyzers from an OEM, Tender specific authorization letter is required from the manufacturer, clearly indicating contact details like Name, Email and address of manufacturer.
- 7. The bidder shall furnish an agreement with OEM for providing services and supply of spare parts for 5 years from the date of commissioning of items. In case bidder is an OEM, bidder shall provide a certificate to conformity of the availability of services and supply of spare parts of the supplied items for the next 5 years from the date of commissioning of items.
- 8. The bidder shall furnish "OEM Technical literature/Manuals of offered Analyzers/ Accessories and all major items forming part of BOM".
- 9. Bidder's Registered address of India office and Name of representative for technical support for E&C and after sales service at project site.

# CONTINOUS AMBIENT AIR QUALITY MONITORING SYSTEM

# Tender Scope of AAQMS package supply is divided as below: -

Sr.No.	Item Description	Scope	Percentage price break up of Total quoted price
1	1 Continuous Ambient Air Quality Monitoring		90%
	Station excluding R-F Communication System		
2	R-F Communication System	Annexue-2	5%
3	Mandatory Spares for CAAQMS	Annexue-3	5%

# 1.01.00 CAAQMS Stations - 04 Set.

**Annexure-1** 

Broad break up of items under CAAQMS is as below:

S. No.	Description	Quantity
1.	Sulphur dioxide (SO <sub>2</sub> ) Analyzer	04 Nos.
2.	Oxides of nitrogen (NO <sub>x</sub> ) Analyzer	04 Nos.
3.	Carbon monoxide (CO) Analyzer	04 Nos.
4.	Carbon dioxide (CO <sub>2</sub> ) Analyzer	04 Nos.
5.	Ozone (0 <sub>3</sub> ) Analyzer	01 No.
6.	Suspended Particulate Monitors (PM10, PM2.5 Analysers)	08 Nos.
7.	Sampling Inlet Heads (PM10, PM2.5 and TSP - 01 Set)	04 Set
		(12 No.)
8.	Meteorological Monitoring System	01 Set
9.	Multi Gas Calibrator	04 Set
10.	Calibration Gas Cylinders for analysers (01 Set for each	04 Set
	AAQMS)	
11.	Hydrogen Generator	04 Nos.
12.	Sample Handling System Including Compressed Air for	04 Set
	Purging	
13.	Analyzer Shelter with 19" Rack Cabinet, Furniture (01	04 Set
	Cupboard, 01 Table & 02 Revolving Chairs), Air Conditioners	
	(1.5T, 2 No. for each AAQMS)	
14.	UPS with batteries (3Ø Input, 1Ø Output, Min 6 KVA) with for	04 Set
	1 Hour backup facility for each shelter	
15.	Local DAS with Work Station (PC)	04 Set
16.	Central DAS with Work Station (PC), Laser Jet Printer & UPS	01 Set
17.	Exclusive Work Station for uploading data on CPCB/SPCB	01 Set
	server	
18.	Electronic Display with Platform and Mounting structure	01 No.
19.	Redundant Wireless (RF) Connectivity	1 Set
20.	Any additional item not covered above but required as per	-
	technical specifications for completeness of system.	

**Note:** All above items are required to be supplied as per clause no. 1.01.01 to 1.01.34 of specification. This is a turnkey contract. Any other item required to complete the scope of

manufacturing, supply, erection & commissioning of AAQMS stations with local DAS, central DAS, display board, with redundant RF based interconnectivity is in scope of bidder.

- **1.01.01** AAQMS shall be provided to check upon the ambient air quality inside and around the power plant and capable of generating required reports for submission to relevant central & state regulatory agencies by the end user.
- **1.01.02** AAQMS is intended to monitor Ambient air quality for concentration levels of gaseous pollutants as mentioned above at 04 different locations within the power station boundary and adjoining areas as per the ambient air quality monitoring guidelines of central and state regulatory agencies like MOEF, central and state pollution control boards (PCBs) prevailing during contract execution phase.
- **1.01.03** The offered analyzers ( $SO_2$ ,  $NO_x$ , CO, PM10, PM2.5 and  $O_3$ ) for the AAQMS system shall meet all applicable certification, requirements/ guidelines of relevant central & state regulatory agencies like MOEF, central and state pollution control boards (PCBs) etc. or of USEPA in the absence of the same. In absence of the same, offer will be rejected.
- **1.01.03.1** For CO2 Analyser, certificates with copy of the Test report (in English) from OEM for Continuous Ambient Air Monitoring application is applicable. It is the sole responsibility of the bidder to obtain the necessary approvals and certificates of the above compliance along with copy of the Test reports.
- **1.01.04** AAQMS shall include monitoring of the following pollutant gases/parameters. Method of measurements & standards shall be as per CPCB norms.
- a) Sulphur dioxide (SO2)
- b) Oxides of nitrogen (NOx)
- c) Carbon monoxide (CO)
- d) Carbon Di-oxide (CO2)
- e) Suspended particulate matter (PM10)
- f) Suspended particulate matter (PM2.5)-respiratory
- g) Ozone (03) at one location only
- **1.01.05** AAQMS for each plant location shall be fixed type, self-contained 'station'. Total four (4) nos such stations shall be provided at the min. one (1) no 'station' shall be located at the UP-wind direction path. Balance three (3) no. 'stations' shall be located at different plant locations considering the factors like downwind direction, sensitive receptor, population etc. the exact location of the monitoring stations shall be decided in consultation with TNPGCL and regulatory agencies (TSPCB) during project implementation phase.
- **1.01.06** Offered AAQMS shall have facility for on-line monitoring, on-line logging of parameters values, on-line archiving and on-line report generation to transmit the same to regulatory authorities i.e. CPCB & SPCB and plant management personnel. All required software & hardware for above purpose shall be provided by bidder.

The Analysers should be 19" Rack Mounted with the ON / OFF Switch and display of all-important status signals including Lamps, etc. should be preferably on the front panel.

- **1.01.7** The system shall be supplied with all spares and consumables (like Chemical reagents, filters, markers, papers etc.) necessary for trouble free operation for a period of 36 months after I&C at site. List of spares and consumables along with offered quantity shall be provided along with offer. *Minimum indicative list for the same is attached as Annexure-4.*
- **1.01.8** Minimum requirements like input power, space, approach and any other associated facilities required for installation and commissioning of the AAQMS shall be specified by the bidder in the offer. Installation and commissioning of the AAQMS is required to be done by the bidder at the site in consultation with BHEL/ TNPGCL. Only one-point raw power supply would be provided at each AAQMS location by BHEL. Rest all work related to I&C of AAQMS as per specification shall be in bidder's scope. Bidder shall obtain statutory and other clearances for commissioning, operation & maintenance of the AAQMS.
- **1.01.9** Bidder shall furnish the details of calibration system provided with each Analyzer, along with the offer.

### 1.01.10 SPECIFICATIONS OF CONTINUOUS MONITORING AMBIENT AIR ANALYSERS

Description	NO-NO <sub>2</sub> -NOx Analyser	SO <sub>2</sub> Analyser	CO Analyser	CO <sub>2</sub> Analyser	Ozone Analyser
Principle	Chemiluminescence	Fluorescence in UV absorbance	IR type with Gas Filter Correlation	IR type with Gas Filter Correlation	UV Photometric
Measurement	NO, NO <sub>2</sub> , NOx in Ambient Air	Sulphur Dioxide in Ambient Air	СО	CO <sub>2</sub>	0 <sub>3</sub>
Display	LCD/LED	LCD/LED	LCD/LED	LCD/LED	LCD/LED
Ranges	0-1 PPM in Multi ranges (mini mum four selectable ranges) preferably as below: 0-100 PPB; 0-200 PPB, 0-500 PPB & 0-1000 PPB	0-1 PPM in Multi ranges (minimum four selectable ranges) preferably as below: 0-100 PPB; 0-200 PPB, 0-500 PPB & 0- 1000 PPB	0-100 PPM (minimum four selectable ranges)	0-1000 PPM	0-100 ppb to 0-10 ppm,  User selectable, Dual ranges and auto ranging supported
Minimum Detectable Limit	±1 PPB	±1 PPB	0.05 ppm	0.05 ppm	<0.1 ppm
Zero Drift (24Hr. Basis)	<0.4 ppb of Full Scale Per Day	< 1 ppb	<0.1 ppm/day	<0.1 ppm/day	<1.0 ppb/24 hours
Span Drift (24 Hr. Basis)	± 1% of Full Scale Per Day	± 1% per week	± 1% per week	± 1% per week	1% of reading per 7 days
Response time at Lowest range	10 to 40 Seconds for 0-100% reading.	10 to 80 Seconds for 0-100% reading	60 Seconds	60 Seconds	
Accuracy	±0.4 ppb (for 500 ppb range)	± 1 %	±0.1 ppm	±0.1 ppm	±0.1 ppm

Linearity	±1% of Full-Scale Reading	± 1% of full-scale reading	± 1% of Full- Scale Reading	± 1% of Full-Scale Reading	1% of full Scale
Operating Temperature	15-35 deg.C	20 - 30 deg.C	20 - 30 deg.C	20 - 30 deg.C	20 - 30 deg.C
Signal Output	4-20 mA DC, RS 232 or RS 485 link.	4-20 mA DC, RS 232 or RS 485 link.	4-20 mA DC, RS 232 or RS 485 link.	4-20 mA DC / RS 232 or RS 485 link.	4-20 mA DC / RS 232 or RS 485 link.
Power Supply	240 V AC (UPS)	240 V AC (UPS)	240 V AC (UPS)	240 V AC (UPS)	240 V AC (UPS)
Mounting	Rack Mounted	Rack Mounted	Rack Mounted	Rack Mounted	Rack Mounted
Other parameter					Zero Noise: <0.3 ppb, Span Noise: <0.5% of reading above 100 ppb (RMS), Lag time: <10 sec, Rise and fall time: <20 sec to 95%, Sample Flow Rate: 0.8 liters/min.
Calibration	Built – in calibration Facility	Built – in calibration Facility	Built – in calibration Facility	Built – in calibration Facility	Built – in calibration Facility
Consumables and spares (Recommended requirements)	3 Years of continuous operation	3 Years of continuous operation	3 Years of continuous operation	3 Years of continuous operation	3 Years of continuous operation

# 1.01.11 Continuous ambient air measurement of TSP, PM10 & PM 2.5.

The Continuous Ambient Particulate Monitor shall have capability to measure the mass concentration of suspended particulate matter (TSP/PM 10/PM2.5) by use of beta attenuation principle.

Principle: Beta attenuation by particulates sampled through the instrument and collected on movable filter tape. Before and after sampling, beta radiation shall be measured by appropriate counter. An internal microprocessor shall handle all sequences and automatically calculate the concentration of the particulate matter being measured. Each analyser shall be freely configurable at site for either TSP, PM 10 & PM 2.5. These analysers shall be provided with sampling heads suitable for continuous measuring of PM2.5 and PM10. Additional sampling arrangement for TSP shall also be provided and it shall be possible to easily connect it to the Analyser normally measuring PM2.5.

1	Principle	Beta attenuation
2	Measurement Range	0-2000 μg/m³ (Micro Gram per cubic meter)
		(Min. two selectable ranges)
3	Minimum Detectable Limit	2 μg/m <sup>3</sup>

4	Accuracy	± 5%	
5	Sampling Inlet	1. PM10 Hood &	
		2. PM2.5/TSP-Manually Interchangeable hoods	
6	Cycle	1 hr	
7	Display	LCD	
8	Resolution	±1 μg/m <sup>3</sup>	
9	Data Storage	200 days, 1 hr sample	
10	Power supply	230V, 50 Hz supply UPS	
11	Air flow rate	0-20 SLM user selectable	
12	Temp. range	30 deg to +60 deg C	
13	Mounting	19" Rack	

# 1.01.12 Multi-point calibrator

To cross check the built-in-calibration facility of the Analyzers, a Multi-Gas Calibration System for each AAQMS station with fast response time shall be offered by the Bidder which can be used as manual or remote multi-point generation of gas concentrations from one to several high concentration through Span Gas Cylinders.

**OEM of Multi-Gas Calibration System** should be same as offered AAQMS Analyzers against this bid specification.

- a) Flow measurement accuracy  $\pm 1\%$  of set point or  $\pm 1\%$  of full-scale reading (ln 20-100%) whichever is less.
- b) Repeatability of flow control ± 0.2 % of full-scale reading
- c) Linearity of mass flow±0.5 % of full-scale reading Measurement
- d) Calibration gas input ports 6 nos.
- e) Response time <60 sec. for 0-99 %
- f) Temperature range 0-40°c
- g) Power supply 240V AC
- **1.01.13** Analyser gas sampling system shall be complete with sampling hood arrangement with SS hood, SS 316 manifold, moisture trap, air compressor of requisite capacity (minimum 10 LPM) and heat less type air dryer.
- **1.01.14** Zero air generators, for each AAQMS, shall be with inbuilt catalytic converter. Make of Zero air generators should be same as offered AAQMS Analyzers against this bid specification. In case Zero Air Generator is inbuilt within the system, the confirmation of the same shall be provided by OEM along with offer.
- **1.01.15** The analysers should be complete with calibration system. Calibration gas cylinders shall be offered as below:
- (a) NO<sub>x</sub> (NO:15 PPM & N2:99.9% Pure N2)
- (b) SO<sub>2</sub> (15 PPM+Balance N2)

- (c) CO (800 PPM+ Balance N2)
- (d) CO<sub>2</sub> (750 PPM+ Balance N2)

The above cylinders shall be suitable for minimum 6 months calibration with SS 316 regulator. All the calibration gases provided along with the system must be NIST traceable. The analyser must have zero-point internal calibration system. The calibration procedure shall be integrated into the software system for automatic calibration.

# 1.01.16 Hydrogen generator complete with fluid tank and all accessories:

Hydrogen generator shall be capable of delivering hydrogen with a purity of >99.99% of a stable pressure of at least 3 bar, and a flow rate of at least 15 ml/min. This is envisaged for future use for VOC analysers, however, VOC analysers are not part of current scope.

- **1.01.17** The analysers must function properly in Ennore meteorological conditions without any defect between ambient temperature at site, 0 to 100% relative humidity and in high ambient dust level.
- **1.01.18** All Analysers, Monitors and Sensors shall be fully integrated in the Rack Cabinet which shall be installed in shelter and fully calibrated and tested before call for inspection. Total integrated analyser system along with shelter will be functionally inspected at Bidder's place prior to dispatch to site.

# 1.01.19 AAQMS Analyser Shelter

# 1.01.19.1 General requirement

The minimum size of shelter shall be 4 meters (Length) x 3 meters (Width) x 2.5 meters (Height). To accommodate the panels, work stations, tables, revolving tilting chairs, cupboard, UPS, battery etc.

The analyser shelter shall be a completely assembled unit suitable for installation on an RCC platform (Minimum Size:  $5(L) \times 4$  (W)  $\times 1$  (H) meters). All internal piping and tubing shall terminate in bulkhead connections. Internal wiring shall terminate in external junction boxes. All equipment including tubing, conduit fittings, junction boxes etc. shall be installed so as not to interface with the removal of analysers, sample handling systems and related equipment, accessibility for maintenance shall be the prime consideration.

#### 1.01.19.2 Construction features

- a) The analyser shelter shall consist of a self-framing exterior skin assembled on a rigid primed and painted steel superstructure. All materials used in the construction shall be non-combustible
- b) Wall panels design to be completely weather resistant. The design shall allow for thermal expansion/contraction of the structure over the complete range of ambient temp. Applicable for the location without causing harmful buckling or opening of joints etc. materials of construction shall be 2 mm thick SS sheets for external walls and 18-gauge galvanized steel for internal walls with ribbed interlocking. The ribbed interlocking shall provide a strong column for the sheets on the side valves, where the "u" profile created at the edges, when interlocked with the second sheet, increases the section modules of ribbing.

- c) The wall panels of the shelter shall be insulated and designed for the given ambient conditions by glass rock wool approx. 100 mm insulation thickness.
- d) Roof panels design and construction to be completely weather resistant. The design shall allow for thermal expansion/contraction of the structure over the complete range of ambient temp. Applicable for the location without causing harmful buckling or opening of joints etc.
- e) The base structure of the shelter shall be constructed using ISMC (1501125) ISMB (100) welded property and adequately sized to ensure structural rigidity to prevent deformation during dragging, lifting, loading and unloading of the shelter.
- f) The roof panels shall be provided with 80mm thick rock wool insulation.
- g) All insulation materials are to be fire retarding.
- h) The analyzer house shall have two doors, one as the main entrance and the other as the emergency of the shelter.
- i) The doors are to be mounted on special hinges to ensure gas tight construction of the shelter.
- j) Doors shall be sturdy, double walled, insulated with rock wool and open to the outside. Each door shall have a window with transparent toughened safety glass.
- k) The main entrance shall carry a SS plate indicating the plane area number and the tag-list of all the analyzers inside the shelter.
- l) Analyzer shelters met the standards of the unknown building code with the following design loads:
  - i) Roof 20 lb / sq ft live load
  - ii) Wind 35 lb /sq ft at 0-30 ft above grade elevation
  - iii) Seismic zone as applicable for project location (Ennore, Tamil Nadu)
- m) All tubes and cable entries to the shelter shall be through multicable transit blocks to ensure gas tightness of the shelter
- n) The floor is to be fabricated with anti-slip sheet and sealed continuously to ensure no loss of pressure.
- o) Each shelter shall be provided with lightening protection system.

Layout drawing of AAQMS Foundation and shelter with dimensions along with positioning of doors, windows and internal items to be provided along with offer.

# 1.01.19.3 Painting

- a) Preliminary cleaning involving removing of grease, oil, paint and dirt, which prevent pickling acid from coming in contact with the scale or mist.
- b) Structural painting shall include scraping, chemical cleaning, one coat of each primer, one coat of epoxy zinc chromate red oxide primer and two coats of epoxy finish paint. The surface coating shall take sufficient care of removing all the containments thus ensuring against

premature and complete coating failure. Precautions to be taken to avoid air bubbles and uneven coat thickness.

- c) Internal sheet metal: the internal walls shall be powder coated.
- d) Painting for the shelter is completed in every respect before dispatch. No painting will be done at site except touch up of scratches made during site erection.

# 1.01.19.4 Environmental conditioning

Analyzer shelters shall be environmentally conditioned to keep the inside atmosphere of the shelter at a constant temperature of 24°C (±) 3 °C to obtain repeatability and reliability of the analyzers and also a comfortable working environment for workmen. For this purpose, 'split type' air conditioner (1 working & 1 standby) to be provided. Air conditioner shall be able to work continuously under worst ambient conditions. A single phase (230/240 V AC) exhaust fan (300 mm size) with safety grills & flap type louver shall be provided in the shelter. Hygrometer shall be provided to measure & display the humidity inside the shelter. Similarly, thermostat shall be provided to measure & display the Temperature inside the shelter. All Air conditioner shall be energy efficient with highest star rating.

# 1.01.19.5 Lighting

- a) Illumination level in the shelters shall be at a minimum of 300 lux at 750 mm elevation inside the shelter. Maintenance factor shall be 0.65
- b) External dome type lighting shall be under the overhangs to provide sufficient illumination for maintenance work.
- c) Power switches for internal and external lighting shall be provided near to the main entrance on the outside of the shelter.

# 1.01.19.6 Fire detection & protection:

- 1.01.19.6.1 Fire Detector 1 inside and 1 outside the shelter
- **1.01.19.6.2 Fire extinguisher –** 1 inside and 1 outside the shelter

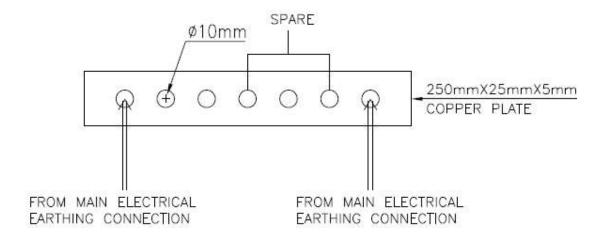
# 1.01.19.7 Platform for AAQMS Shelter:

RCC Platform of suitable size and Height (Minimum Size:  $5(L) \times 4$  (W)  $\times 1$  (H) meters) is required to be constructed by the Bidder at each AAQMS Location. Shelters is required to be installed at platform at site of each AAQMS Station as a part of scope of supply. Platform Layout drawing is to be submitted along with offer.

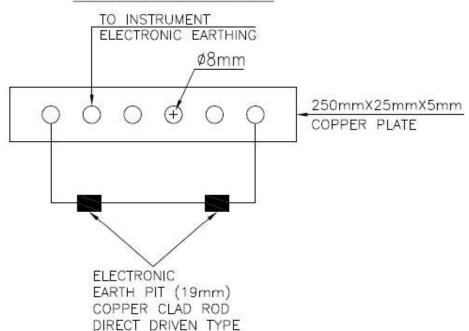
# 1.01.19.8 Earth Pit for AAQMS.

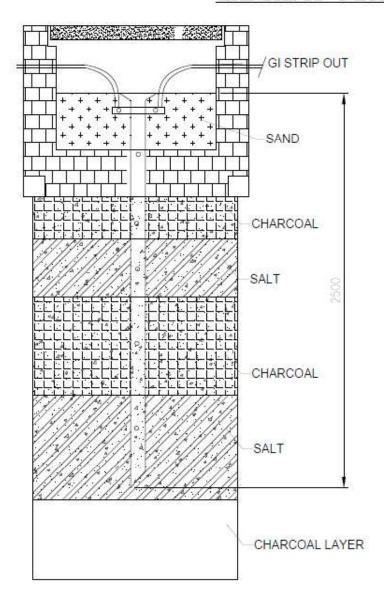
The Supplier shall provide earth pit for AAQMS as below:

# ELECTRICAL EARTHING STRIP



# ELECTRONIC EARTH





# EARTHPIT DETAILS

Layout drawing is to be submitted along with offer.

**1.01.19.9** Industry standard revolving chairs with wheels and with provision for adjustment of height (hydraulically/gas lift) shall be provided for the AAQMS shelters. These shall be designed for sitting for long duration such that these are comfortable for the back. Chair pedestal shall be made of 5mm thick MS plate covered with polypropylene cladding. Armrests in one piece shall be of poly-urethane and twin wheel castor of glass filled nylon.

# 1.01.20 Uninterruptible Power Supply (UPS) System

UPS of suitable capacity for minimum 1-hour backup with all accessories and batteries as per details given below:

**A.UPS** 

Quantity: 4 No. i.e. 1 no for each AAQMS

Capacity: 6 KVA or more

Input/output: Three phase Input & Single-phase output

### **B. Battery**

Quantity: 64 Nos. or more i.e. 16 Nos or more for each AAQMS

Rating: 12V, 18 AH

Sufficient no. of Batteries is required to be provided for 1 Hour backup facility at each AAQMS along with battery charger shall be provided. Battery shall be maintenance free type. Battery sizing calculation indicating no. of batteries to be offered along with UPS details and technical datasheet to be provided along with offer. UPS at each shelter shall be required for AAQMS components and computer. UPS would not be required for Air Conditioner. Schematic line/Wiring diagram shall be provided for UPS alongwith offer.

#### 1.01.21 Power distribution board

Power distribution board for distribution of UPS & 240 V AC power for all individual consumers as individual analyzers, auxiliary equipment inside and around the shelter, lighting receptacles shall be provided. Each of the main systems shall have an individual isolation circuit breaker mounted next to the individual power users.

**1.01.22** Telephone/mobile connection with a minimum 3 years prepaid charges post commissioning shall be provided for each AAQMS Stations.

# 1.01.23 PC based Data Acquisition System (DAS)

For AAQMS Station the DAS system for each AAQMS Station shall collect, store and analyze air quality data from all instruments of the Station. For these purposes all instruments shall be interfaced with local DAS system suitably either through a serial link or by hardware.

The application software shall have following features:

- 1. Calculation of arithmetic mean values, average values at different fixed intervals and user defined time periods like hourly / weekly / monthly / yearly etc.
- 2. Calculation of pollution load and wind roses (by interfacing meteorological data wherever provided).
- 3. Generation of reports for at different fixed intervals like daily, weekly, annual etc.

and for user defined periods.

- 4. Generation of reports in the form of line / column charts / tables / curves / graphics etc.
- 5. Generation of reports for pollution load, wind rose, Station etc
- 6. Comparison of data of various parameters for the same monitoring station.
- 7. Generation of reports for real time data and based on archived data.

- 8. Display of real time (on-line momentary values) and archived values in tabular texts and graphic formats.
- 9. Facility for calibration windows for analyzer calibration.
- 10.Real time monitoring of status of all analyzers and sensors with diagnostics for maintenance personnel.
- 11. Alarm annunciation of analyzer/sensor abnormal conditions.

# 1.01.24 Work Stations PC specification as given below or better is to be provided:

Each operating station & Engineering work stations and any other work stations/PC envisaged in plant shall meet following minimum requirements & as per latest trends at the time of supply:

- On board Intel Xeon quad core, 3.46 GHz processor with 1066 MHz bus with Hyper threading or higher.
- 4GB DDR3 RAM (min.)
- 1 x 500 GB IDE Hard Disc Drive of 7200 RPM or higher
- 1024 MB Graphic Accelerator
- System chipset: Intel
- 2 x RS 232 ports
- 1 x parallel port
- 4 nos. USB ports. (2nos. on front side)
- 1 x 52X CD R/W Drive & 16 X DVD Drive
- $2 \times Ethernet (10 / 100 / 1000MB) cards (Industrial Grade)$
- UXGA graphics and monitor 1920 X 1080, 256 colours with MRPII compliant, viewing angle 178° vertical & Horizontal and fastest response time.
- 1 x windows XP Professional or latest & proven version of Windows OS with Multimedia
- Ethernet adapter
- Third party operating system, graphical users' interface and software, if required.
- Optical mouse Sound card
- Internal speakers
- Wireless internet & Blue tooth Interface
- Redundant power supply (In built)
- General MS Windows latest, MS-Office Professional, Adobe

- Acrobat, anti-virus McAfee or equivalent, AutoCAD etc.
- Application engineering & HMI software to suit project Specific requirement
- All OWS shall be interchangeable

Preferred makes of OWS/EWS/PC's are DELL, HP, COMPAQ, NEC & IBM.

# 1.01.24.1 Peripherals for Operator Station, Engineering Work Stations & Server System

# 1.01.24.2 Full flat Monitors with LED back lighting

The bidder shall furnish OWS/EWS/Servers/PC with coloured Full flat Monitors with LED back lighting. OWS/EWS/Servers/PC with Monitors shall have a fast cursor control device like a track ball/optical mouse. All Monitors shall be of high-resolution colour graphics type and with not less than 32 colours. The picture frequency shall not exceed 85 Hz. The resolution required is 1920 X 1080 pixel or better. The picture shall be stable and completely free of any flickering. The screen illumination shall be enough to give good readability. The screen dimensions shall not be less than 24" screen diagonal.

Antiglare hard coating shall be provided. High reliability and long life 24" (Industrial type) or better size monitors shall be supplied by the bidder. Monitors shall be equipped with all adjusting elements accessible on the front plate. Monitors with 3D capabilities for graphics shall be provided by bidder.

Monitors along with keyboard & optical mouse shall be mounted on supervisory control console specified elsewhere in the specification.

# 1.01.24.3 Key Board:

Functional key boards for plant operator station shall be of special type adopted to operation tasks and monitor functions. It shall contain all keys necessary for plant operation arranged in an ergonomically manner. Multi-function keys shall be provided with automatic display for modified functions. Freely programmable keys (Minimum 101) shall be available for special user application.

Key Board shall be integrated into supervisors control consoles horizontal part.

Provision of functional keyboard shall be in addition to facility for operator control through mouse/track ball.

Membrane type keyboard shall be provided for operator interface with process for plant control and display functions to access plant data in conjunction with control OPERATING STATIONs. Membrane keypad shall be assignable with LED alarms, dedicated display selection keys with spare provision, hardware locking facility to set OPERATING STATION in engineer, supervisor or operator mode. The keyboard shall have a minimum of 101 configurable keys for assigning most frequently used displays. A minimum of forty of those keys shall have two independently lit LED's used for event-specific alarm annunciation.

Keyboard shall be provided to enable the shift supervisor to develop graphic displays, control system software and system configuration for the DDCMIS. It shall be possible to perform operating interface functions from engineering OPERATING STATION. Assignable function keys shall be provided for execution of command, program etc. Hardware facility shall be provided to set OPERATING STATION in engineer or operator mode. QWERTY type keyboard shall be provided for engineer's functions. QWETRY type Key Board may be offered alternatively for OWS.

#### 1.01.24.4 PRINTERS

Laser Jet printer (B & W)

Printing Speed 26 ppm (min.)

Resolution 1200 X 1200 dpi

Memory 128 MB (min.)

External Port 1 no. USB 2.0 port, and TCP/IP 10/100 Ethernet, Blue tooth interface

Duty Cycle 15,000 pages per month

Pages size A3 size with automatic duplex printing facility.

Paper tray – 2

Preferred makes of printers are HP, Canon, Fuji Xerox & Epson.

# 1.01.25 Central AAQMS monitoring

**1.01.25.1** Monitoring and report generation of AAQMS for the whole power station shall be carried out through a centralised Work Stations based data acquisition system. For this purpose, all individual analyzer data from each AAQMS stations shall be collected in Work Stations based centralized AAQMS DAS monitoring system with B&W A4 sized IJP or better by interfacing each AAQMS stations through redundant serial communication link.

Work Stations & Laser Jet printer specification:

# Laser Jet printer (B & W) Specifications:

Printing Speed	30 ppm (min.)
Resolution	1200 X 1200 dpi
Memory	128 MB (min.)
External Port 1 no.	USB 3.0/ 2.0 port, and TCP/IP 10/100
Ethernet	Blue tooth interface
Duty Cycle	15,000 pages per month
Pages size	A4 size with automatic duplex printing
	facility.
Paper tray	2

Preferred makes of printers are HP, Canon, Fuji Xerox, & Epson.

Central AAQMS shall also be connected to Plant DCS & MIS server for monitoring through Redundant LAN connectivity (through wireless RF Connectivity). Necessary Software for this purpose shall be loaded.

AAQMS instruments shall be provided with provision for bidirectional connectivity over ModBus/RS-232/RS-485 with End user's central cloud server for real time data monitoring, remote diagnostics & remote calibration checks, etc., complying with CPCB IT Division document "Protocol for real time data management from industries or the latest regulatory requirement prevailing at the time award of the contract. All necessary hardware and software required at instrument end shall be provided by the bidder. Necessary details like scheme, register addresses of analyzer, etc. shall also be provided by the bidder for implementation of above. The bidder shall fully assist TNPGCL agency involved in implementation of above connectivity. In addition to above requirement, 4-20 mA connectivity to DDCMIS shall be provided by the bidder.

# 1.01.25.2 Central AAQMS DAS system shall perform following functions:

- a) To collect all the data from individual AAQMS stations at prescribed time or on request.
- b) Ability to manage multiple remote AAQMS stations.
- c) Monitoring, analyze, report generation and archiving of data.

# 1.01.25.3 Central AAQMS DAS system software shall have following features

- a) Calculation of arithmetic mean values, average values at different fixed intervals and user defined time periods like hourly/weekly/monthly/yearly etc. for each remote station.
- b) Calculation of pollution load and wind roses (by interfacing meteorological data)
- c) Generation of reports for at different fixed intervals like daily, weekly, annual etc. and for user defined periods.
- d) Generation of reports in the form of line/column charts/tables/curves/graphics etc.
- e) Calculation of reports for pollution load, wind roses, station etc.
- f) Comparison of data of various parameters for the same monitoring station.
- g) Inter comparison of data between different monitoring stations.
- h) Generation of reports for real time data and based on archived data.
- i) Facility for calibration windows for analyzer calibration.
- j) Real time monitoring of status of all analysers and sensors with diagnostics for maintenance personnel.
- k) Alarm annunciation of analyser/sensor abnormal conditions.
- l) Display of real time (on-line momentary values) and archived values in tabular texts and graphic formats.

# 1.01.26 Design, Functional & Performance Requirements.

**1.01.26.1** AAQMS offered shall ensure operability, maintainability and reliability. The This offered system shall be consistent with modern practices and shall be compliance with all applicable codes, standard guides, statutory regulations and safety requirements.

# 1.01.27 Meteorological Monitoring System (MMS)

- **1.01.27.1** A meteorological monitoring system (MMS) shall be Provided. Meteorological data shall be monitored within the plant premises at one (1) location. The exact location of the monitoring station shall be decided in consultation with BHEL/TNPGCL during project implementation phase based on the central & state PCB guidelines. The Following parameters shall be monitored:
- a) Wind Direction
- b) Wind Speed
- c) Ambient Temperature
- d) Ambient Pressure
- e) Solar Radiation
- f) Relative Humidity
- g) Rainfall

For above purpose a total of separate 7 number sensors would be provided.

- **1.01.27.2** MMS shall be continuous on-line type. MMS shall allow monitoring, logging of parameter values, archiving and report generation to transmit to environmental monitoring authorities and plant management personnel.
- **1.01.27.3** MMS shall will be Complete with all the Necessary Measuring Equipment and accessories and shall be housed in a walk-in shelter, Environmentally Conditioned (If Required for Measuring Equipment), Complete with Lighting and Convenience Receptacles. For this Purpose, MMS equipment can be housed in one AAQMS Station Shelter. Alternatively, A Separate Shelter for Housing MMS Equipment Shall Be Provided.
- **1.01.27.4** Output Signal of All Meteorological Monitoring Analysers shall be connected to Plant DCS / DDCMIS for monitoring, archiving and report generation for environmental monitoring authorities. Necessary software for the purpose shall be loaded into DDCMIS.

# 1.01.27.5 Technical Specification of MMS

	Wind Speed Sensor	Wind Direction Sensor	Ambient Temperature Sensor	Relative Humidity (RH) Sensor	Solar Radiation Sensor (Solarimeter)
Principle	Frequency proportional to wind speed	Potentiometric type Sensor	PRT -100 Type Resistance Temperature Detector	Thin film capacitance type sensor	Thermopile

Range	0 - 210 Km / Hr	0-360 deg	0-50 deg C	0- 100% RH	Spectral Range: 0.25 - 60 Micron, Measurement range: -0- 1500Watt/m2
Accuracy	± 1%	± 3°	± 0.25 deg C	±1% Of Full- Scale	+ 3.5 %
				Reading	
Threshold	0.3 m/sec	0.3 m/ sec			
Operating	0 to 50 deg C	0 to 50 deg C	0 to 50°C	0 to 50°C	0 to 50
Temperature					deg C
Radiation			Non-	Non-	Non-Aspirated
shield			Aspirated	Aspirated	Radiation
			Radiation	Radiation	Shield
			Shield	Shield	

1.01.27.6 Specifications of Rain Gauge

1	Accuracy	± 0.5 - 1 %
2	Sensitivity	0.5 mm
3	Operating Temperature	0 to 50 deg C

# 1.01.27.7 Meteorological Mast

One Meteorological Mast of telescopic type and of 10-meter height to be placed adjacent to one AAQMS Station. The Mast is required for mounting the Meteorological Sensors. Necessary Hangers and Holders along with electrical grounding set shall be provided for installation of the Sensors. Material of Construction of the Mast shall be metallic i.e. heavy grade aluminum and robust and shall be resistant to atmospheric corrosion. Wind load limit shall be more than 8.5 sq. ft at 50 mph.

### 1.01.28 Additional Work Station

As per the TNPCB requirement environment parameters shall be uploaded to TNPCB's web server. One no of PC with UPS and necessary software (as recommended by TNPCB) with modem & dedicated internet connection (min. 3 years prepaid / postpaid charges in bidder's scope after I&C at site) and necessary I/O cards to access the mA output from various analysers, is to be supplied for uploading the parameters of AAQMS Analysers. As above workstation specification clause No.1.01.24.

# 1.01.29 Specification for Digital Display Board

Digital display board for the display of all AAQMS parameters and for sixteen (16) analog signals of Stack Emission Monitoring system at the main gate shall be provided. Stack emission parameters would be provided by BHEL at CDAS PC.

#### Display board specification shall be as follows:

- 1. Size of the display 4 Feet (H) X 8 Feet (L) minimum.
- 2. Visibility Range 80-100 mtr (Size of display will be suitable to achieve the visibility range).
- 3. No of Display lines 5 as following:
  - a. Name of company,

- b. Date and Day
- c. Ambient air quality parameters with units
- d. Meteorological parameters with Units
- e. Stack parameters with Units
- 4. Display of colour elements Colour (RGY)
- 5. Minimum life span 5 years
- 6. Ambient Temperature Maximum 50oC
- 7. Humidity Range 0 99%
- 8. Language English only
- 9. Colour gradient Cluster LED based
- 10. Display casing Weather proof casing IP 65 with Canopy.
- 11. Type Microcontroller/Microprocessor driven
- 12. LED matrix 2x64x128 for above display size.
- 13. LED pitch 0.6"
- 14. Signal input to the display board -
  - (i) Data communication through RS 232/485 /Ethernet or suitable protocol from AAQMS station for all parameters of AAQMS and Meteorological parameters.
  - (ii) Provision for 16-Analog signals from stack monitoring Device/DDCMIS. Necessary hardware & Software for this purpose would be provided by bidder.
- 15. Power Supply 240V AC.
- 16. Platform and Mounting structure 01
- 17. Connectivity: Wireless connectivity from CDAS

# 1.01.30 TRAINING REQUIREMENT

Bidder shall provide training to end user for Theory & design features, Trouble shooting and fault analysis for AAQMS (Min. 5 Man days).

- **1.01.31** Only Single Point raw power supply would be provided at each AAQMS & display board location by BHEL/end user. All other works/items related to installation, commissioning, demonstration and handing over upto the satisfaction of end user as per technical specification requirement will be in Bidder's scope.
- **1.01.32** For all PC's, general MS Windows latest, MS Office, MS Visual studio, Adobe Acrobat, Antivirus (Professional) software shall be included in all the PC's including the application software to suit the project specific requirement.

# 1.01.33 Documents Requirement

Following data sheet/drawing shall be submitted by bidder after placement of PO before start of manufacturing:

- **1.01.33.01** Data sheet for AAQMS including all technical details of items as per Cl. 1.01.00.
- **1.01.33.02** Data Sheet for Wireless Communication System.
- **1.01.34** TNPCB is now insisting that all the Power plants should upload the environment parameters to TNPCB's web server. One no of work station with necessary software (as recommended by TNPCB) with modem & dedicated internet connection and necessary I/O cards

to access the mA output from various analyzers, is to be supplied for uploading the parameters of CEMS & CAAQMS.

(Minimum of 40 parameters are to be uploaded and actual no. will be discussed during detailed engineering).

# 2.00.00 General Terms & Conditions

**2.00.01 Installation & Commissioning:** The supplier shall erect & commission all the items covered enquiry at site to integrate the system, demonstrate the performance of the Equipment and all its accessories to ensure compliance with complete specifications & parameters quoted by them to the satisfaction of BHEL/end user.

At the time I&C, material will be issued from BHEL store to I&C locations, the transportation of the material from store to the locations where AAQMS are to be installed and security of the material till completion of the I&C will be in the scope of vendor/supplier.

**2.00.02 O & M Manual:** 3 hard copies of O&M manual, 05 CD ROM copies of O&M manual and 05 soft copy of O&M manual in English language giving complete technical information for operation and maintenance of the items.

**2.00.03 Packing & Dispatch:** All the items in the enquiry will be packed separately in a suitable water proof vibration packing box capable of bearing air, water and road transit hazards. "HWR AAQMS" should be written in bold letters on all four sides of the boxes. Packing boxes will be properly identified and marked with BHEL's (India) Purchase Order Number.

**2.00.04 Guarantee:** The equipment will be guaranteed for a period of 42 months from the date of dispatch or 36 months from the date of Installation & Commissioning, whichever is earlier.

(R S Yadav)

Manager (PCRI)

(Shailendra Kumar, SDGM, PCRI)

#### SPECIFICATION FOR RF COMMUNICATION

# Annexure-2

- **2.1Wireless Connectivity:** Redundant LAN connectivity (through wireless RF Communication) shall be provided for each AAQMS Station for data communication.
- **2.2** The finalized locations shall be shared by BHEL/TNPGCL with vendor within 30 days of PO placement to conduct site survey. Upon receipt of final locations, vendor will submit its survey report within 60 days to BHEL/Customer for approval. Bidder will obtain necessary approval for Licenses authorizing the use of communication equipment specified frequencies.
- **2.3** In addition to above requirement, analysers shall be connected to respective local data logger and central data logger by the bidder as stipulated in other part of specification.
- **2.4** CDAS will further transmit the data to pollution control boards server. Necessary hardware for Internet connectivity at CDAS would be in bidder's scope. Recurring bills, if any, for Internet connectivity at CDAS for three-year post-commissioning is covered under scope.

Data Acquisition System (DAS) would be equipped with wireless connectivity based on RF modems. Vendor shall obtain necessary approval for licenses authorizing the use of wireless communication equipment with specified frequencies. Required documents/credentials of end user for obtaining licences will be provided by BHEL/end user within 15 days on receipt of request by bidder.

# **SPECIFICATION FOR MANDATORY SPARES**

**Annexure-3** 

# **3.0 Specification for Mandatory Spares:**

**3.1** AAQMS - One no. Electronic cards of each type used for AAQMS (Ambient Air Quality Monitoring System) system. However, following Minimum mandatory spares shall be considered by bidder: -

S.N.	Item	Quantity (No.)
1.	Electronic Module/Mother Board /Signal Processing Unit for each type of Analyzer.	
Α	SO2 Analyser - Mother Board	
В	NOx - Mother Board	1
С	PM10 - Mother Board	1
D	PM2.5 - Mother Board	1
Е	CO - Mother Board	1
F	CO2 - Mother Board	1
G	03 - Mother Board	1
2.	Power supply module of each type for each Type of Analyzer	
Α	SO2 Analyser - Power supply module	1
В	NOx Analyser - Power supply module	1
С	PM10 Analyser - Power supply module	1
D	PM2.5 Analyser - Power supply module	1
Е	CO Analyser - Power supply module	1
F	CO2 Analyser - Power supply module	1
G	03 Analyser - Power supply module	1
3.	UV Lamp with adopter with SO2 analyzer - UV Lamp & lamp driver card	1
4.	Light source and detector unit for SPM, and NOX/SOX analyzer	
Α	SPM - detector	1
В	NOx - detector	1
С	SOx - Photo Multiplier Tube/detector	1
5.	Pump for SPM Analyzer	1
6.	2 no. each type of conference hall mike & speakers	
Α	Conference Hall Mike	2
В	Speakers	2

# **SPECIFICATION FOR CONSUMABLES**

# Annexure-4

Sr.No.	Description	Model No.	Make	Quantity
1	For S02 Analyzer			
1.1	5 Micron PTFE filter			12
1.2	Remove closing spring			12
1.3	Gas Refiling			12
2	For NOX Analyzer			
2.2	5 Micron PTFE filter			12
2.3	0 ring			12
2.4	Gas Refiling			12
3	For CO Analyzer			
3.1	5 Micron PTFE filter			12
3.2	Remove closing spring			12
3.3	Gas Refiling			12
4	For C02 Analyzer			
4.1	5 Micron PTFE filter			12
4.2	Remove closing spring			12
4.3	Gas Refiling			12
5	PM10 & PM2.5 Analyzer			
5.1	Roll of filter paper			36
6	For Ozone Analyzer			
6.1	Solenoid valve			4
6.2	0 ring			4
6.3	Maintenance kit for pump			4

List of above consumables with quantity is indicative only and vendor has to consider consumables as per their system being supplied and provide firm list along with offer for satisfactory operation of AAQMS for a period of 03 years after successful I&C.

# Buyer Added Bid Specific Additional Terms & Conditions (ATC) for item "AAQMS (Ambient Air Quality Monitoring System) package" of Ennore project site

Note: This Annexure has to be mandatorily filled & signed by the bidder and submitted along with Technical bid.

Any deviation to the below mentioned terms shall be stated specifically in the comment's column for each term and also in case of acceptance to our terms, it will be construed that the whole term is understood and agreed in totality without any deviation. (If otherwise mentioned).

SI.	Terms Description	Supplier Acceptance/ Comments
1.	PRE-QUALIFICATION CRITERIA:	
	1.1 Pre-Qualification Requirement (Attached as Annexure-A): The Pre-Qualification Requirements have been compiled and placed as Annexure-A. All the bidders should ensure submission of complete details and documents as called for in these requirements. The Offers submitted by the bidders would be scrutinized with respect to Pre-Qualification Requirements first. Techno-Commercial offer of only those bidders shall be evaluated who meet the Pre-Qualification Requirements.  Important Note: Bidders should ensure completeness and correctness of all supporting documents of PQR along with their offer. BHEL reserve the right to close PQR within 30 days of opening of techno-commercial Bids. Offers of Bidder / Bidders, who do not meet PQR i.e. do not complete the PQR documentation within 30 days of opening of techno-commercial bid, may be ignored and no-further correspondence shall be entertained thereafter.	
	1.2 Submission of Integrity Pact (IP) duly signed: The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with offer. Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.	
	1.3 Bidder must not be admitted under Corporate Insolvency Resolution Process or Liquidation as on date, by NCLT or any adjudicating authority/authorities, and shall submit undertaking (Annexure-4) to this effect.	
	<ul><li>1.4 Customer Approval:</li><li>A. Vendor approval from the customer is envisaged. The price bid will be opened</li></ul>	
	only for vendors approved by the customer.	
	B. For vendor approval from the customer, the bidder is required to submit supply	
	details and the commissioning report of the offered item to facilitate the customer's approval process.	
	Explanatory Notes for the PQR:	

SI.	Terms Description			Supplier Acceptance/ Comments
	i. All door compartile. Creating four right peating. Price of Fender			
2.	Tender	OF SUPPLY: Scope of AAQMS package supply is divided in ned below: -	n to three components as	
	Sr. No.	Item Description	<u>Scope</u>	
	I.	Continuous Ambient Air Quality Monitoring Station excluding R-F Communication System	Annex-1 of Annexure-B	
	II.	R-F Communication System	Annex-2 of Annexure-B	
	III.	Mandatory Spares for CAAQMS	Annex-3 of Annexure-B	
	<ul> <li>(A) Please quote your valuable offer as per BHEL Specification enclosed with the bid documents. Total scope of tender is in Annex-B, which is divided in above three line items mentioned at sl. No 1-3 of above table.</li> <li>(B) Bidders to upload point-wise compliance of BHEL Specifications along with the offer as a token of acceptance.</li> </ul>			
3.	PRICE BA	ISIS:		
	Price in INR to be quoted on FOR destination basis. The price will remain firm during the currency of the contract.  Kindly confirm that price has been quoted on FOR destination basis inclusive of GST (i.e. including all taxes, duties, local levies/ transportation / loading & unloading charges, packing & forwarding charges, insurance etc.)			
4.	TAXES & 4.1 The sclause) to charges,			

# SI. Terms Description Supplier Acceptance/ Comments

goods & services delivered in course of his operations in executing the contract. In case BHEL is forced to pay any of such taxes/duties, BHEL shall have the right to recover the same from his bills or otherwise as deemed fit along with the applicable overheads @5% and interest on the total value (i. e. amount paid by BHEL + overhead).

However, provisions regarding **GST** on output supply (goods/service) and TDS/TCS as per Income Tax Act shall be as per following clauses.

# 4.2 GST (Goods and Services Tax)

- **4.2.1** GST as applicable on output supply (goods/services) are excluded from Supplier/Vendor's scope; therefore, contractor's price/rates shall be **exclusive** of GST. Reimbursement of GST is subject to compliance of following terms and conditions. BHEL shall have the right to deny payment of GST and to recover any loss to BHEL on account of tax, interest, penalty etc. for non-compliance of any of the following condition.
- **4.2.2** The admissibility of GST, taxes and duties referred in this chapter or elsewhere in the contract shall be limited to direct transactions between BHEL & its Supplier/Vendor. BHEL shall not consider GST on any transaction other than the direct transaction between BHEL & its Supplier/Vendor.
- **4.2.3** Supplier/Vendor shall obtain prior written consent of BHEL before billing the amount towards such taxes. Where the GST laws permit more than one option or methodology for discharging the liability of tax/levy/duty, BHEL shall have the right to adopt the appropriate one considering the amount of tax liability on BHEL/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by BHEL shall be binding on the Contractor for discharging the obligation of BHEL in respect of the tax liability to the Supplier/Vendor.
- **4.2.4** Supplier/Vendor has to submit GST registration certificate of the concerned state. Supplier/Vendor also needs to ensure that the submitted GST registration certificate should be in active status during the entire contract period.
- **4.2.5** Supplier/Vendor has to issue /Debit Note/Credit Note indicating HSN/SAC code, Description, Value, Rate, applicable tax and other particulars in compliance with the provisions of relevant GST Act and Rules made thereunder.
- **4.2.6** Supplier/Vendor has to submit GST compliant invoice within the due date of invoice as per GST Law. In case of delay, BHEL reserves the right of denial of GST payment if there occurs any hardship to BHEL in claiming the input thereof. In case of goods, Supplier/Vendor has to provide scan copy of invoice & GR/LR/RR to BHEL before movement of goods starts to enable BHEL to meet its GST related compliances. Special care should be taken in case of month end transactions.

# **Terms Description Supplier** SI. Acceptance/ Comments 4.2.7 Supplier/Vendor has to ensure that invoice in respect of such services which have been provided/completed on or before end of the month should not bear the date later than last working day of the month in which services are performed. **4.2.8** Subject to other provisions of the contract, GST amount claimed in the invoice shall be released on fulfilment of all the following conditions by the Supplier/Vendor: a) Supply of goods and/or services have been received by BHEL. b) Original Tax Invoice has been submitted to BHEL. c) Supplier/Vendor has submitted all the documents required for processing of bill as per contract/ purchase order/ work order. d) In cases where e-invoicing provision is applicable, Supplier/Vendor is required to submit invoice in compliance with e-invoicing provisions of GST Act and Rules made thereunder. e) Supplier/Vendor has filed all the relevant GST return (e.g. GSTR-1, GSTR-3B, etc.) pertaining to the invoice submitted and submit the proof of such return along with immediate subsequent invoice. In case of final invoice/ bill, contractor has to submit proof of such return within fifteen days from the due date of relevant return. Respective invoice has appeared in BHEL's GSTR - 2A for the month corresponding to the month of invoice and in GSTR-2B of the month in which such invoices has been reported by the contractor along with status of ITC availability as "YES" in GSTR-2B. Alternatively, BG of appropriate value may be furnished which shall be valid at least one month beyond the due date of confirmation of relevant payment of GST on GSTN portal or sufficient security is available to adjust the financial impact in case of any default by the Supplier/Vendor. g) Supplier/Vendor has to submit an undertaking confirming the payment of all due GST in respect of invoices pertaining to BHEL. 4.2.9 Any financial loss arises to BHEL on account of failure or delay in submission of any document as per contract/purchase order/work order at the time of submission of Tax invoice to BHEL, shall be deducted from Supplier/Vendor's bill or otherwise as deemed fit. 4.2.10 TDS as applicable under GST law shall be deducted from Supplier/Vendor's bill. **4.2.11** Supplier/Vendor shall comply with the provisions of e-way bill wherever applicable. Further wherever provisions of GST Act permit, all the e-way bills, road permits etc. required for transportation of goods needs to be arranged by the contractor. 4.2.12 Supplier/Vendor shall be solely responsible for discharging his GST liability according to the provisions of GST Law and BHEL will not entertain any claim of GST/interest/penalty or any other liability on account of failure of Supplier/Vendor in complying the provisions

of GST Law or discharging the GST liability in a manner laid down thereunder.

SI.	Terms Description	Supplier Acceptance/ Comments
	<b>4.2.13</b> In case declaration of any invoice is delayed by the vendor in his GST return or any invoice is subsequently amended/altered/deleted on GSTN portal which results in any adverse financial implication on BHEL, the financial impact thereof including interest/penalty shall be recovered from the Supplier/Vendor's due payment.	
	<b>4.2.14</b> Any denial of input credit to BHEL or arising of any tax liability on BHEL due to noncompliance of GST Law by the Supplier/Vendor in any manner, will be recovered along with liability on account of interest and penalty (if any) from the payments due to the Supplier/Vendor.	
	<b>4.2.15</b> In the event of any ambiguity in GST law with respect to availability of input credit of GST charged on the invoice raised by the contractor or with respect to any other matter having impact on BHEL, BHEL's decision shall be final and binding on the Supplier/Vendor.	
	4.2.16 Variation in Taxes & Duties:  Any upward variation in GST shall be considered for reimbursement provided supply of goods and services are made within schedule date stipulated in the contract or approved extended schedule for the reason solely attributable to BHEL. However downward variation shall be subject to adjustment as per actual GST applicability.  In case the Government imposes any new levy/tax on the output service/goods after price bid opening, the same shall be reimbursed by BHEL at actual. The reimbursement under this clause is restricted to the direct transaction between BHEL and its Supplier/Vendor only and within the contractual delivery period only.  In case any new tax/levy/duty etc. becomes applicable after the date of Bidder's offer but before opening of the price Bid, the Bidder/ Supplier/Vendor must convey its impact on his price duly substantiated by documentary evidence in support of the same before opening of price bid. Claim for any such impact after opening the price bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.  4.3 Income Tax:	
	TDS/TCS as applicable under Income Tax Act, 1961 or rules made thereunder shall be deducted/collected from Supplier/Vendor's bill.	
	4.4 HSN Code of Item & Applicable GST % (To be filled by Supplier):	
5.	MATERIAL DISPATCH CLEARANCE CERTIFICATE (MDCC):	
	MDCC shall be issued by BHEL. No material shall be dispatched by supplier unless and until Material Dispatch Clearance Certificate (MDCC) issued by BHEL. In case any material is dispatched without MDCC and any loss is incurred by Supplier/Vendor for any reason whatsoever, BHEL shall not be responsible in any manner to compensate the supplier in this regard.	

SI.	Terms Description	Supplier Acceptance/ Comments
	For issuance of MDCC, Supplier is required to submit Packing list, Warrantee certificate, Complete test / inspection reports, Calibration certificates, copy of inspection call etc to BHEL. BHEL will issue MDCC within 7 days of receipt of these documents, if these are complete w.r.t. approved quality plan (if any) and comply with approved technical documents.	
	The delivery period as per sl. No. 7 below is inclusive of 07 days taken by BHEL to issue MDCC.	
6.	Quality Requirements	
	<ol> <li>The final inspection shall be witnessed by BHEL, BHEL's customer (end user), or a nominated Third-Party Inspection Agency (TPIA).</li> <li>Upon receipt of the BHEL Purchase Order, the vendor shall submit a Quality Plan, aligned with the technical specification, in the prescribed format for approval.</li> </ol>	
7.	DELIVERY:  BHEL's Delivery requirement is: 15/11/2025.  This period is applicable including all following items (i.e. A, B & C)  A. Continuous Ambient Air Quality Monitoring Station excluding R-F Communication System &,  B. Mandatory Spares for CAAQMS	
	Delivery period indicated in GeM bid is only indicative and final delivery of tender shall be considered as above.	
	Accordingly, bidders to confirm the above deliveries or quote their best possible delivery in no of months / weeks from the date of placement of Purchase order, including all activities like document approval, inspection by TPI time & issuance of MDCC etc, as follows:	
	• 30 days from the date of PO for supplier to submit the documents (drawings / datasheet & Quality Plan) for approval.	
	<ul> <li>30 days for documents approval by BHEL / End User.</li> <li>07 days for inspection of material by BHEL / BHEL'S CUSTOMER (END USER) / NOMINATED TPIA.</li> </ul>	
	• 07 days for issuing dispatch clearance from the date of receipt of documents mentioned in Clause No. 5 of this document.	
	• 07 days for arranging dispatch of material from the date of providing MDCC by BHEL. Any delay in document submission / approval / Inspection / dispatch clearance will be in respective account.	
	C. R-F Communication System	
	<ul> <li>30 days from the date of PO: BHEL/TNPGCL to provide the finalized locations of AAQMS &amp; display board to conduct site survey.</li> </ul>	

# SI. Terms Description Supplier Acceptance/ Comments

- 60 days for vendor to submit its survey report/drawing/datasheet/Quality plan to BHEL/Customer for approval, from the date of providing locations by BHEL.
- 30 days for documents approval by BHEL / End User, from the date of submission by vendor.
- Vendor shall obtain necessary approval for licenses authorizing the use of wireless communication equipment with specified frequencies. Required documents/credentials of end user for obtaining licenses will be provided by BHEL/end user within 15 days on receipt of request by bidder.
- 07 days for inspection of material by BHEL / BHEL's nominated TPIA.
- 07 days for issuing dispatch clearance from the date of receipt of documents mentioned in Clause No. 5 of this document.
- 07 days for arranging dispatch of material from the date of providing MDCC by BHEL.
   Any delay in providing finalized location/ document submission / approval / Inspection / dispatch clearance / will be in respective account.

Any delay in providing finalized location of AAQMS & display board or documents/credentials of end user for obtaining licenses will be in BHEL's account and extension in delivery schedule will be provided accordingly.

#### NOTE:

- **a).** If the delivery of supply as detailed above gets delayed beyond the delivery period, the Supplier/Vendor shall request for a delivery extension and BHEL at its discretion may extend the Contract. However, if any 'Delivery extension' is granted to the Supplier/Vendor for completion of supply, due to backlog attributable to the Supplier/Vendor, then it shall be without prejudice to the rights of BHEL to impose LD for the delays attributable to the Supplier/Vendor.
- **b).** In case BHEL increase the quantity during currency of the contract in line with quantity variation clause, delivery extension on pro-rata basis shall be given for supply of these additional quantity.
- c) Drawings/Data sheets/documents/QAP etc. as called for in the specifications shall be submitted by Vendor for BHEL/ Customer approval within 30 days of purchase order. BHEL shall approve these drawings/data sheets/ documents / QAP etc. within 30 days of receipt.

Any comments on the documents shall be given by BHEL within 7 days of submission and vendor shall submit revised document / reply to comments, within 7 days of BHEL comments. However, total time for Document approval submission and approval shall not exceed 30 days for respective party.

Delivery is from the date of PO, accordingly, delay in submission / revision of the documents by the vendor will automatically account for to vendor. In case of delay on account of BHEL in comments / approval of the documents, the delivery shall be re-scheduled by the no of days taken by BHEL in excess to 30 days. For delay analysis cumulative no of days (including time taken in comments), shall be considered for delivery extension.

SI.	Terms Description	Supplier
		Acceptance/
		Comments
8.	TRANSIT INSURANCE: Transit Insurance will be covered by BHEL under its open Insurance	
	Policy.	

# 9. **PAYMENT TERMS**:

The total scope of work, as detailed in Annexure-B, is divided into three components. The final quoted price by the bidder shall be apportioned among these components as outlined below:

Sr.No.	Item Description	Scope	Percentage of Total Contract Price
1	Continuous Ambient Air Quality Monitoring Station excluding R-F Communication System	Annexue-1	90%
2	R-F Communication System	Annexue-2	5%
3	Mandatory Spares for CAAQMS	Annexue-3	5%

# The payment terms applicable to each component are detailed below:

**90% payment** shall be released after submission of documents (as defined in cl 10 including 5% PBG) and receipt of Material at BHEL respective project site, within no. of days as defined in the below table from the date of receipt of Material at site i.e. MRC date).

Type of Bidder	Payment Terms (Number of Days from Material receipt at site)
Micro & Small Enterprises (MSEs)	45 days
Medium Enterprises	60 days
Non MSME	90 days

However, GST amount shall be reimbursed in line with compliance to Cl. No. 4 (Taxes & Duties) above.

# a) Balance 10% on successful Installation and Commissioning of item at site:

The supplier shall erect & commission all the items covered enquiry at site to integrate the system, demonstrate the performance of the Equipment and all its accessories to ensure compliance with complete specifications & parameters quoted by them to the satisfaction of BHEL/end user.

At the time I&C, material will be issued from BHEL store to I&C locations, the transportation of the material from store to the locations where AAQMS are to be installed and security of the material till completion of the I&C will be in the scope of vendor/supplier.

Failing to comply to the Installation and Commissioning clause, the offer will be rejected straightaway. *Cost for the same should be inclusive in the quoted prices.* 

SI.	Terms Description	Supplier Acceptance/ Comments
	Installation and Commissioning will be done at following address:	
	SE/PROJECTS/ENNORE SEZ STPP, TAMIL NADU POWER GEN. CO. LTD. CHENNAI-600120	
	Failing to comply to the above clause, the offer will be rejected straightaway.	
	b) NO INTEREST PAYABLE TO CONTRACTOR  No interest shall be payable on the security deposit or any other money due to the contractor.	
10.	DOCUMENTS REQUIRED FOR BILL PROCESSING:  The following documents are required to be sent for Bill Processing:  Original Tax Invoice (As per Cl. No. 4 above)  Original LR  Packing List  Guarantee/Warrantee certificate  Copy of MDCC issued by BHEL  Receipted Copy of LR / Proof of delivery (POD) / Material Receipt Certificate (MRC) from BHEL site  Performance Bank Guarantee (in line to sr. no. 13 below)  GST Compliance declaration  GeM Invoice  Consignee Receipt Cum Acceptance Certificate (CRAC)  E-invoice if turnover more than Rs. 5.00 cr  E-invoice/ Digitally signed invoice if turnover less than or equal to Rs. 5.00 cr. The digital invoice is required to be uploaded by vendors themselves at BHEL Haridwar's B2B portal.  Rest documents as mentioned in the PO remarks.	
11.	BANK DETAILS FOR EMD & PERFORMANCE SECURITY SUBMISSION:  For Electronic Fund Transfer the details are as below:	
	<ul> <li>a) Name of the Beneficiary: Bharat Heavy Electricals Limited</li> <li>b) Bank Particulars: Name of the Company - BHARAT HEAVY ELECTRICALS LTD. Address of the company – HEEP, BHEL, SECTOR-5A, RANIPUR, HARIDWAR - 249403 Name of the bank - STATE BANK OF INDIA Bank branch - RANIPUR BRANCH, OPP: BHEL MAIN GATE, SECTOR-5A, RANIPUR, HARIDWAR, UTTRAKHAND, INDIA, PIN CODE: 249403 SWIFT NO: SBININBB225CC </li> </ul>	

SI.	Terms Description	Supplier Acceptance/ Comments
	ACCOUNT NO: 10667995458 IFSC CODE: SBIN0000586	
12.	EMD: Applicable	
	<b>12.1</b> The offer must be accompanied by the prescribed amount of Earnest Money Deposit (EMD) in the manner described herein.	
	i. EMD shall be furnished before tender opening / along with the offer in full as per the amount indicated in the NIT.	
	ii. The EMD up to an amount of <b>Rs. 6,00,000/- (Rs. Six Lakhs only)</b> is to be paid only in the following forms:	
	a) Electronic Fund Transfer credited in BHEL account (before tender opening).	
	<ul> <li>Banker's cheque/ Pay order/ Demand draft, in favour of 'Bharat Heavy Electricals Limited' and payable at Regional HQ issuing the tender (along with offer).</li> </ul>	
	c) Fixed Deposit Receipt (FDR) 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 marking lien in favour of BHEL) (along with offer). The Fixed Deposit in such cases shall be valid for a period of 45 (forty-five) days beyond the final bid validity period.	
	d) Bank Guarantee from any of the Scheduled Banks. In such cases shall be valid for a period of 45 (forty-five) days beyond the final bid validity period.	
	e) Insurance Surety Bonds.	
	iii. No other form of EMD remittance shall be acceptable to BHEL.	
	<ul> <li>i. The bidder will be forfeited as per NIT conditions, if: <ol> <li>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.</li> </ol> </li> </ul>	
	ii. EMD by the Bidder shall be withheld in case any action on the tenderer is envisaged under the provisions of extant "Guidelines on Suspension of business dealings with suppliers/ contractors" and shall be forfeited in case of suspension	
	12.3 Subject to Clause 12.2 above, EMD of the unsuccessful bidders shall be returned at the earliest after expiry of the final bid validity period and latest by the 30th day after the award of the contract. However, in case of two packet or two stage bidding, EMD of	

S	SI.	Terms Descript	ion	Supplier Acceptance/ Comments
			dders during first stage i.e., technical evaluation etc. shall be returned within aration of result of first stage i.e. technical evaluation etc.	
			successful Bidder shall be refunded on conclusion of the order/ receipt of a curity as mentioned in NIT.	
		<b>12.5</b> EMD sh	all not carry any interest.	
		of Industry and In addition, offer	I Enterprises (MSEs) or Startups as recognized by Department for Promotion Internal Trade (DPIIT) shall be exempted from payment of EMD.  ers direct from the manufacturer or their authorized agents are also submission of EMD.	
1	.3.	PERFORMANCE	SECURITY: Applicable	
		5.0% of the co submitted within for a period of	bidder to submit Performance Security/Performance Bank Guarantee of ontract Value (Excluding Taxes). The Performance Security/PBG shall be in 30 days of notification of the award of Contract and it should remain valid 60 (sixty) days beyond the date of completion of all contractual obligations including warranty obligations.	
		performs and completion of	all be returned to the contractor without interest, after the contractor duly ompletes the contract in all respects but not later than 60 (sixty) days of all such obligations including the warranty under the contract. The curity/PBG shall not carry any interest.	
		<b>13.3</b> Modes of o	deposit: Ince security may be furnished in the following forms:	
		i.	Local cheques of Scheduled Banks (subject to realization)/ Pay Order/Demand Draft/ Electronic Fund Transfer in favour of 'Bharat Heavy Electricals Limited' and payable at Regional HQ	
		ii.	Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee should be in the prescribed format of BHEL. There must be a gap of minimum 3 months between BG Validity date and BG claim date.	
		iii.	Fixed Deposit Receipt (FDR) 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).	
		iv.	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). v. Insurance Surety Bond.	
		Note:		

SI.	Terms Description	Supplier Acceptance/ Comments
	a) 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.	
	b) In case of GTE tenders, the performance security should be in the same currency as the contract and must conform to Uniform Rules for Demand Guarantees (URDG 758) - an international convention regulating international securities.	
	<b>13.4</b> The performance security will be forfeited and credited to BHEL's account in the event of a breach of contract by the Supplier/Vendor as provided herein or elsewhere in the Contract/PO.	
	<b>13.5</b> Performance Security shall be refunded to the Supplier/Vendor without interest, after the Supplier/Vendor duly performs and completes the contract in all respects.	
	13.6 The Performance Security shall not carry any interest.	
	<b>13.7</b> There is no exemption of Performance security deposit submission for MSE Vendors.	
14.	BREACH OF CONTRACT, REMEDIES AND TERMINATION:	
	14.1 The following shall amount to breach of contract:	
	<ol> <li>Non-supply of material/ non-completion of work by the Supplier/Vendor within scheduled delivery/ completion period as per contract or as extended from time to time.</li> </ol>	
	II. The Supplier/Vendor fails to perform as per the activity schedule and there are sufficient reasons even before expiry of the delivery/ completion period to justify that supplies shall be inordinately delayed beyond contractual delivery/ completion period.	
	III. The Supplier/Vendor delivers equipment/ material not of the contracted quality.	
	IV. The Supplier/Vendor fails to replace the defective equipment/ material/ component as per guarantee clause.	
	V. Withdrawal from or abandonment of the work by the Supplier/Vendor before completion as per contract.	
	VI. Assignment, transfer, subletting of Contract by the Supplier/Vendor without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.	
	VII. Non-compliance to any contractual condition or any other default attributable to Supplier/Vendor.	
	VIII. Any other reason(s) attributable to Vendor towards failure of performance of contract.	

SI.	Terms D	Description	Supplier Acceptance/ Comments
		In case of breach of contract, BHEL shall have the right to terminate the Purchase Order/ Contract either in whole or in part thereof without any compensation to the Supplier/Vendor.	
		Any of the declarations furnished by the contractor at the time of bidding and/ or entering into the contract for supply are found untruthful and such declarations were of a nature that could have resulted in non-award of contract to the contractor or could expose BHEL and/ or Owner to adverse consequences, financial or otherwise.	
	X	Supplier/Vendor is convicted of any offence involving corrupt business practices, antinational activities or any such offence that compromises the business ethics of BHEL, in violation of the Integrity Pact entered into with BHEL has the potential to harm the overall business of BHEL/ Owner.	
		Note-Once BHEL considers that a breach of contract has occurred on the part of Supplier/Vendor, BHEL shall notify the Supplier/Vendor by way of notice in this regard. Contractor shall be given an opportunity to rectify the reasons causing the breach of contract within a period of 14 days.	
		In case the contractor fails to remedy the breach, as mentioned in the notice, to the satisfaction of BHEL, BHEL shall have the right to take recourse to any of the remedial actions available to it under the relevant provisions of contract.	
	14.2 <u>F</u>	Remedies in case of Breach of Contract.	
	i)	Wherein the period as stipulated in the notice issued under clause 14.1 has expired and Supplier/Vendor has failed to remedy the breach, BHEL will have the right to terminate the contract on the ground of "Breach of Contract" without any further notice to contractor.	
	ii)	Upon termination of contract, BHEL shall be entitled to recover an amount equivalent to 10% of the Contract Value for the damages on account of breach of contract committed by the Supplier/Vendor. This amount shall be recovered by way of encashing the security instruments like performance bank guarantee etc. available with BHEL against the said contract. In case the value of the security instruments available is less than 10% of the contract value, the balance amount shall be recovered from other financial remedies (i.e. available bills of the Supplier/Vendor, retention amount, from the money due to the Supplier/Vendor etc. with BHEL) or the other legal remedies shall be pursued.	
	iii)	Wherever the value of security instruments like performance bank guarantee available with BHEL against the said contract is 10% of the contract value or more,	

such security instruments to the extent of 10% contract value will be encashed. In

SI.	Terms	Description	Supplier Acceptance/ Comments
		case no security instruments are available or the value of the security instruments available is less than 10% of the contract value, the 10% of the contract value or the balance amount, as the case may be, will be recovered in all or any of the following manners:	
	iv)	In case the amount recovered under sub clause (a) above is not sufficient to fulfil the amount recoverable then; a demand notice to deposit the balance amount within 30 days shall be issued to Supplier/Vendor.	
	v)	If Supplier/Vendor fails to deposit the balance amount within the period as prescribed in demand notice, following action shall be taken for recovery of the balance amount:	
		<ul> <li>a) from dues available in the form of Bills payable to defaulted Supplier/Vendor against the same contract.</li> <li>b) If it is not possible to recover the dues available from the same contract or dues are insufficient to meet the recoverable amount, balance amount shall be recovered from any money(s) payable to Supplier/Vendor under any contract with other Units of BHEL including recovery from security deposits or any other deposit available in the form of security instruments of any kind against Security deposit or EMD.</li> </ul>	
	vi)	In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against defaulted supplier/Vendor.	
	vii)	It is an agreed term of contract that this amount shall be a genuine pre-estimate of damages that BHEL would incur in completion of balance contractual obligation of the contract through any other agency and BHEL will not be required to furnish any other evidence to the Supplier/Vendor for the purpose of estimation of damages.	
	viii)	In addition to the above, imposition of liquidated damages, debarment, termination, de-scoping, short-closure, etc., shall be applied as per provisions of the contract.	
	Note:	1) The defaulting Supplier/Vendor shall not be eligible for participation in any of the future enquiries floated by BHEL to complete the balance work. The defaulting contractor shall mean and include:	
		<ul> <li>(a) In case defaulted Supplier/Vendor is the Sole Proprietorship Firm, any Sole Proprietorship Firm owned by same Sole Proprietor.</li> <li>(b) In case defaulted Supplier/Vendor is The Partnership Firm, any firm comprising of same partners/ some of the same partners; or sole proprietorship firm owned by any partner(s) as a sole proprietor.</li> </ul>	

SI.	Terms Description	Supplier Acceptance/ Comments
	LD against delay in executed supply in case of Termination of Contract:	
	LD against delay in executed supply shall be calculated in line with LD clause no. 18.0 below, for the delay attributable to Supplier/Vendor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of supply till termination of contract.	
	Method for calculation of "LD against delay in executed supply in case of termination of contract" is given below.  i. Let the time period from scheduled date of start of supply till termination of contract evaluation the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of Hold (if any) not attribute by the period of the period of Hold (if any) not attribute by the period of the	
	contract excluding the period of Hold (if any) not attributable to contractor = T1  ii. Let the value of executed supply till the time of termination of contract= X	
	iii. Let the Total Executable Value of supply for which inputs/fronts were made available to Supplier/Vendor and were planned for execution till termination of contract = Y	
	iv. Delay in executed supply attributable to Supplier/Vendor i.e. T2=[1-(X/Y)] x T1	
	v. LD shall be calculated in line with LD clause (clause 18.0) of the Contract for the delay attributable to Supplier/Vendor taking "X" as Contract Value and "T2" as period of delay attributable to Supplier/Vendor.	
15.	BILL TO/ SHIP TO ADDRESS:	
	<u>Bill To</u> : For all projects, Bill To address will be as below:  Bharat Heavy Electrical Ltd,	

# **Ship To:** Ship To address shall be as under:

Project Name	Ennore 2X660 MW project
Consignee Address	SE/PROJECTS/ENNORE SEZ STPP,
	TAMIL NADU POWER GEN. CO. LTD.
	CHENNAI-600120

# 16. **GUARANTEE/WARRANTY:**

The equipment will be guaranteed for a period of 42 months from the date of dispatch or 36 months from the date of Installation & Commissioning, whichever is earlier.

Failing to comply to the warrantee clause, the offer will be rejected straightaway. Warrantee certificate is to be provided along with shipping documents. Please confirm.

SI.	Terms Description	1			Supplier
					Acceptance/ Comments
17.	MICRO AND SM	IΔII FNTFRD	PISES (M	SE).	Comments
17.			<u>-</u>	shall furnish the following details & submit	
	documentary evid	dence/ Govt. (	Certificate	etc. in support of the same along with their	
	techno-commercia	al offer.			
	Type under MSE	SC/ST owned	Women owned	Others (excluding SC/ ST & Women Owned)	
	Micro				
	Small				
	bidder is not fallin	g under MSE c	ategory.	ove, offer shall be processed construing that the	
	a) MSE suppliers can avail the intended benefits in respect of the procurements related to the Goods and Services only (Definition of Goods and Services as enumerated by Govt. of India vide Office Memorandum F. No. 21(8)/2011-MA dtd. 09/11/2016 office of AS & DC, MSME) only if they submit along with the offer, attested copies of either Udyam Registration. Date to be reckoned for determining the deemed validity will be the last date of Technical Bid submission. Non-submission of supporting document in GeM portal will lead to consideration of their bids at par with other bidders. No benefits shall be applicable for this enquiry if the above required documents are not uploaded at the time of bid submission. Documents submitted by the bidder shall be				
18.	LIQUIDATED DA		ing the up	plicable benefits.	
	refer to the dama	ges, not in the	nature of	nder this Tender/Agreement, shall mean and penalty, which the contractor agrees to pay in reach of contract etc. as the case may be.	
	parties as a reason on account of dela If the Seller/Servi original/re-fixed of entitled to deduct Force Majeure con	able and genui ay/breach on the ce Provider fa lelivery period t/recover the aditions afores	ne pre-estine part of tills to delive (s) specifie Liquidated said, @ 0.5	oplier/Vendor is a sum which is agreed by the mate of damages which will be suffered by BHEL he Supplier/Vendor.  er any or all of the Goods/Services within the d in the contract/PO, the Buyer/BHEL will be Damages for the delay, unless covered under of the contract value of delayed quantity per d as pre-estimated damages not exceeding 10%	
	•			without any controversy/dispute of any sort	
19.	INTEGRITY PACT (	<u>IP)</u> : Applicable			
	=			and transactions between the Company and its ed in a fair, transparent and corruption free	

# SI. Terms Description Supplier Acceptance/ Comments

manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

SI.	IEM	Email
1.	Shri Otem Dai, IAS (Retd.)	iem1@bhel.in
2.	Shri Bishwamitra Pandey, IRAS (Retd.)	iem2@bhel.in
3.	Shri Mukesh Mittal, IRS (Retd.)	iem3@bhel.in

- b) The IP as per Annex-8 with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/ three-part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.
- c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.

#### Note:

No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are as per Clause no. 28 below.

#### 20. PREFERENCE TO MAKE IN INDIA:

For this procurement, the local content to categorize a Supplier/Vendor as a Class I local supplier/ Class II local Supplier/Non-Local Supplier and purchase preferences to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 04.06.2020 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the GeM Bid, the same shall be applicable even if issued after issue of this GeM Bid, but before opening of Part-II bids against this GeM Bid.

Acceptance of offers from country Sharing Land Border with India:

#### 20.1 Compliance to Restrictions under Rule 144 (xi) of GFR 2017:

I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. The Competent Authority for the purpose of this Clause shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).

SI.	Terms Description	Supplier Acceptance/ Comments
		Comments
	II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.	
	III. "Bidder from a country which shares a land border with India" for the purpose of this	
	Clause means: -	
	a. An entity incorporated established or registered in such a country; or	
	<ul> <li>b. A subsidiary of an entity incorporated established or registered in such a country; or</li> </ul>	
	<ul> <li>c. An entity substantially controlled through entities incorporated, established or registered in such a country; or</li> </ul>	
	d. An entity whose beneficial owner is situated in such a country; or	
	e. An Indian (or other) agent of such an entity; or	
	f. A natural person who is a citizen of such a country; or	
	g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.	
	IV. The beneficial owner for the purpose of (III) above will be as under:	
	<ol> <li>In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.</li> <li>Explanation</li> </ol>	
	<ul> <li>a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent of shares or capital or profits of the company.</li> </ul>	
	b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements.	
	<ol> <li>In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership.</li> </ol>	
	In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person has ownership of or entitlement to	

# **Terms Description** Supplier SI. Acceptance/ Comments more than fifteen percent of the property or capital or profits of the such association or body of individuals. 3. Registration of the bidder with Competent Authority should be valid at the time of submission of bids and at the time of acceptance of the bids. 4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official; 5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership. ٧. An Agent is a person employed to do any act for another, or to represent another in dealings with third person. Note: (i) The bidder shall provide undertaking for their compliance to this Clause, in the format provided in Annexure-13. 21. **Settlement of Dispute** If any dispute or difference of any kind whatsoever shall arise between BHEL and the Supplier/Vendor, arising out of the contract for the performance of the work whether during the progress of contract termination, abandonment or breach of the contract, it shall in the first place referred to Designated Engineer for amicable resolution by the parties. Designated Engineer (to be nominated by BHEL for settlement of disputes arising out of the contract) who within 60 days after being requested shall give written notice of his decision to the contractor. Save as hereinafter provided, such decision in respect of every matter so referred shall forthwith be given effect to by the Supplier/Vendor who shall proceed with the work with all due diligence, whether he or BHEL desires to resolve the dispute as hereinafter provided or not. If after the Designated Engineer has given written notice of this decision to the party and no intention to pursue the dispute has been communicated to him by the affected party within 30 days from the receipt of such notice, the said decision shall become final and binding on the parties. In the event the Supplier/Vendor being dissatisfied with any such decision or if amicable settlement cannot be reached then all such disputed issues shall be resolved through conciliation in terms of the BHEL Conciliation Scheme 2018 as per Clause 21.1 21.1 Conciliation: Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and

so notified in writing by either Party to the other Party (the "Dispute") shall, in the first

SI.	Terms Description	Supplier
		Acceptance/
		Comments

instance, be attempted to be resolved amicably in accordance with the conciliation procedure as per BHEL Conciliation Scheme 2018. The proceedings of Conciliation shall broadly be governed by Part III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and provided in - "Procedure for conduct of conciliation proceedings" (as available in <a href="https://www.bhel.com">www.bhel.com</a>).

**Note:** Ministry of Finance has issued OM reference No. 1/2/24 dated 03.06.2024 regarding "Guidelines for Arbitration and Mediation in Contracts of Domestic Public Procurement. In the said OM it has been recommended that Government departments/Entities/agencies are to encourage mediation under the Mediation Act. 2023. The said Act has not yet been notified by the Government. Therefore, the clause "Settlement of Disputes" shall be modified accordingly as and when the Mediation Act 2023 gets notified.

#### **21.2 ARBITRATION:**

- 21.2.1 Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided in Clause 21.1 herein above or otherwise) in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or. in any manner touching upon the Contract (hereinafter referred to as the 'Dispute'), then, either Party may, refer the disputes to **Delhi International Arbitration Centre (DIAC)** and such dispute to be adjudicated by Sole Arbitrator appointed in accordance with the Rules of said Arbitral Institution.
- 21.2.2 A party willing to commence arbitration proceeding shall invoke Arbitration Clause by giving notice to the other party in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the 'Notice') before referring the matter to arbitral institution. The Notice shall be addressed to the Head of the Region, Power Sector/ Unit, BHEL, executing the Contract and shall contain the particulars of all claims to be referred to arbitration with sufficient detail and shall also indicate the monetary amount of such claim including interest, if any.
- 21.2.3 After expiry of 30 days from the date of receipt of aforesaid notice, the party invoking the Arbitration shall submit that dispute to **Delhi International Arbitration Centre** (**DIAC**) and that dispute shall be adjudicated in accordance with their respective Arbitration Rules. The matter shall be adjudicated by a Sole Arbitrator who shall necessarily be a Retd Judge having considerable experience in commercial matters to be appointed/nominated by the respective institution. The cost/expenses pertaining to the said Arbitration shall also be governed in accordance with the Rules of the respective Arbitral Institution. The decision of the party invoking the Arbitration for reference of dispute to a specific Arbitral institution for adjudication of that dispute shall be final and binding on both the parties and shall not be subject to any change thereafter. The institution once selected at the time of invocation of dispute shall remain unchanged.

	Towns Description		
SI	Terms Description	Supplier Acceptance/ Comments	
	21.2.4 The fee and expenses shall be borne by the parties as per the Arbitral Institutional rules.		
	21.2.5 The Arbitration proceedings shall be in English language and the seat and venue of Arbitration shall be <b>Haridwar</b> .		
	21.2.6 Subject to the above, the provisions of Arbitration & Conciliation Act 1996 and any amendment thereof shall be applicable. All matters relating to this Contract and arising out of invocation of Arbitration clause are subject to the exclusive jurisdiction of the Court(s) situated at <b>Haridwar</b> .		
	21.2.7 Notwithstanding any reference to the Designated Engineer or Conciliation or Arbitration herein, a. the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree. Settlement of Dispute clause cannot be invoked by the Contractor, if the Contract has been mutually closed or 'No Demand Certificate' has been furnished by the Contractor or any Settlement Agreement has been signed between the Employer and the Contractor.		
	21.2.8 It is agreed that Mechanism of resolution of disputes through arbitration shall be available only in the cases where the value of the dispute is less than Rs. 10 Crores.		
	21.2.9 In case the disputed amount (Claim, Counter claim including interest is Rs. 10 crores and above, the parties shall be within their rights to take recourse to remedies other than Arbitration, as may be available to them under the applicable laws after prior intimation to the other party. Subject to the aforesaid conditions, provisions of the Arbitration and Conciliation Act, 1996 and any statutory modifications or reenactment thereof as amended from time to time, shall apply to the arbitration proceedings under this clause.		
	21.2.10 In case, multiple arbitrations are invoked (whether sub-judice or arbitral award passed) by any party to under this contract, then the cumulative value of claims (including interest claimed or awarded) in all such arbitrations shall be taken in account while arriving at the total claim in dispute for the subject contract for the purpose of clause 21.2.9. Disputes having cumulative value of less than 10 crores shall be resolved through arbitration and any additional dispute shall be adjudicated by the court of competent jurisdiction.		
	21.3 In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:		
	In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD (Administrative Mechanism for		

SI.	Terms Description	Supplier Acceptance/ Comments
	Resolution of CPSEs Disputes) as mentioned in DPE OM No. 05/0003/2019-FTS-10937 dated 14-122022 as amended from time to time.	
22.	JURISDICTION	
	Subject to clause 21 of this contract, the Civil Court having original Civil Jurisdiction Haridwar, Uttarakhand shall alone have exclusive jurisdiction in regard to all matters in respect of the Contract.	
	GOVERNING LAWS	
	The contract shall be governed by the Law for the time being in force in the Republic of India.	
23.	Force Majeure  23.1 "Force Majeure" shall mean circumstance which is:  a) beyond control of either of the parties to contract,  b) either of the parties could not reasonably have provided against the event before entering into the contract,  c) having arisen, either of the parties could not reasonably have avoided or overcome, and  d) is not substantially attributable to either of the parties And  Prevents the performance of the contract,  Such circumstances include but shall not be limited to:  i. War, hostilities, invasion, act of foreign enemies.  ii. Rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war. iii. Riot, commotion or disorder by persons other than the contractor's personnel and other employees of the contractor and sub-contractors. iv. Strike or lockout not	
	solely involving the contractor's personnel and other employees of the contractor and sub-contractors.  v. Encountering munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the contractor's use of such munitions, explosives, radiation or radio- activity. vi. Natural catastrophes such as earthquake, tsunami, volcanic activity, hurricane or typhoon, flood, fire, cyclones etc.  vii. Epidemic, pandemic etc.  23.2 The following events are explicitly excluded from Force Majeure and are solely the responsibilities of the non-performing party: a) any strike, work-to-rule action, go-slow or similar labour difficulty (b) late delivery of equipment or material (unless caused by Force Majeure event) and (c) economic hardship.	

SI.	Terms Description	Supplier Acceptance/ Comments
	23.3 If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within 15 (fifteen) days after the occurrence of such event.	
	23.4 The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered or delayed. The Time for Completion shall be extended by a period of time equal to period of delay caused due to such Force Majeure event.	
	23.5 Delay or non-performance by either party hereto caused by the occurrence of any event of Force Majeure shall not	
	<ul> <li>v) Constitute a default or breach of the Contract.</li> <li>vi) Give rise to any claim for damages or additional cost expense occasioned thereby, if and to the extent that such delay or non-performance is caused by the occurrence of an event of Force Majeure.</li> </ul>	
	23.6 BHEL at its discretion may consider short closure of contract after 1 year of imposition of Force Majeure in line with extant guidelines. In any case, Supplier/Vendor cannot consider deemed short-closure after 1 year of imposition of Force Majeure.	
24.	Non-Disclosure Agreement:	
	The bidders shall enter into the Non-disclosure agreement separately and are required to submit declaration as per Annexure-7: Non-Disclosure Certificate.	
25.	Cartel Formation	
	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.	
26.	Fraud Prevention Policy Bidder along with its associate /collaborators /sub-contractors /sub-vendors / consultants / service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website http://www.bhel.com and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.	

SI.	Terms Description		Supplier Acceptance/ Comments	
27.	Suspension of Business Dealings with Suppliers / C	ontractors:		
	The offers of the bidders who are under suspension engage the services of the banned firms / principa banned firms is available on BHEL web site www.bh	I / agents, shall be rejected. The list		
	If any bidder / supplier / contractor during pre-tendering / tendering / post tendering / award / execution / post-execution stage indulges in any act, including but not limited to, malpractices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or tampers the tendering process or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860( Bhartiya Nyaya Samhita 2023) or any other law in force in India, or does anything which is actionable under the Guidelines for Suspension of Business dealings, action may be taken against such bidder / supplier / contractor as per extant guidelines of the company available on <a href="www.bhel.com">www.bhel.com</a> and / or under applicable legal provisions. Guidelines for suspension of business dealings is available in the webpage:			
28.	http://www.bhel.com/vender_registration/vender.php.  Bid should be free from correction, overwriting, using corrective fluid, etc. Any interlineation, cutting, erasure or overwriting shall be valid only if they are attested under full signature(s) of person(s) signing the bid else bid shall be liable for rejection. In the event of any Technical or Commercial queries, the same may please be addressed to the following BHEL concerned before Part I opening-  Mr. Vinay Kumar Gupta Designation: Engineer (PPX-BOI) 4th Floor, Main Administrative Building, HEEP, BHEL, Hardwar- 249403 Uttarakhand, India Email ID: vinaykumar.gupta@bhel.in  Bid should be free from correction, overwriting, using corrective fluid, etc. Any interesting the correction of any Technical or Commercial queries, the same may please be addressed to the following being the following being the correction. In the event of any Technical or Commercial queries, the same may please be addressed to the following being the following being the properties of the following being the correction of the properties of the following being the bid else bid shall be liable for rejection. In the event of any Technical or Commercial queries, the same may please be addressed to the following being the bid else bid shall be liable for rejection. In the event of any Technical or Commercial queries, the same may please be addressed to the following being the bid else bid shall be liable for rejection. In the event of any Technical or Commercial queries, the same may please be addressed to the following being the bid else bid shall be valid only if they are attested under full signature. In the event of any Technical or Commercial queries, the same may please be addressed to the following being the bid else bid shall be valid only if they are attested under full signature. In the event of any Technical or Commercial queries, the same may please be addressed to the following being the bid else bid shall be valid only if they are attested under full signature.			
29.	Tel: +91 1334 28 1187  Order of Precedence:	<u> </u>		
	In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below:  a. Amendments/Clarifications/Corrigenda/Errata etc. issued in respect of the tender documents by BHEL.			
	b. Buyer Added Bid Specific ATC			
	c. GeM Bid Technical Conditions of Con d. GeM GTC (GeM GTC 4.0 v1.24_5 Ma	, ,		
30.	,	<u> </u>		
30.	Action against Bidder/vendor/supplier/contractor in case of default:  In order to protect the commercial interests of BHEL, BHEL shall take action against supplies / contractors by way of suspension of business dealings, who either fail to perform or are in default without any reasonable cause, cause loss of business/ money/ reputation, indulge			

SI.	Terms Description	Supplier Acceptance/ Comments
	in malpractices, cheating, bribery, fraud or any other misconduct or formation of cartels so as to influence the bidding process or influence the price etc.	
	Suspension of Business Dealings could be in the form of "Hold" or "Banning" a supplier/contractor or a bidder and shall be as per "Guidelines for Suspension of Business Dealings with Suppliers/ Contractors" available at BHEL's website <a href="https://www.bhel.com/guidelines-suspension-business-dealings-supplierscontractors">https://www.bhel.com/guidelines-suspension-business-dealings-supplierscontractors</a> .	
31.	Conflict of interest	
	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	
	<ul> <li>b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or</li> </ul>	
	c) they have the same legal representative/agent for purposes of this bid; or	
	<ul> <li>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</li> </ul>	
	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	
	<ul> <li>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:         <ol> <li>The principal manufacturer directly or through one Indian agent on his behalf; and</li> <li>Indian/foreign agent on behalf of only one principal, or</li> </ol> </li> </ul>	
	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.	
32.	Price Variation Formula (PVF) / Clause (PVC): Not-Applicable	
33.	Special Condition:	

SI.	Terms Description	Supplier Acceptance/ Comments
	<ul> <li>Storage instructions and MSDS (Material Safety Data Sheet) is to be sent along with supply of material.</li> <li>Please confirm to despatch the material on door delivery basis.</li> <li>Please confirm to provide original GR / LR &amp; E-way Bill direct to BHEL after despatch of Material.</li> <li>Please inform 8 Digit GST HSN Code of the Quoted Item.</li> </ul>	
34.	Bidder Contact details  Please provide Contact details of your representative for techno-commercial clarifications:  Mobile no. & Email id (minimum 2 person).	1. 2.
35.	Compliance of Statutory requirements:  Supplier should comply with all statutory requirements pertaining to environmental standards for the Manufacturing, Packing, supply and Transportation of material.	
36.	NOTE:  1. In the event of our customer order covering this tender being cancelled /placed on hold /otherwise modified, BHEL would be constrained to accordingly cancel / hold / modify the tender at any stage of execution.	
	2. BHEL may negotiate the L1 rate, if not meeting our budget / estimated cost. BHEL may re-float the tender opened, if L1 price is not acceptable to BHEL even after negotiation. Any deviation from the conditions specified in Techno-Commercial Terms and Conditions - Buyer Added Bid Specific Additional Terms & Conditions (ATC) and Technical specifications and requirements will lead to rejection of offer.	
	3. Any change in applicable rates of Tax or any other statutory levies (Direct / Indirect) or any new introduction of any levy by means of statute and its corresponding liability for the deliveries beyond the agreed delivery date for reasons not attributable to BHEL will be to vendors account. BHEL will not reimburse the same and any subsequent claim in this respect will be summarily rejected.	
	4. BHEL reserves its right to reject an offer due to unsatisfactory past performance by the respective Vendor in the execution of any contract to any BHEL project / Unit.	
	5. The offers of the bidders who are under suspension and also the offers of the bidders, who engage the services of the banned firms /principal/agents, shall be rejected. The list of banned firms is available on BHEL web site www.bhel.com.	
	<ol> <li>Recovery / deduction as applicable as per Direct and Indirect taxes as notified by Govt.         Of India from time to time will be made and information/certificate for such deduction/recoveries shall be provided by BHEL to the vendor.</li> </ol>	

SI.	Terms Description	Supplier Acceptance/
		Comments
37.	Risk Purchase: In case of abnormal delays (beyond the maximum late delivery period as per LD clause) in supplies / defective supplies or non-fulfilment of any other terms and conditions given in Purchase Order, BHEL may cancel the Purchase Order in full or part thereof, and may also make the purchase of such material from elsewhere / alternative source at the risk and cost of the supplier. BHEL will take all reasonable steps to get the material from alternate source at optimum cost. If bidder does not agree to the above Risk Purchase Clause, BHEL reserves the right to reject the offer. In case for compelling reasons BHEL accepts the offer without acceptance of this clause by the bidder and in the eventuality of Risk Purchase, appropriate action will be taken as per BHEL extant rules. This will be without prejudice to any other right of BHEL under the contract or under General Law.	
38.	<ul> <li>a) Evaluation criteria:</li> <li>Evaluation will be done on the basis of Total Landed cost up to Ennore project site (Total Value-wise evaluation).</li> <li>b) Validity:</li> <li>Offer will be valid for 150 days from bid end date and extensions thereof.</li> </ul>	
	BHEL will reserve the right to reject any or all quotations, quoting validity less than 150 days.	
39.	Document:	
	3 hard copies of O&M manual, 05 CD ROM copies of O&M manual and 05 soft copy of O&M manual in English language giving complete technical information for operation and maintenance of the items.	
40.	Packing & Dispatch:	
	The equipment / accessories shall be packed in a suitable water proof/vibration proof packing box capable of bearing air and road transit hazards. Packing box shall be properly identified and marked with BHEL's (India) Purchase Order Number. Also, "PCRI HWR" should be written in bold letters on all four sides of the packing box.	
41.	Enclosure:  Annexure-1: Check List.  Annexure-2: Offer forwarding letter / tender submission letter  Annexure-3: No Deviation Certificate  Annexure-4: Declaration regarding Insolvency/ Liquidation/ Bankruptcy Proceedings  Annexure-5: Declaration by Authorized Signatory  Annexure-6: Declaration by Authorized Signatory regarding Authenticity of submitted  Documents  Annexure-7: Non-Disclosure Certificate	

SI.	Terms Description	Supplier Acceptance/ Comments
	Annexure-8: Integrity Pact Annexure-9: Declaration confirming knowledge about Site Conditions Annexure-10: Declaration reg. Related Firms & their areas of Activities Annexure-11: Declaration for relation in BHEL Annexure- 12: Declaration reg. minimum local content in line with revised public procurement Annexure- 13: Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017 Annexure-14: Bank Account Details for E-Payment Annexure-15: Power of Attorney for submission of tender. Annexure-16: Proforma of Bank Guarantee for Earnest Money. Annexure-17: Proforma of Bank Guarantee for Performance Security. Annexure-18: List of Consortium Bank.	

# **CHECK LIST**

**NOTE:** - Suppliers are required to fill in the following details in their Letterhead and no column should be left blank

Α	Name and Address of the Supplier			
В	GSTN No. the Supplier (Place of Execution of Contract / Purchase Order)			
C D	Details of Contact person for this Tender  EMD DETAILS	Name: Mr./ Ms. Designation: Telephone No: Mobile No: Email ID:		
E	DESCRIPTION		APPLICABILITY (BY BHEL)	ENCLOSE BY BIDDER
i.	Whether <b>Pre - Qualification Criteria</b> is understood and provided proper supporting documents.		Applicable/ Not Applicable	YES / NO
ii.	Whether all pages of the Tender documents including annexures, appendices etc. are read and understood		Applicable/ Not Applicable	YES / NO
iii.	Audited Balance Sheet and profit & Loss Account for the last three years		Applicable/ Not Applicable	YES / NO
iv.	Copy of PAN Card & GST registration		Applicable/ Not Applicable	YES / NO
V.	Submission of <b>MSE certificate</b> as specified in Tender		Applicable/ Not Applicable	YES / NO
vi.	Offer forwarding letter / tender submission letter as per Annexure – 2		Applicable/ Not Applicable	YES / NO
vii.	Submission of <b>Certificate of No Deviation</b> as per Annexure – 3		Applicable/ Not Applicable	YES / NO
viii.	Declaration regarding Insolvency/ Liquidation/ Bankruptcy Proceedings as per Annexure – 4		Applicable/ Not Applicable	YES / NO

ix.	Declaration by <b>Authorized Signatory</b> as per Annexure – 5	Applicable/	YES / NO
X.	Declaration by <b>Authorized Signatory regarding Authenticity</b> of submitted Documents Annexure – 6	Applicable/ Not Applicable	YES / NO
xi.	Submission of <b>Non-Disclosure Certificate</b> as per Annexure – 7	Applicable/ Not Applicable	YES / NO
xii.	Submission of <b>Integrity Pact</b> as specified in Tender as per Annexure – 8	Applicable/ Not Applicable	YES / NO
xiii.	Declaration <b>confirming knowledge about Site Conditions</b> as per Annexure – 9	Applicable/ Not Applicable	YES / NO
xiv.	Declaration reg. <b>Related Firms &amp; their areas of Activities</b> as per Annexure – 10	Applicable/ Not Applicable	YES / NO
XV.	Declaration for <b>relation in BHEL</b> as per Annexure – 11	Applicable/ Not Applicable	YES / NO
xvi.	Declaration reg. <b>minimum local content</b> in line with revised public procurement as per Annexure – 12	Applicable/ Not Applicable	YES / NO
xvii.	Declaration regarding <b>compliance to Restrictions under Rule 144 (xi) of GFR 2017</b> as per Annexure – 13	Applicable/ Not Applicable	YES / NO
xviii.	Bank Account Details for E-Payment as per Annexure – 14	Applicable/ Not Applicable	YES / NO
xix.	Power of Attorney for submission of tender as per Annexure – 15	Applicable/ Not Applicable	YES / NO
XX.	<b>Proforma of Bank Guarantee for Earnest Money</b> as per Annexure – 16	Applicable/ Not Applicable	YES / NO

**NOTE**: Strike off 'YES' or 'NO', as applicable. Tender not accompanied by the prescribed **above applicable documents** are liable to be summarily rejected.

DATE:

Sign. of the AUTHORISED SIGNATORY (With Name, Designation and Company seal)

#### **OFFER FORWARDING LETTER / TENDER SUBMISSION LETTER**

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder) Offer Reference No: ..... Date: ..... To, (Write Name & Address of Officer of BHEL inviting the Tender) Dear Sir. Sub: Submission of Offer against Tender Enquiry No: ..... Having examined the tender documents against your Tender Enquiry No. \_\_\_\_\_ dated \_\_\_\_\_ and having understood the provisions of the said tender documents and having thoroughly studied the requirements of BHEL related to the work tendered for, in connection with \_ (name of work & project site), we hereby submit our offer for the proposed work in accordance with terms and conditions mentioned in the tender documents, at the prices quoted by us and as per the indicated delivery schedule. Should our Offer be accepted by BHEL for Award, I/we further agree to furnish 'Performance Security' for the work as provided for in the Tender Conditions within the stipulated time as may be indicated by BHEL. I/We further agree to execute all the works referred to in the said Tender documents upon the terms and conditions contained or referred to therein and as detailed in the appendices annexed thereto. I/We have deposited herewith the requisite Earnest Money Deposit (EMD) as per details furnished in the Check List. **Authorized Representative of Bidder** Signature: Name: Address: Place:

Date:

# **CERTIFICATE OF NO DEVIATION**

(To be Typed & submitted in the Letter Head of the Company/Firm of Bidder)
To,
(Write Name & Address of Officer of BHEL inviting the Tender)
Dear Sir,
Subject: No Deviation Certificate
Ref: 1) Tender Enquiry No:
We hereby confirm that we have not changed/ modified/materially altered any of the tender documents as downloaded from the website/ issued by BHEL and in case of such observance at any stage, it shall be treated as null and void.
We also hereby confirm that we have neither set any Terms and Conditions and nor have we taken any deviation from the Tender conditions together with other references applicable for the above referred Tender Enquiry.
We further confirm our unqualified acceptance to all Terms and Conditions, unqualified compliance to Tender Conditions.
We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.
Thanking you,
Yours faithfully,
(Signature, date & seal of authorized representative of the bidder)
Date:
Place:

#### **UNDERTAKING**

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)
To,
(Write Name & Address of Officer of BHEL inviting the Tender)
Dear Sir/Madam,
Sub: DECLARATION REGARDING INSOLVENCY/ LIQUIDATION/ BANKRUPTCY PROCEEDINGS
Ref: Tender Enquiry Specification No:
I/We, declare that,
I/We am/are not admitted under insolvency resolution process or liquidation under Insolvency and
Bankruptcy Code, 2016, as amended from time to time or under any other law as on date, by NCLT or
any adjudicating authority/authorities.
Sign. of the AUTHORISED SIGNATORY
(With Name, Designation and Company seal)
Place:
Date:

#### **DECLARATION BY AUTHORISED SIGNATORY OF BIDDER**

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)
To,  (Write Name & Address of Officer of BHEL inviting the Tender)
Dear Sir,
Sub: Declaration by Authorised Signatory  Ref: 1) Tender Enquiry Specification No:
I/We, hereby certify that all the information and data furnished by me with regard to the above Tender Specification are true and complete to the best of my knowledge. I have gone through the specifications, conditions, stipulations and all other pertinent issues till date, and agree to comply with the requirements and Intent of the specification.
I further certify that I am authorised to represent on behalf of my Company/Firm for the above-mentioned tender and a valid Power of Attorney to this effect is also enclosed.
Yours faithfully,
(Signature, Date & Seal of Authorized Signatory of the Bidder)
Date:
Enclosed: Power of Attorney

# **DECLARATION BY AUTHORISED SIGNATORY OF BIDDER**

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)
 To,
(Write Name & Address of Officer of BHEL inviting the Tender)
Dear Sir,
Sub : <b>Declaration by Authorised Signatory regarding Authenticity of submitted documents.</b>
Ref : 1) Tender Enquiry No. & Date:
2) All other pertinent issues till date
I/We, hereby certify that all the documents submitted by us in support of possession of "Qualifying Requirements" are true copies of the original and are fully compliant required for qualifying / applying in the bid and shall produce the original of same as and when required by Bharat Heavy Electricals Limited.
I / We hereby further confirm that no tampering is done with documents submitted in support of our qualification as bidder. I / We understand that at any stage (during bidding process or while executing the awarded contract) if it is found that fake / false / forged bid qualifying / supporting documents / certificates were submitted, it would lead to summarily rejection of our bid / termination of contract. BHEL shall be at liberty to initiate other appropriate actions as per the terms of the Bid / Contract and other extant policies of Bharat Heavy Electricals Limited.
Yours faithfully,
(Signature, Date & Seal of Authorized Signatory of the Bidder)
Date:

# **NON-DISCLOSURE CERTIFICATE**

	(To be Typed & submitted in the Letter Head of the Company/Firm of Bidder)
	-
	understand that BHEL Haridwar is committed to Information Security Management System as per information Security Policy.
Hence	
who	are submitting offer for providing services to BHEL Haridwar against Tender Enquiry hereby undertake to comply with the ing in line with Information Security Policy of Haridwar.
0	To maintain confidentiality of documents & information which shall be used during the execution of the Contract.
0	The documents & information shall not be revealed to or shared with third party which shall not be in the business interest of BHEL Haridwar.
Date:	(Signature, date & seal of Authorized Signatory of the bidder)

#### **INTEGRITY PACT**

#### **Between**

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONF PART

which expression unless repugnant to the context or meaning hereof shall include its successors of assigns of the ONE PART
and
, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART
<u>Preamble</u>
The Principal intends to award, under laid-down organizational procedures, contract/s for
. The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).
In order to achieve these goals, the Principal will appoint Independent External Monitor(s), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.
Section 1- Commitments of the Principal

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -
- 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
- 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
- 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or

if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

#### Section 2 - Commitments of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
- 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. 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.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Indian Penal Code (IPC) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) 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 with the award of the contract.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and will await their decision in the matter.

#### Section 3 - Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

#### **Section 4 - Compensation for Damages**

- 4.1 If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher.

#### **Section 5 - Previous Transgression**

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

#### Section 6 - Equal treatment of all Bidders/ Contractors / Sub-contractors

- 6.1 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors. In case of sub-contracting, the Principal contractor shall be responsible for the adoption of IP by his sub-contractors and shall continue to remain responsible for any default by his subcontractors.
- 6.2 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

#### Section 7 - Criminal Charges against violating Bidders/ Contractors /Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

#### Section 8 -Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The

- Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s) / Sub-contractor(s) with confidentiality in line with Non- disclosure agreement.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- 8.5 The role of IEMs is advisory, would not be legally binding and it is restricted to resolving issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter should be examined by the full panel of IEMs jointly as far as possible, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.
- 8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to CMD, BHEL, at the earliest. They may also send their report directly to the CVO and the Commission, in case of suspicion of serious irregularities requiring legal/ administrative action. IEMs will tender their advice on the complaints within 10 days as far as possible.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.9 IEM should examine the process integrity; they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the organization should be looked into by the CVO of the concerned organisation.
- 8.10 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code/ Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.
- 8.12 The word 'Monitor' would include both singular and plural.

#### **Section 9 - Pact Duration**

- 9.1 This Pact shall be operative from the date IP is signed by both the parties till the final completion of contract for successful bidder and for all other bidders 6 months after the contract has been awarded. Issues like warranty / guarantee etc. should be outside the purview of IEMs.
- 9.2 If any claim is made/ lodged during currency of IP, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

#### **Section 10 - Other Provisions**

- 10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.
- 10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- 10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those bidders / contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

1	
For & On behalf of the Principal	For & On behalf of the Bidder/ Contractor
(Office Seal)	(Office Seal)
Place Date	
Witness:	Witness:
(Name & Address) ———	(Name & Address) ———

# **DECLARATION CONFIRMING KNOWLEDGE ABOUT SITE CONDITIONS**

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)
To,
(Write Name & Address of Officer of BHEL inviting the Tender)
Dear Sir,
Dear Sir,
Sub: Declaration confirming knowledge about Site conditions
Ref: 1) Tender Enquiry Specification No:
I/We, hereby declare and confirm that we have visited the Project Site as referred in BHEL Tender Specifications and acquired full knowledge and information about the Site conditions including Wage structure, Industrial Climate, the Law & Order and other conditions prevalent at and around the Site. We further confirm that the above information is true and correct and
we shall not raise any claim of any nature due to lack of knowledge of Site conditions.
I/We, hereby offer to carry out work as detailed in above mentioned Tender Specification, in accordance with Terms & Conditions thereof.
Yours faithfully,
(Signature, Date & Seal of Authorized Representative of the Bidder)
Date:
Date: Place:

#### **DECLARATION**

		Date:
To,		
(Write	Name & Address of Officer of BHEL inviting t	the Tender)
Dear S	iir/ Madam,	
Sub:	Details of related firms and their area of a	activities
	find below details of firms owned by our fam tem with BHEL, (NA, <i>if not apple</i>	nily members that are doing business/ registered for <i>licable</i> )
1	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
2	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
	I certify that the above information is true fithe above information furnished is found	and I agree for penal action from BHEL in case to be false.
		Regards,
		()

From:	M/s
Supplier Code:	
Address:	

To be typed and submitted in the Letter Head of the Company/Firm of Bidder failing which the offer of Bidder is liable to be summarily rejected)
(Write Name & Address of Officer of BHEL inviting the Tender)
Dear Sir,
Sub: <u>Declaration for relation in BHEL</u> Ref: 1) Tender Enquiry Specification No:
I/We hereby submit the following information pertaining to relation/relatives of Proprieter/Partner(s)/ Director(s) employed in BHEL
Tick (√) any one as applicable:
1. The Proprieter, Partner(s), Director(s) of our Company/Firm DO NOT have any relation or relatives employed in BHEL
OR
2. The Proprieter, Partner(s), or Director(s) of our Company/Firm HAVE relation/relatives employed in BHEL and their particulars are as below:
i. ii
•

#### Note:

- 1. Attach separate sheet, if necessary.
- 2. If BHEL Management comes to know at a later date that the information furnished by the Bidder is false, BHEL reserves the right to take suitable against the Bidder/Contractor.

(Signature, Date & Seal of Authorized Signatory of the Bidder)

# DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED 19<sup>TH</sup> JULY, 2024 AND SUBSEQUENT ORDER(S)

•	ted in the Letter Head of the Entity/Firm provid	
  To,		
(Write Name & Address of	Officer of BHEL inviting the Tender)	
Dear Sir,		
•	mum local content in line with Public Procure n, dated 19 <sup>th</sup> July, 2024 and subsequent order(s)	
<b>Ref:</b> 1) Tender Enquiry Spe 2) All other pertinent	cification No: issues till date	
the organization here) has 'Class-I local supplier' /	items/works/services offered bya local content of % and this meets the Class II local supplier' ** as defined in Public-Revision dated 04.06.2020 issued by DPIIT and	local content requirement for c Procurement (Preference to
The details of the location(	s) at which the local value addition is made are	as follows:
1	2	
3	4	
Thanking you, Yours faithfully,		
	Authoriz	(Signature, Date & Seal of zed Signatory of the Bidder)
** - Strike out whichever is	not applicable.	

Note:

- 1. Bidders to note that above format, duly filled & signed by authorized signatory, shall be submitted along with the techno-commercial offer.
- 2. In case the bidder's quoted value is in excess of Rs. 10 crores, the authorized signatory for this declaration shall necessarily be the statutory auditor or cost auditor of the company (in the case of companies) or a practising cost accountant or practicing chartered accountant (in respect of suppliers other than companies).
- 3. In the event of false declaration, actions as per the above order and as per BHEL Guidelines shall be initiated against the bidder.

#### **ANNEXURE - 13**

(To be typed and submitted in the Letter Head of the Entity/ Firm providing certificate as applicable)	
To,	
(Write Name & Address of Officer of BHEL inviting the Tender)	
Dear Sir,	
<b>Sub</b> : Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017	
Ref: 1) Tender Enquiry Specification No:	
I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. I certify that (SPECIFY THE NAME OF THE ORGANIZATION HERE), is not from such a country/ has been registered with the Competent Authority (attach valid registration by the Competent Authority, i.e., the Registration Committee constituted by the Dept. for Promotion of Industry and Internal Trade (DPIIT).	
I hereby certify that we fulfil all requirements in this regard and is eligible to be considered.	
Thanking you, Yours faithfully,	
(Signature, Date & Seal of	
Authorized Signatory of the Bidder)	

**Note:** Bidders to note that in case above certification given by a bidder, whose bid is accepted, is found to be false, then this would be a ground for immediate termination and for taking further action in accordance with law and as per BHEL guidelines.

#### **BANK ACCOUNT DETAILS FOR E-PAYMENT**

(To be given on Letter head of the Company /Firm of Bidder, and **ENDORSED (SIGNED & STAMPED) BY THE BANK** to enable BHEL release payments through Electronic Fund Transfer (EFT/RTGS)

1.	Beneficiary Name :
2.	Beneficiary Account No. :
3.	Bank Name & Branch :
4.	City/Place :
5.	9 digit M ICR Code of Bank Branch :
6.	IFSC Code of Bank Branch :
7.	Beneficiary E-mail ID : (for payment confirmation)
NOTE: In cas	e Bank endorsed certificate regarding above has already been submitted earlier, kindly

submit photocopy of the same

#### **POWER OF ATTORNEY for SUBMISSION OF TENDER**

(To be typed on non-judicial stamp paper of minimum Rs. 100/- and Notarized) ..... KNOW ALL MEN BY THESE PRESENTS, that I/We do hereby make, nominate, constitute and appoint Mr. ....., whose signature given below herewith to be true and lawful Attorney of M/s......hereinafter called 'Company', for submitting Tender/entering into Contract and inter alia, sign, execute all papers and to do necessary lawful acts on behalf of Company with M/s Bharat Heavy Electricals Ltd, Central Procurement Cell (CPC), in connection with......vide Tender Enquiry No: \_\_\_\_\_\_, dated \_\_\_\_\_. And the Company do hereby agree to ratify and confirm all acts, deeds, things or proceedings as may be lawfully done by the said attorney and by or on behalf of the company and in the name of the company, by virtue of the powers conferred herein and the same shall be binding on the company and shall have full force and effect. IN WITNESS WHEREOF, the common seal of the company has been hereunto affixed in the manner hereinafter appearing on the document. Dated at \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_ Director/CMD/Partner/Proprietor Signature of Mr. ..... (Attorney)

Witness

**Notary Public** 

Attested by: Director/CMD/Partner/Proprietor

#### PROFORMA OF BANK GUARANTEE FOR EARNEST MONEY

(On non-Judicial paper of appropriate value)

Bank Guarantee No
Date
То
(Employer's Name and Address)
Dear Sirs,
In accordance with the terms and conditions of Invitation for Bids/Notice Inviting Tender Nohaving its registered
office at
The Tender Conditions provide that the Tenderer shall pay a sum of Rs as Earnest Money Deposit in the form therein mentioned. The form of payment of Earnest Money Deposit includes Bank Guarantee executed by a Scheduled Bank.
In lieu of the stipulations contained in the aforesaid Tender Conditions that an irrevocable and unconditional Bank Guarantee against Earnest Money Deposit for an amount of
we, the[Name & address of the Bank]having our Registered Office at
(hereinafter referred to as the Bank) being the Guarantor under this
Guarantee, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer without any demur, merely on your first demand any sum or sums of Rs.
$^{5}$ (in words Rupees) without any reservation, protest, and recourse and without the beneficiary needing to prove or demonstrate reasons for its such demand.
Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs
We undertake to pay to the Employer any money so demanded not with standing any dispute or disputes

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor/Contractor/Vendors in any suit or proceeding pending before any Court or

Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment hereunder and the Tenderer shall have no claim against us for making such payment. We ...... Bank further agree that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Tender or to extend the time of submission of from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Tenderer and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Tenderer or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Tenderer or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us. The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Tenderer and notwithstanding any security or other guarantee that the Employer may have in relation to the Tenderer's liabilities. This Guarantee shall be irrevocable and shall remain in force upto and including......<sup>6</sup> and shall be extended from time to time for such period as may be desired by the Employer. This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Tenderer but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms hereof. However, unless a demand or claim under this Guarantee is made on us in writing on or before the .......<sup>7</sup> we shall be discharged from all liabilities under this Guarantee. This Bank Guarantee shall be governed, construed and interpreted in accordance with the laws of India. Courts at ...... shall alone have exclusive jurisdiction over any matter arising out of or in connection with this Bank Guarantee We, ...... Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing. Notwithstanding anything to the contrary contained hereinabove: a. The liability of the Bank under this Guarantee shall not exceed......<sup>5</sup>..... b. This Guarantee shall be valid up to ......<sup>6</sup> c. Unless the Bank is served a written claim or demand on or before \_\_\_\_\_\_<sup>7</sup> all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities

under this guarantee irrespective of whether or not the original bank guarantee is returned to

the Bank

We, Bank, have power to issue this Guarar authorized person has full powers to sign this Guarantee	ntee under law and the undersigned as a duly on behalf of the Bank.
	For and on behalf of (Name of the Bank)
Date	
Place of Issue	
1 Details of the Invitation to Bid/Notice Inviting	
Tender 2	
Name and Address of the Tenderer	
3 Details of the Work 4	
Name of the Employer 5	
BG Amount in words and Figures	

#### **Notes:**

Claim Period

6 Validity Date 7 Date of Expiry of

- 1. Units are advised that expiry of claim period may be kept 3-6 months after validity date. It may be ensured that the same is in line with the agreement/ contract entered with the Vendor.
- 2. The BG should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Contractor/sub-contractor /vendor/ Bank issuing the guarantee.
- 3. In line with the GCC, SCC or contractual terms, Unit may carry out minor modifications in the Standard BG Formats. If required, such modifications may be carried out after taking up appropriately with the Unit/Region's Law Deptt.
- 4. In Case of Bank Guarantees submitted by Foreign Vendors
  - a. From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India) can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e., Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
  - b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)

- **b.1** In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter-Guarantee by Foreign Bank in favour of the Indian Bank's (BHEL's Consortium Bank) branch in India. It is advisable that all charges for issuance of Bank Guarantee/ counter-Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.
- **b.2 In case, Foreign Vendors intend to provide BG from** Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.
- **b.3** The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). The BG Format provided to them should clearly specify the same.

#### **BANK GUARANTEE FOR PERFORMANCE SECURITY**

(On non-Judicial paper of appropriate value)

Bank Guarantee No: Date:
To NAME & ADDRESSES OF THE BENEFICIARY
Dear Sirs, In consideration of Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at
We,, (hereinafter referred to as the Bank), having registered/Head office at
Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs
We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the <u>Vendor / Contractor / Supplier</u> in any suit or proceeding pending before any Court or

Tribunal, Arbitrator or any other authority, our liability under this present being absolute and

unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the <u>Vendor / Contractor / Supplier</u> shall have no claim against us for making such payment.
We thebank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract/ satisfactory completion of the performance guarantee period as per the terms of the Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.
WeBANK further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Vendor / Contractor / Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Vendor / Contractor / Supplier and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Vendor / Contractor / Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Vendor / Contractor / Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.
The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the <u>Vendor / Contractor / Supplier</u> and notwithstanding any security or other guarantee that the Employer may have in relation to the <u>Vendor / Contractor / Supplier 's</u> liabilities.
This Guarantee shall remain in force upto and including
This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Vendor / Contractor / Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.
Unless a demand or claim under this guarantee is made on us in writing on or before the <sup>8</sup> we shall be discharged from all liabilities under this guarantee thereafter.
This Bank Guarantee shall be governed, construed and interpreted in accordance with the laws of India.
Courts at shall alone have exclusive jurisdiction over any matter arising out of or in connection with this Bank Guarantee
We, BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwit	thstanding anything to the contrary contained hereinabove:
a.	The liability of the Bank under this Guarantee shall not exceed <sup>6</sup>
b.	This Guarantee shall be valid up to <sup>7</sup>
C.	Unless the Bank is served a written claim or demand on or before8 all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.
	Bank, have power to issue this Guarantee under law and the undersigned as a duly rized person has full powers to sign this Guarantee on behalf of the Bank.
Place o	For and on behalf of (Name of the Bank) Dated
NAME DETA CON PROJ BG A	E AND ADDRESS OF EMPLOYER i.e., Bharat Heavy Electricals Limited 2 E AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER. 3 NILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE 4 TRACT VALUE 5 ECT/SUPPLY DETAILS 6 MOUNT IN FIGURES AND WORDS 7

#### Note:

DATE OF EXPIRY OF CLAIM PERIOD

- 1. Units are advised that expiry of claim period may be kept 3-6 months after validity date. It may be ensured that the same is in line with the agreement/ contract entered with the Vendor.
- 2. The BG should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Vendor/Contractor/Supplier /Bank issuing the guarantee.
- 3. In line with the GCC, SCC or contractual terms, Unit may carry out minor modifications in the Standard BG Formats. If required, such modifications may be carried out after taking up appropriately with the Unit/Region's Law Deptt.

#### 4. In Case of Bank Guarantees submitted by Foreign Vendors-

a. From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India) can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.

# b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)

**b.1** In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter-Guarantee by Foreign Bank in favour of the Indian Bank's (BHEL's Consortium Bank) branch in India. It is advisable that all charges for issuance of Bank Guarantee/ counter-Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.

- **b.2 In case, Foreign Vendors intend to provide BG from** Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.
- **b.3** The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). The BG Format provided to them should clearly specify the same.

# LIST OF CONSORTIUM BANK

\_\_\_\_\_\_

SI. No.	NAME OF THE BANK
1	State Bank of India
2	Canara Bank
3	IDBI Bank Limited
4	ICICI Bank Limited
5	HDFC Bank Limited
6	Axis Bank
7	IndusInd Bank Limited
8	Bank of Baroda
9	Exim Bank
10	Indian Bank
11	Punjab National Bank
12	Union Bank of India
13	Yes Bank Limited
14	RBL Bank Ltd.
15	Standard Chartered Bank
16	Indian Overseas Bank
17	Kotak Mahindra Bank Limited
18	Federal Bank Limited
19	Hongkong and Shanghai Banking Corporation Ltd