

Pre-Qualification Criteria

Project: DC & AC Charger on Delhi-Chandigarh National highway.

Customer: DHI

Specification: PS/445/2605 & PS/44/2628

1. The vendor shall be an Original Equipment Manufacturer (OEM) of DC Chargers & AC Chargers Equipment. OEMs based outside India, who are making offer for this tender shall have authorized representatives in India for support related to documentation, erection, commissioning & any other co-ordination work. This authorization provided by OEM to representatives shall indicate the type, duration & validity of the agreement. The Indian representatives should have the team of experienced service engineers on payroll located at various parts of India. OEM shall furnish an undertaking that in case of change in Indian representatives/agent, OEM shall continue to support supplies w.r.t to field service and supply of spare parts.
2. The vendor should have designed, engineered, manufactured, type tested or got type tested, supplied and commissioned or supervised commissioning of at least one (1) number of DC Charger system and one (1) number of AC Charger system for Electric Vehicle application (of the type offered). The Reference List of DC Charger supplies and AC Charger supplies made giving the ratings, year of supply, application and details of the customers etc. to be provided along with the offer.
3. The vendor or their authorized service representatives shall have trained engineers for commissioning & service for the offered equipment and shall be in a position to provide prompt after sales service and spares support for our installations. This service network shall necessarily be available in India.
4. The vendor shall be in a position to undertake AMC or provide service support for the equipment supplied, after the expiry of the warranty / guarantee period either directly or through a service representative.
5. Vendor should have ISO:9001 certificate or higher.
6. Vendor should have at least 3 years' experience in the business of manufacturing, sale and service of electrical equipment related to battery chargers, storage and AC to DC & DC to DC Converters.
7. Vendor charger (both AC and DC) should be ARAI certified.

Note:

- a. Vendor must furnish all necessary supporting documents, as required, along with the bid to satisfy Pre-Qualification criteria as specified above.
- b. The Pre-Qualification criteria are mandatory requirements and the technical bids will be evaluated only when the Pre-Qualification criteria are met.

Checklist for Pre-Qualification Criteria

Sl. No.	Vendor Confirmation to the points above	Document to be attached
1	Yes / No	Confirmation on letterhead with seal
2	Yes / No	Reference list of all the supplies made till date.
3	Yes / No	Name& registered address of the Indian branch office or Indian representative for support of E&C and after sales service with organization chart
4	Yes / No	Confirmation on letterhead with seal
5	Yes / No	ISO 9001 certificate or higher
6	Yes / No	Confirmation on letterhead with seal
7	Yes/No	Test certificates, interoperability certificate from ARAI.



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REVISION HISTORY SHEET

REV. NO.	DATE	NATURE OF CHANGE	REASONS	PREPARED BY	APPROVED BY
00	29-03-2019	FIRST ISSUE	-----		

REVISION 00

APPROVED BY
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PREPARED BY
M M Bharat Kumar

ISSUED BY
COE

DATE
29-03-2019

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TECHNICAL SPECIFICATION OF AC001 MATERIAL CODE: PR0150001096

1. PURPOSE

This Technical Specification describes the definition, requirements and specifications for low voltage AC electric vehicle (EV) charging stations in India, also referred to as "AC charger – AC-001 ", for conductive connection to the vehicle with an AC input voltage of 3 phase, 415V.

It also specifies the requirements for digital communication between EV charging station and electric vehicle for control of AC charging. The civil work associated with erection of charger (including ceramic tiles on pedestal) and electrical connection from charger to distribution box (upto 10m) is with in the scope of the bidder.

Note: The Vendor should submit the entire component wise Bill of material (BOM) list with their respective costs, which shall remain valid till the warranty and AMC validity expiry period. The desired functional and technical specifications of charging equipment (as per indian conditions) have been mentioned in the subsequent sections of this document. However the intent is not to specify and capture all the aspects of design and installation associated with charging equipment mentioned herein. It shall be the obligation of vendor that all the systems, sub systems and equipment/device shall conform in all respect to high standards of engineering, design workmanship, and shall be capable of performing continuous commercial operation as per best industry standards.

2. GENERAL REQUIREMENTS:

The EV shall be connected to Public metered AC outlet (PMAO) for conductive energy transfer function. The system will have following general specifications:

- 1) PMAO is supplied with three pahse AC power and output single phase AC power
- 2) Energy transfer mode is conductive
- 3) Each outlet will have up to three independent charging sockets
- 4) The PMAo has built-in metering, safety & monitoring
- 5) PMAO and central management system (CMS) communication with each other to serve purposes of firmware, reservation, cancellation, addition and deletion of PMAOs etc. CMS should interact with the charger for its above functions, selected as per the user; or by the service provider for tariff related changes. CMS will have interface to user app, and multiple chargers for managing all requests and responses
- 6) Chargers shall be compact piller charger with an option for wall mounting.

3. SYSTEM STRUCTURE:

AC Charger is a public metered AC outlet (PMAO) which is to provide AC input to the vehicle which has on-board chargers. This applies to electric road vehicles for charging at 230V standard single phase AC supply with a maximum output of 15A and at a maximum output power of 3.3kW. PMAO is a slow charger for low power vehicles.

REVISION 01

APPROVED BY

Amarnath Pramanick

PREPARED BY

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ISSUED BY

COE

DATE

29-03-2019



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4. INPUT REQUIREMENTS

- a) AC supply system is 3phase, 5wire AC sytem (3phase+N+PE)
- b) Nominal Input Voltage is 415V (+6% and -10%) as per IS 12360
- c) Input Frequency is 50Hz+/-1.5Hz
- d) Input supply failure back-up: Battery backup for minimum 1 hour for the control system and billing unit. Data logs should be synchronized with CMS during back up time, incase battery drains out.

5. OUTPUT REQUIREMENTS

- a) Number of outputs:3
- b) Type of each output: A.C, 230V (+6% and -10%) single phase as per IS12360
- c) Output details: 3 independent charging sockets as per IEC 60309. Female connector to be used on the PMAO side
- d) Output Current: Three vehicles charging simultaneously, each at 15A current.
- e) Output Connector compatibility: IEC 60309 industrial Blue connectors to be used.
- f) Connector mounting: ensure IP 54.Angled connector mounted looking downwards for outdoor use is preferred.
- g) Double pole breaking RCD (IEC 60309 Blue connector) of less than 30mA (as per section 7.4 of AIS 138 part 1) is recommended.
- h) Limiting Output Current: Circuit Breaker for each output limited to 16A current output. Breaker should be reset to resum operation.
- i) Output selection: The breaker inside to be energized in sequence-one round of all three phases bfore the second round.
- j) Socket readiness: An LED to indicate that the socket is ready. Three LEDs one for each phase/socket shall indicate the readiness/in-use status.LED failure/LED not glowing shall mean that socket is ready.
- k) Isolation: Charger shall comply with class 1 or class 2 insulation class as defined in AIS 138 part 1,clause 3.3.1 and 3.3.2



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6. User interface and Display requirements:

- a) Visual Indicator: Error indication, presence of input supply indication, Charge process indication and other relevant information
- b) Display Messages: PMAO should display appropriate messages for user during the various charging stages like suggestive sequence of charger operation, Vehicle plugged in/vehicle plugged out, Duration since start of charge, KWh consumed, Authorization status, and Fault conditions.
- c) ON-OFF(start-Stop) switches
- d) Emergency stop switch is mushroom headed push button type (red color), visible and easily accessible.
- e) Display screen size is minimum 3.5” inches with 720X480 pixels, user interface can be touch screen or keypad.
- f) User Authentication is by using mobile application or user interface(OCPP gives only a field mandate, media to be used is open)
- g) Metering information: consumption units

7. Billing and Payment requirements:

- a) Metering- metering as per units consumed for charging the battery of each vehicle as per Indian standards.
- b) Billing – Grid responsive Billing
- c) Payment-BHIM/Bharat QR or UPI complaint mobile application payment.

8. Protection and Safety Requirements:

- a) Safety parameters: Safety and protection to be ensured for India specific environment (As per AIS 138 part 1)
- b) EMI/EMC: As per AIS 138-19section 11.11.3.2)
- c) Start of charging: The outlet will be locked and covered, the connector will be exposed to charging only after user authentication using user interface or mobile application. Only when the lock opens and connector is properly connected, the switch/relay will turn ON to feed power to EV. Lock will be opened only after full charging and authentication by user or the operator. Once disconnected the charging session terminates
- d) Power failure: If there is a power failure, user is indicated. If the user wants to terminate the session, the user can shut-off the switch and remove the plug. If user does not remove the plug, the charging resumes when power comes back.
- e) Interruption of charging: Temperature based safety mechanism to trigger switching off of the charging to ensure the temperature is not more than 80degC for a duration less than 10S. In such situation, an appropriate signal will be sent to turn the switch/ relay OFF in order to stop the charging. Once disconnected, the charging session terminates.



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9. Protection and Safety Requirements:

If plug is taken out (for more than 2 seconds) and then reinserted for charging, the charging session will disconnect. A new session will be required to continue charging. These shall ensure that no one can remove a vehicle being charged and insert their own cable and use the infrastructure with out paying or at someone else's account.

10.Mechanical Requirement:

- a) Suggested cable security: PMAO should have locking mechanism for the connector while charging. The vehicle may also have locking mechanism during charging to ensure the safety of the cable (suggestion to OEM to have shutter lock for security purpose of the cable during charging session).
- b) Mechanical stability: shall not be damaged by mechanical impact energy: 20J (5kg at 0.4m) (section 11.11.2.2 of AIS 138 part 1). IP ratings: IP 54 (section 11.11.2.4 of AIS 138 part 1). Cooling: Air cooled or forced air cooled to protect the equipment against temperature hazards.

11. Environment Requirements:

- a) Ambient Temperature Range : 0 to 55degC
- b) Ambient Humidity: 5 to 95% as per AIS 138 part 1 section 11.2
- c) Ambient Pressure:86kpa to 106kpa as per AIS 138 Part 1 section 11.11.2.4
- d) Storage Temperature: 0 to 60 degC



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12. COMMUNICATION REQUIREMENTS:

- Communication between PMAO and Central Management System: Open Charge Point Protocol (OCPP) 1.5 protocol.
- The higher versions of OCCP if used should be compatible to OCPP 1.5
- Should enable handshaking between PMAO and CMS for discovery
- It should authorize the operation, before electric vehicle can start or stop charging
- PMAO should respond to CMS for various queries and commands like reservation, cancellation and other functions specified on OCPP
- Grid responsive metering as per units consumption of each vehicle
- Interface between charger and central management system(CMS) Reliable Internet Connectivity.

SIM Card requirement:

- The charger shall support 2G/3G/4G/5G network and an integrated network should be included. It should use a wireless network.
- The Sim card shall be provided by Customer. However provision for Micro/Nano sim should be provided.
- The Pin number for the SIM card shall be configured via the operator configuration.
- The charger should detect the disconnection of sim card and should automatically try to reconnect.

13. BILLING AND PAYMENT REQUIREMENT:

- Billing: Based on grid responsive metering
- Payment: BHIM / Bharat QR or UPI compliant mobile payment
- Metering: As per Indian metering standard

14. MARKING & PAINTING REQUIREMENTS

The AC (AC-001) Charger shall bear the markings in a clear manner as per clause No. 11.14.3 of AIS 138 Part 1. Logo, markings and paint of BEVC to be approved by BHEL. Logo of BHEL should be printed on EV Charger. Sample of Logo will be provided during detailed Engg.

PAINTING: 2 Coats of Primer and 2 Coats of Finish Paint to be given for all surfaces of enclosure. Paint shall be Epoxy Based with Powder Coated Finish - shade RAL7032. Paint Thickness: 60 Microns (minimum).Exact paint shade shall be informed during detailed engineering.

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15. ELECTRICAL & CIVIL WORK PRIOR TO DISTRIBUTION BOARD:

Survey of the location and all work pertaining to Wiring infrastructure prior to distribution Box and supply and installation of items for various activities as detailed below (including but not limited to) on need basis depending on site conditions. All the below works must be quoted in per meter and per number basis. Charges will be paid to Vendor on prorated basis depending on site requirements. Evaluation of the vendor quote will be done per unit meter and unit number of all the items below.

Sl no.	Description
1.	A. Supply & laying of cables of different 1100 Voltage Grade(each in one meter)
	4CX6 sqmm, Cu, XLPE, FR, Armoured cable
	4CX10 sqmm, Cu, XLPE, FR, Armoured cable
	4CX16 sqmm, Cu, XLPE, FR, Armoured cable
	4CX25 sqmm, Cu, XLPE, FR, Armoured cable
	3.5CX50 sqmm, Cu, XLPE, FR, Armoured cable
	3.5CX75 sqmm, AI, XLPE, FR, Armoured cable
	3.5CX90 sqmm, AI, XLPE, FR, Armoured cable
	3.5CX120 sqmm, AI, XLPE, FR, Armoured cable
	3.5CX150 sqmm, AI, XLPE: FR, Armoured cable
	3.5CX240 sqmm, AI, XLPE, FR, Armoured cable
2.	Supply & Glanding using single compression type, weatherproof, Brass-Ni(per one number)
	Upto cable OD of 20 mm
	From cable OD of 20 mm to 30 mm
	From cable OD of 30 mm to 50 mm
	From cable OD of 50 mm to 80 mm
3.	Supply & Fixing of conduits - recessed surface mounting(per one meter)
	Upto 1" GII painted MSI black enameled MS Conduits
	on surface including the supply of hardware
	Upto 2" GII painted MSI black enameled MS Conduits
4	Supply & Installation of Cable trays(per one Meter)
	Upto 2" wide, 14 SWG hot dip galvanised perforated cable tray
	Upto 4" wide, 14 SWG hot dip galvanised perforated cable tray



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Civil related Works

Making of earth pit With supply of necessary material like Earthing rod, salt, charcoal, (or Earthing powder) including of excavation and backfilling of Earth pit. Contractor need to ensure that the earth resistance value of Earth pit needs to be less than 1 ohm. (lumpsum)

Parking area marking around the charger with weather resistant paint. (lumpsum)

Breaking of PCC upto 50 mm thick(per metre)

Excavation of asphalted areas and roads (per cubic metre)

Breaking of RCC including concrete and removal of steel bars etc. using breakers as required (per metre)

Providing and laying plain cement concrete for all the above. (per cubic metre)

Excavation in loose soil / built in cable trench by per instruction(per cubic metre)
of EIC

Laying of GI MS pipes / GI earth strips in required length(per metre)

Laying of GI pipes of 2" dia - Medium class including(per metre)

Laying of GI pipes of dia more than 2" upto 4" - Medium class including bending, fixing of fittings etc(per metre)

Laying of 25 mm wide x 3 mm thick- galvanised flat including cutting, welding, bolting, drilling holes, covering the joints etc. (per metre)

Supply and erection of 3ftX3ft canopy over the charger for outdoor installations – material of canopy shall be specified later.



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6	Supply & Installation of Distribution Boards enclosed in a metal enclosure(each per one number)
	With Three phase Energy Meter & 100 Amps MCCB
	With Three phase Energy Meter & 200 Amps MCCB
	With Three phase Energy Meter & 250 Amps MCCB
	Details of all above Energy meters will be given during detailed engineering. No additional cost will be given to vendor for this. Energy meters will be as per standard industry requirements.
7	Supply & Installation of Distribution Boards enclosed in a metal enclosure having below
	4 pole 63 Amps, MCCB - 01 No As Incomer,
	4 pole 32 Amps, MCCB - 02 Nos As outgoing
	4 pole 63 Amps, MCCB - 01 No As Incomer,
	4 pole 32 Amps, MCCB - 03 Nos As outgoing
	4 pole 100 Amps, MCCB - 01 No As Incomer,
	4 pole 32 Amps, MCCB - 04 Nos As outgoing
	4 pole 100 Amps, MCCB - 01 Nos As Incomer,
	4 pole 32 Amps, MCCB - 05 Nos As outgoing

It is mandatory for the bidder to quote for these jobs in the Price Bid Sheet format provided for in the Tender, and to carry out these works, as and when authorized by BHEL.

TYPE TESTING

Sl no.	Criteria	Parameter	Clause no. Of AIS 138 Part 1
1	Safety Functions Verifications	Earth presence detection (Socket –EVSE)	6.4.1.1
		Earth Continuity check(EVSE-EV)	6.4.1.2
		Over current and short circuit protection	6.4.1.5
		Leakage current(RCD)	6.4.1.6
		Dielectric Withstand Voltage	11.6.1



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2	Mechanical Stability	Mechanical Imnpact	11.11.2.2
		IP Testing	11.11.2.4
3	Climatic environmental tests	Ambient air temperature	11.11.1.2
		Ambient Humidity	11.11.1.4
4	EMC Verification	Immunity to electrostatic discharges	11.11.3.2
		Supply voltage dips and interruptions	11.11.3.2
		Fast Transient bursts	11.11.3.2
		Voltage surges	11.11.3.2

NOTE: The creation and operation of the Mobile app mentioned in the specifications above is not in the scope of the vendors for this Tender. However, the charging equipment shall be compliant with the protocols including OCPP, as mentioned in the Tender. A System Integrator shall develop a single consolidated Mobile app to operate with all the different makes' charging equipment, and shall manage the charging and payment infrastructure.



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16. CERTIFICATION:

The AC -001 must be ARAI certified. One number of AC-001 charger should be ARAI certified before despatch, for the first lot to be supplied.

17. QUALITY CONTROL AND INSPECTION:

- The vendor shall be wholly responsible for the quality and performance of the supplied charging equipment as per the tendered technical specifications.
- BHEL reserves the right to visit the manufacturing site or the supply chain for quality inspection at any time. BHEL at its discretion may order the testing of random samples either at the implementation partner's premises (if an ARAI-accredited Testing Laboratory is available) or at any other third-party ARAI-accredited laboratory.
- After testing, if the charging equipment are found not matching the specifications at given test parameters, BHEL at its discretion may order for cancellation of complete order or cancellation of the complete lot of product. The complete loss shall be to the account of the vendor.
- The items will be supplied in proper packing (as per relevant IS, if any) to avoid any damage during transit, storage and delivery. The vendor shall be responsible to transport and insure the charging equipment till their delivery at project site (locations shall be intimated later).

Pre-Dispatch Inspection

All materials/equipment manufactured by the vendor shall be subject to inspection, check and/or test by the BHEL or its authorized representative at all stages and place, before, during and after the manufacture.

The vendor shall maintain and provide statutory test certificates for each supplied batch, confirming compliance to the technical specifications and other tender requirements. The Test Certificate needs to be transmitted electronically to BHEL at least 48 hours in advance of pre-dispatch inspection date. Only those batches meeting compliance shall be dispatched by the vendor.

If upon delivery, the material/equipment does not meet the specifications, the material/equipment shall be rejected and returned to the vendor for repairs / modification, etc. or for replacement. In such cases, all expenses including the to-and-fro freight, repacking charges, any other costs, etc. shall be to the account of the vendor. The bidder shall arrange removal of the rejected items within 15 days from the date of notification. In the event the vendor fails to lift the material in 15 days, BHEL is at liberty to dispose the rejected items in any manner as it may deem fit.

All tests shall be carried out as per AIS 138, and the vendor shall submit the relevant test reports. BHEL / Customer representative will be present at manufacturer's works for witnessing of final testing. This is to be incorporated in the Quality Plan. **No charges shall be applicable for witnessing of final tests.** Boarding and Lodging is to BHEL/Customer account.

18. STORAGE AT SITE:

The bidder shall have to arrange for storage of the charger at the site without any extra cost implication to BHEL.



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19. DOCUMENTATION ALONG WITH SUPPLY OF CHARGING EQUIPMENT

The vendor shall provide the following documents (both hard copy and soft copy) to BHEL for reference:

- a) Manual / Guide: User Manuals, FAQ, OEM Functional Manuals and Installation Guides, Business Process Guides and Troubleshooting Guides.
- b) Firmware.
Certificates: Equipment Warranty, Insurance, tests.

20. INSTALLATION AND COMMISSIONING:

All electric and civil work including the related supplies i.e cables, glands, fasteners, distribution box (including but not limited to) etc required for Installation and commissioning shall be under vendor's scope. Commissioning of Charger System at Customer place shall be in the scope of Vendor. Final Acceptance shall be based on successful completion of the same. Any replacement of failed/damaged items during commissioning shall be exclusively at Vendor's cost. Vendor is advised to stock necessary spares and ensure easy availability to facilitate trouble free commissioning. The Vendor is expected to work with project managers from communication/system integrator/ utilities for resolving the following risks (non exhaustive indicative list): poor equipment performance, project scope creep, unavailability of internal and external sources, Rectification of equipment faults.

21.COMPREHENSIVE ON-SITE EXTENDED WARRANTY AND AMC:

Vendor should be able to provide On-site extended warranty and AMC for a period of 5 years at a later stage when BHEL required.

22. SPECIFIC EXCLUSIONS:

1. Operation of Charging Equipment.
2. HT to LT Conversion

Acronyms:

1. BEVC - Bharat EV Charger
2. CCC - Controlled Current Charging
3. CMS - Central Management System
4. CVC - Controlled Voltage Charging
5. EV - Electric Vehicle
6. EVSE - Electric Vehicle Safety Equipment
7. IP - Ingress Protection
8. OCPP - Open Charge Point Protocol



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Sl. No.	Parameter	Specification
23	Maintenance	The procedure for maintenance of AC Charger panels and the schedule thereof shall be mentioned in the offer.
24	Confirmations/ Deviations to Specification	Point-wise confirmation to this specification to be given along with offer. Deviations, if any, shall be indicated separately. If there are no deviations to the specifications, supplier shall mention the same explicitly. A reply from vendor stating that “ Equipment will generally meet the specifications ” will not be accepted by BHEL. Clause-wise Confirmation / Clarifications of all the Clauses in this Purchase Specifications shall be furnished in the format below. This is mandatory. Deviations furnished below ONLY will be considered by BHEL. Deviations mentioned elsewhere will not be allowed. BHEL have the right to not accept the deviations mentioned by Vendor.

Point No.	Page No.	Confirmation / Clarification / Information/Deviations	Details	Remarks, if any

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25. DOCUMENTATION:

Sl. No.	Parameter	Specification
1	Technical Information required along with Offer	a) Dimensional Drawing of Panels along with minimum clearance to be maintained for effective cooling, and Weight b) Technical Catalogue of AC Charger System being offered c) Reference list for similar rating AC Chargers giving the following: Model number, Application, Rating, Year of supply and commissioning. d) Confirmation / Clarification / Information/Deviations List as per Point 24 above.
2	Information / Confirmations required along with offer	a) After Sales Service and Support shall be given by the Vendor for a minimum period of 10 (ten) years after commissioning. Address of the Sales and Service Representatives in India with complete contact details: Name/Telephone/Email are to be provided during detailed Engineering. b) Vendor shall give a notice of at least 1 year to the end user of the equipment and BHEL before phasing out the product / spares to enable the end user for placement of order for spares and services.



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Sl. No.	Parameter	Specification
3	Technical (unpriced) and Commercial (priced) Bids – For Evaluation	a) AC Charger System (24nos) b) Installation and Commissioning Charges including Electrical and civil works from AC Charger to Distribution board upto 10m (lumpsum for 24 nos) *c) Comprehensive AMC Charges(for 5 years for 24 Nos-yearwise) *d) Type testing for 1 No at ARAI laboratory *e) Canopy charges(24 Nos) *f) Electrical and civil works prior to distribution board (24 Nos) *g) civil works for provision of AC Chargers ground mounting (Frames, foundation etc) (lumpsum for 24 Nos)
4	Information required for Customer / Consultant Approval	a) Dimensional Drawing of Panels along with minimum clearance to be maintained for effective cooling, and Weight b) Schematic Diagram c) Bill of Materials for equipment to be supplied d) Feeder Requirements – UPS, 230V AC and 415V supply e) Losses at Rated Load (including Fans) f) Technical Catalogue of DC Charger System being offered h) Test Protocol and Quality Plan i) Type test certificates of similar rating equipment 1)Short circuit test and Impulse withstand for the panels 2) Degree of protection and EM immunity and Emission for DC Charger panels
5	Information Required along with Supply. Maintenance Manuals and Documentation	a) Erection, Commissioning and Maintenance Manuals along with Final Drawings and Documentation, FAQ, OEM Functional manuals, Installation guides, Business process guides and troubleshooting guides – 3 Copies b) 1 no. CD ROM consisting of the above. c) Test and Guarantee/Warranty Certificates. d) Complete Bill of Material (item wise) for the equipment supplied. e) Firmware f) Certificates: Insurance, tests

Note: All prices to be quoted. No deviation allowed.

3(c), 3(e), 3(f), 3(g) charges will be paid on pro rata basis. 3(d) charges will be paid if conducted based on requirement.



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QUALITY CONTROL/INSPECTION BY BHEL/CUSTOMER:

1. The bidder shall be wholly responsible for the quality and performance of the supplied charging equipment as per the tendered specifications.
2. BHEL/Customer reserves the right to visit the manufacturing site or the supply chain for quality inspection at any time. BHEL/Customer at its discretion may order the testing of random samples either at the implementation partner's premises (if an ARAI-accredited testing laboratory is available) or at any other third-party ARAI accredited laboratory at cost of the successful bidder
3. After testing, if the charging equipment are found not matching the specifications at given test parameters, BHEL/Customer at its discretion may order for cancellation of complete order or cancellation of the complete lot of product. The complete loss shall be to the account of the bidder.
4. The items shall be supplied in proper packing (as per relevant IS, if any) to avoid any damage during transit, storage and delivery. The bidder shall be responsible to transport and insure the charging equipment till their delivery at project site.

PRE-DISPATCH INSPECTION:

5. All materials/equipment manufactured by the bidder against the letter of award (LOA) shall be subjected to inspection, check and/or test by the BHEL/Customer or its authorized representative at all stages and place, before, during and after the manufacture.
6. The bidder shall maintain and provide statutory test certificates for each supplied batch, confirming compliance to the technical specifications and other tender requirements. The test certificates need to be transmitted electronically to BHEL/Customer, at least 48 hours in advance of pre-dispatch inspection date. Only those batches meeting compliance shall be dispatched by the supplier.
7. If upon delivery, the material/equipment does not meet the specifications, the material/equipment shall be rejected and returned to the bidder for repairs/modifications etc. or for replacement. In such cases, all expenses including the to-and-fro freight, repacking charges, any other costs etc shall be to the account of the vendor.
8. All tests shall be carried out as per AIS 318: and the successful bidder shall submit the relevant test reports.

TESTS:

9. The vendor needs to get the samples for the first lot to be type-tested under BHEL/Customer supervision at an ARAI laboratory. The samples for such tests would be identified by BHEL/Customer and cost of the sample and shipping shall be borne by the Vendor.
10. During the contract duration, BHEL/Customer at bidder cost shall conduct additional type tests at ARAI-accredited laboratory to maintain check on the supplied product. The random sample for such tests would be identified by BHEL/Customer and can be from the manufacturing/supply chain/customer facility.



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Summary of AC Charger Specifications:

A. General Requirements

S.No	Parameter	Description
1	EVSE Type	AC
2	Energy Transfer Mode	Conductive

B. Input Requirements

1	AC Supply system	3 phase, 5 wire AC system(3ph+N+E)
2	Nominal Input Voltage	3Ph, 415V(+6% and -10%) as per IS 12360
3	Input Frequency	50Hz, +/-1.5Hz
4	Input Supply failure backup	Battery backup for minimum 1 hour for control system and billing unit. Data logs should be synchronized with CMS during back up time, in case battery drains out

C. Output Requirements

1	Number of outputs	3
2	Type of each output	230V(+6% and -10%) single phase, 15A as per IS 12360AC
3	Output details	3 Independent charging sockets
4	Output Current	Three vehicles charging simultaneously, each at 15A current
5	Output Connector compatibility	IEC 60309
6	Limiting Output Current	Circuit breaker for each outlet limited to 16A current output. Breaker should be reset to resume operation
7	Connector mounting	Angled connector mounted looking downwards for outdoor use
8	Isolation	Class 1 or class 2 insulation as per AIS138(3.3.1 and 3.3.2)

D. Environmental Requirements

1	Ambient Temperature Range	0degC to 55 degC
2	Ambient Humidity	5 to 95%
3	Ambient pressure	86kpa to 106kpa
4	Storage Temperature	0 to 60degC



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E.Mechanical Requirements

1	Suggested Cable security	PMAO and the vehicle connector outlet to have provision for locking mechanism during charging to ensure the safety of the cable
2	Mechanical stability	Shall not be damaged by mechanical impact energy : 20J(5kg at 0.4m)
3	IP ratings	IP 55
4	Mechanical Impact	Air cooled or forced air cooled to protect the equipment against temperature hazards
5	Dimension(W*H*D)/Weight	Will be informed later

F.User Interface & Display Requirements

1	ON-OFF(start-stop) switches	Mandatory
2	Emergency Stop switch	Mushroom headed push button type in Red color, visible and easily accessible
3	Visual indicators	Error indication, presence on Input supply indication, state of charge process indication
4	Display	Minimum 3.5'' inches with 720X480pixels , user interface with touch screen or keypad
5	Support Language	English
6	Display Messages	EVSE should display appropriate messages for user during the various chaging states like: Vehicle plugged in/Vehicle plugged out,Duration since start of charge. kWh,Fault conditions Metering: Consumption Units
7	Authentication	Using mobile application or user interface (OCPP gives only a field mandate, media to be used is open)
8	Metering information	Consumption units

G Communication Requirements

1	Communication between EVSE and Central server	Open charge Point protocol(OCPP) 1.5 protocol or higher versions compatible to OCPP 1.5
2	Metering	Grid responsive metering as per units consumption of each vehicle
3	Interface between charger and Central management system(CMS)	Reliable internet connectivity



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H.Billing & payment Requirements

1	Metering	Metering as per units consumption for charging each vehicle
2	Billing	Grid responsive metering
3	Payment	BHIM/Bharat QR or UPI compliant mobile application payment

I. Protection & Safety Requirements

1	Safety Parameters	Safety and protection to be ensured for India specific environment (as per AIS 138 part 1)
2	Start of Charging	The outlet will be locked and covered, the connector will be exposed to charging only after user authentication using user interface or mobile application. Only when the lock opens and connector is properly connected, the switch/relay will turn ON to feed power to EV. Lock will be opened only after full charging and authentication by user or the operator. Once disconnected, the charging session terminates.
3	Power failure	If there is a power failure, user is indicated about this. The charging resumes when power comes on. If the user wants to terminate the session during power failure, the user can shut-off the switch and remove the plug
4	Interruption of charging	Connector terminals to be mounted with temperature sensors to avoid burning of connectors. Safety mechanism to trigger switching off of the charging at temp>80degC for a duration<10S. In such situation, an appropriate signal will be sent to turn the switch/relay OFF to stop the charging. Once disconnected, the charging session terminates. If the above locking mechanism is mandated then the following point won't be required: If plug is taken out (for more than 2 seconds) and then reinserted for charging, the charging-session will disconnected. A new session will be required to continue charging to ensure that no one can remove a vehicle being charged and insert their own cable and use the infrastructure without paying or at someone else's account.

J.Marking

1	Marking Requirement	Logo, markings and paint of BEVC to be approved by BHEL. Logo of BHEL should be printed on EV Charger.
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The scope of the vendor shall include location survey, planning, designing, engineering, manufacturing, testing, inspection, packing, supply, transportation & insurance (till delivery at site), delivery to project site (the delivery location would be Delhi-Chandigarh National highway),unloading, handling and storage and erection & Commissioning of the charging equipment. The civil work associated with erection of charger (including ceramic tiles on pedestal) and electrical connection from charger to distribution box (upto 10m) is with in the scope of the bidder. The charging equipment must come with a comprehensive extended on-site warranty and AMC package (repair/replacement, as applicable) of atleast 5 years from the date of installation and commissioning of the charging equipment life of 10 years. All the electrical works should be carried out by trained and qualified professional (minimum ITI trained)

This is to clarify that the successful bidder owns the responsibility for the charging equipment's compliance with all requirements captured in the technical specifications mentioned below. It is assumed that bidder submitting its response to this tender is prepared to comply with the below mentioned standards/regulations. The charging equipment before delivery, should be type tested as per AIS 138 at an ARAI (Automotive Research Association of India) laboratory.

Exact location of site will be at different locations of Delhi-Chandigarh national highway. Number of chargers to be installed and locations would be specified by BHEL in confirmatory LOA issued to successful bidder.

BHEL will send its representative to verify if the product meets the standards.

Earthing is within the scope of the vendor from Distribution Board to Charger.

Central Management system shall be in Customer scope. The chargers should have the requisite hardware for CMS. It should be compatible with OCPP. The software development is also with in the scope of Customer.

Electricity supply would be provided till Distribution Box. Cabling work from DB to chargers would be within the scope of the bidder.

The vendor have to arrange for storage of the chargers at the site without any extra cost implication to BHEL. As regards the insurance, the supplier shall have to arrange for insurance till handing over after the commissioning.

Secured and reliable internet connectivity shall be provided by customer up to each charger.

Central management system is excluded from the scope of vendor. Suitable interface between charger and CMS shall be provided by Bidder on the charger equipment.



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Service Level Agreement (SLA)

a) The Bidder(s) shall ensure that all information security aspects are exercised tested, implemented and where necessary enhanced not diluted at any point of time.

b) Meter shall record precisely all the incidences and metering parameters required as per specifications.

The SLA is mentioned in the table below:

S. No.	Defined Parameter	Service Level requirement	Validation Procedure
1	Commissioning of Charging equipment: Bidder(s) must ensure that charging equipment Confirmatory Purchase Orders/ Indents placed pursuant to issuance of LOA are supplied, installed & commissioned as per the scheduled date(s) set out in the order at the designated place, as agreed.	Within 06 weeks of Issuance of Confirmatory PO. However, delivery must Commence within 04 weeks of issuance of the PO/Indent.	Delivery challan and Commissioning Report signed by BHEL/ End user.
2	Replacement of faulty Charging equipment: faulty charging equipment to be replaced or repaired (under warranty only) by the bidder(s) within defined duration.	The faulty charging equipment should be repaired and/or replaced within 24 hours of the complaint.	Acknowledgment by the charging station operator in writing.
3	Firmware support: Charger manufacturer shall provide respective firmware in case of a malfunctioning or a feature request at no extra cost to BHEL.	5 days within receipt of charging equipment.	Date of written request by System Integrator/ BHEL/ end user.
4	Availability of charging equipment in working condition	Bidder must ensure that the charging equipment must be online for at least 98% of the time. (Power failure related downtime is excluded)	Through report generated by the equipment



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REVISION HISTORY SHEET

REV. NO.	DATE	NATURE OF CHANGE	REASONS	PREPARED BY	APPROVED BY
00	29-03-2019	FIRST ISSUE	-----		

REVISION 00

APPROVED BY
Amarnath Pramanick

PREPARED BY
M M Bharat Kumar

ISSUED BY
COE

DATE
29-03-2019

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TECHNICAL SPECIFICATION OF DC001 MATERIAL CODE: PR0150001061

1. PURPOSE

This Technical Specification describes the definition, requirements and specifications for low voltage DC electric vehicle (EV) charging stations in India, also referred to as "DC charger – DC-001 ", for conductive connection to the vehicle with an AC input voltage of 3 phase, 415V.

It also specifies the requirements for digital communication between DC EV charging station and electric vehicle for control of DC charging. The civil work associated with erection of charger (including ceramic tiles on pedestal) and electrical connection from charger to distribution box (upto 10m) is with in the scope of the bidder.

Note: The Vendor should submit the entire component wise Bill of material (BOM) list with their respective costs, which shall remain valid till the warranty and AMC validity expiry period. The desired functional and technical specifications of charging equipment (as per indian conditions) have been mentioned in the subsequent sections of this document. However the intent is not to specify and capture all the aspects of design and installation associated with charging equipment mentioned herein. It shall be the obligation of vendor that all the systems, sub systems and equipment/device shall conform in all respect to high standards of engineering, design workmanship, and shall be capable of performing continuous commercial operation as per best industry standards.

2. GENERAL REQUIREMENTS:

The method for charging an EV is to use an off-board charger for delivering direct current. The EV shall be connected to the EVSE so that in normal conditions of use, the conductive energy transfer function operates safely.

- Energy transfer mode: Conductive
- EVSE type: Dual-connector DC EVSE
- No. of outputs: 2
- Charging mode: Mode 4- DC Charging [DC charging is defined as Mode 4 as per IEC61851-1 section6.2]
- Charger shall be Compact Pillar charger with an option for wall mounting.

3. SYSTEM STRUCTURE:

The System requirement parameters are derived from Table D1 of Annex DD of IEC 61851-23.

- Regulation: Regulated DC EV Charging station with combination of the modes: controlled voltage charging (CVC) and controlled current charging (CCC).
- Isolation: Isolated DC EV charging station, according to the type of insulation between input and output: a) Basic insulation, b) Reinforced insulation, c) Double insulation.
- Each DC output should be isolated from each other (Section 7.5.1 01 of IEC 61851-23).
- Environmental conditions: Outdoor use. EVSEs classified for outdoor use can be used for indoor use, provided ventilation requirements are satisfied.

REVISION 00

APPROVED BY

Amarnath Pramanick

PREPARED BY

M M Bharat Kumar

ISSUED BY

COE

DATE

29-03-2019



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- e) Power supply: AC mains to DC EV charging station
- f) DC output voltage rating: Up to and including 100 V
- g) Charge control communication: Communicate by digital and analog signals
- h) Output Current: 200A
- i) Interface Inter-operability: Interoperable with any EV (non-dedicated, can be used by any consumer).
- j) Operator: Operated by a trained operator or EV owner

4. INPUT REQUIREMENTS

- a) Rating of the AC supply voltage

1. The AC supply system would be 3-Phase, 5 Wire AC system (3Ph+N+E) Nominal Input Voltage is 415V (+6% and -10%) as per IS 12360
2. The Rated value of the frequency is 50 Hz $\pm$ 1.5Hz.

- b) Battery back-up

The Input supply system to have a battery backup for minimum 1 hour for control and billing unit. The data logs should be synched with CMS during back-up time, in case battery drains out.

5. OUTPUT REQUIREMENTS

The Charger can provide two DC outputs suitable for 48V/60V/ 72V vehicle battery configurations. The outputs should be as per type-2 Bharat Charger configuration as mentioned below:

- a) Output 1 – Power Limited to 15 KW
- b) Output 2 – Power Limited to 3.3 KW

The chargers should allow charging of one vehicle with maximum power 15 kW or 2W vehicle with limited power (3.3 kW at 48V only) as per the output configurations types given below.

- a) DC Output voltage: 48V /60V/ 72V nominal battery voltages
- b) Output current: limited to 200A
- c) Converter Efficiency: > 92% at nominal output power
- d) Power factor: > 0.90 (Full Load)

The service life of coupler and breaking capacity of the coupler as defined in Section 9 of IEC 61851- 23.



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6. SCOPE:

Charger Configuration Type:

- a) Type 2: Single vehicle charging at 48V with a maximum of 10 kW power or 60V /72V with a maximum of 15 kW power or a 2W vehicle charging at 48V with maximum power of 3.3 kW.

Output Connector Requirements:

- a) Number of Outputs: 2 outputs
- b) Output 1: to be used for up to 15 kW charging, Connector is GB/T20234.3.
- c) Output 2: to be provisioned for 3.3 kW charging, Connector will be defined at the time of issuance of Purchase Order. No additional cost will be given to vendor for this connector.

7. CABLE REQUIREMENTS:

Charging Cable Assembly: As per Section 10 of AIS 138 Part 2, with the functional characteristics defined as below:

- a) Functional characteristics: The maximum cord length will be 5 meter, straight cable
- b) Cable Connection Type: supply cable will be with EVSE as per Case C defined in section 6.3.1 of IEC61851-1.
- c) Cord Extension Set: No extension cord to be used, as per Section 6.3.1 of AIS 138 Part 1
- d) Adaptors: No adaptors to be used as per Section 6.3.2 of AIS 138 Part 1
- e) Storage means of the cable assembly and vehicle connector: EVSE should have storage for cable and connector when not in use, at a height between 0.4m to 1.5m above ground level, as per IEC 61851-23 Section 101.1.3

8. ENVIRONMENTAL REQUIREMENTS:

- a) Ambient Temperature Range: 0°C to 55°C as per 11.11.1.2 of AIS 138 Part 1
- b) Ambient Humidity: 5% to 95% as defined in Section 11.2 of AIS 138 Part 1
- c) Ambient Pressure: 86kpa to 106kpa as defined in Section 11.11.2.4. of AIS 138 Part 1
- d) Storage Temperature: 0°C to 60°C

9. MECHANICAL REQUIREMENTS:

- a) Ingress Protection: The minimum IP degrees for ingress of objects is IP 55. However in addition canopy may be required for outdoor chargers depending on site requirements. Bidder shall quote for the canopy as a separate line item.
- b) Mechanical Impact: As per IEC 61851 -1 Section 11.11.2
- c) Mechanical Stability: As per section 11.11.2.2. of AIS 138 Part
- d) Cooling: Air cooled or forced cool for protection and safety of equipment from any fire hazards.



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10. PROTECTION REQUIREMENTS:

- Protection against Electric Shock: As per AIS 138 Part 1, Section 7.0
- Effective earth continuity between the enclosure and the external protective circuit, as per AIS 138 Part 1 Section 6.4.1.2
- Protection for Over current, under voltage, over voltage, Residual current, Surge protection, Short circuit, Earth fault at input and output, Input phase reversal, Over temperature and Emergency shut-down with alarm.

11. SPECIFIC REQUIREMENTS:

DC FC shall have provision of emergency switching, protection against uncontrolled reverse power flow from vehicle, Output current regulation in CCC, Output voltage regulation in CVC, Controlled delay of charging current in CCC, limited periodic and random deviation (current ripple) and limited periodic and random deviation (voltage ripple in CVC), as per Section 102.2 of IEC 61851-23.

The specific requirements defined in Section 102.2 of IEC 61851-23 except for the functions provided with descriptions:

- Rated outputs and maximum output power: The clause from Section 101.2.1.1 of IEC 61851-23 is applicable except for the ambient temperature range to be 0°C to 55°C for Indian climatic conditions.
- Descending rate of charging current: In case of normal condition, DCFC should be able to reduce the descending current at a rate of 100A per second or more as per Section 101.2.1.4 IEC 61851-23.
- Load dump: In any case of load dump, voltage overshoot shall not exceed 110% of the maximum voltage limit of the battery systems, as per Annex BB 3.8.3 of IEC61851-23.
- EMI/EMC as per AIS 138-2 (section 11.11.3.2 and section 11.11.3.3).

12. FUNCTIONAL REQUIREMENTS:

The functional requirements should be as per Section 6.4.3 of IEC 61851-1 and Section 6.4.3 of IEC 61851-23 except for the following functions, to be implemented as follows:

- Measuring current and voltage: The accuracy of output measurement of system B shall be within the following values (as per AIS 138-2, Annexure C3.1):
 - Voltage measurement: $\pm 0.5\%$
 - Current measurement: ± 1 A if the actual current is less than or equal to ($\sim$) 50 A
- $\pm 2\%$ if the actual current is above ($>$) 50 A Protection against overvoltage at the battery: The DC EV charging station shall reduce the DC output current to less than 5 A within 2 s, to prevent overvoltage at the battery, if the output voltage exceeds the Maximum voltage limit of the battery system for 1s.



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13. COMMUNICATION REQUIREMENTS:

EV - EVSE Communication

A dedicated CAN communication shall be used for digital communication between a DC EV charging station and an EV for control of DC charging.

The physical layer shall be CAN bus over twisted pair cable and should comply with requirements defined in ISO 11898 -2:2003. The communication shall use the CAN framing format at a rate of 250 kbps, using 29-bit identifier of CAN extended frame.

The system definition for communication between DC EV charging station and electric vehicle shall follow AIS 138-2. The application layer for this pair of communication is derived from Annexure G of AIS 138-2 protocol.

EVSE - CMS Communication

The EVSE should be able to communicate (Ethernet/Wi-Fi/2G/3G/4G) with CMS using Open Charge Point Protocol (OCPP) 1.5 or higher versions compatible to OCCP1.5.

- Communication interface: Reliable Internet connectivity.
- Should enable handshaking between EVSE and CMS for its discovery, firmware version, vendor Version, vendor etc. It should authorize the operation, before electric vehicle can start or stop charging. EVSE should respond to CMS for the queried parameters. Reservation, cancellation, addition and deletion of EVSE should be possible from CMS.
- Metering: Grid responsive metering as per units consumption of the vehicle
- Should be upgradable to next version of OCPP whenever it is released.

SIM Card requirement:

- The charger shall support 2G/3G/4G/5G network and an integrated network should be included. It should use a wireless network.
- The Sim card shall be provided by Customer. However provision for Micro/Nani sim should be provided.
- The Pin number for the SIM card shall be configured via the operator configuration.
- The charger should detect the disconnection of sim card and should automatically try to reconnect.

14. BILLING AND PAYMENT REQUIREMENT:

- Billing: Based on grid responsive metering
- Payment: BHIM / Bharat QR or UPI compliant mobile payment
- Metering: As per Indian metering standard



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15. USER INTERFACE AND DISPLAY REQUIREMENTS

1	ON/OFF (Start-Stop) Switches	Mandatory
2	Emergency stop switch	Mushroom headed Push button type in Red Color, visible and easily accessible
3	Visual Indicators	Error indication, Presence of input supply indication, State of charge process indication; and other relevant information
4	Display	Minimum 3.5" inches with 720 x 480 pixels TFT LCD Screen, user interface with touch screen or keypad
5	Support language	English
6	Display Messages	EVSE should display appropriate messages for User during the various charging states like: Suggestive sequence of charger operation, Vehicle plugged in / Vehicle plugged out Duration since start of charge, kWh consumed. User authorization status Idle / Charging in progress: SOC Fault conditions Metering Information: Consumption Units
7	User Authentication	As per OCPP (through mobile application). OCPP gives only a mandate field, media to be used is open. Authentication to be done. Charging starts only after user authentication is successful.
8	End of Charging	Once the charging stops, the connector shall be released only after successful payment receipt/ acknowledgement is received.



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16. PERFORMANCE REQUIREMENTS:

DC Output Voltage and Current Tolerance

- DC Output current regulation in Constant Current Charging (CCC): ± 2.5 A for the requirement below 50 A, and ± 5 % of the required value for 50 A or more
- DC Output voltage regulation in Constant Voltage Charging (CVC): Max. 2 % for the max rated voltage of the EVSE

Control delay of charging current in CCC

- DC output current Demand Response Time: <1 s Ramp up rate: 20 A/s or more
- Ramp Down rate: 100 A/s or more

Descending rate of Charging Current

EVSE should be able to reduce DC current with the descending rate of 100 A/s or more.

Periodic and random deviation (current ripple)

DC output current ripple limit of EVSE:

- 1.5 A below 10 Hz,
- 6 A below 5 kHz,
- 9A below 150 kHz

Periodic and random deviation (Voltage ripple)

- Max. Ripple voltage: ± 5 V.
- Max slew rate: ± 20 V/ms

17. MARKING & PAINTING REQUIREMENTS

The DC FC (DC-001) Charger shall bear the markings in a clear manner as per clause No. 11.14.3 of AIS 138 Part 1. Logo, markings and paint of BEVC to be approved by BHEL. Logo of BHEL should be printed on EV Charger. Sample of Logo will be provided during detailed Engg.

PAINTING: 2 Coats of Primer and 2 Coats of Finish Paint to be given for all surfaces of enclosure. Paint shall be Epoxy Based with Powder Coated Finish - shade RAL7032. Paint Thickness: 60 Microns (minimum). Exact paint shade shall be informed during detailed engineering.

Canopy Requirements:

Supply and Erection of 3 ft x 3 ft canopy over the charger for outdoor installations- material of canopy shall be specified later.

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18. ELECTRICAL & CIVIL WORK PRIOR TO DISTRIBUTION BOARD:

Survey of the location and all work pertaining to Wiring infrastructure prior to distribution Box and supply and installation of items for various activities as detailed below (including but not limited to) on need basis depending on site conditions. All the below works must be quoted in per meter and per number basis . Charges will be paid to Vendor on prorated basis depending on site requirements. Evaluation of the vendor quote will be done per unit meter and unit number of all the items below.

Sl no.	Description
1.	A. Supply & laying of cables of different 1100 Voltage Grade(each in one meter)
	4CX6 sqmm, Cu, XLPE, FR, Armoured cable
	4CX10 sqmm, Cu, XLPE, FR, Armoured cable
	4CX16 sqmm, Cu, XLPE, FR, Armoured cable
	4CX25 sqmm, Cu, XLPE, FR, Armoured cable
	3.5CX50 sqmm, Cu, XLPE, FR, Armoured cable
	3.5CX75 sqmm, AI, XLPE, FR, Armoured cable
	3.5CX90 sqmm, AI, XLPE, FR, Armoured cable
	3.5CX120 sqmm, AI, XLPE, FR, Armoured cable
	3.5CX150 sqmm, AI, XLPE: FR, Armoured cable
	3.5CX240 sqmm, AI, XLPE, FR, Armoured cable
2.	Supply & Glanding using single compression type, weatherproof, Brass-Ni(per one number)
	Upto cable OD of 20 mm
	From cable OD of 20 mm to 30 mm
	From cable OD of 30 mm to 50 mm
	From cable OD of 50 mm to 80 mm
3.	Supply & Fixing of conduits - recessed surface mounting(per one meter)
	Upto 1" GII painted MSI black enameled MS Conduits
	on surface including the supply of hardware
	Upto 2" GII painted MSI black enameled MS Conduits
4	Supply & Installation of Cable trays(per one Meter)
	Upto 2" wide, 14 SWG hot dip galvanised perforated cable tray
	Upto 4" wide, 14 SWG hot dip galvanised perforated cable tray



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Civil related Works

Making of earth pit With supply of necessary material like Earthing rod, salt, charcoal, (or Earthing powder) including of excavation and backfilling of Earth pit. Contractor need to ensure that the earth resistance value of Earth pit needs to be less than 1 ohm. (lumpsum)

Parking area marking around the charger with weather resistant paint. (lumpsum)

Breaking of PCC upto 50 mm thick(per metre)

Excavation of asphalted areas and roads (per cubic metre)

Breaking of RCC including concrete and removal of steel bars etc. using breakers as required (per metre)

Providing and laying plain cement concrete for all the above. (per cubic metre)

Excavation in loose soil / built in cable trench by per instruction(per cubic metre)
of EIC

Laying of GI MS pipes / GI earth strips in required length(per metre)

Laying of GI pipes of 2" dia - Medium class including(per metre)

Laying of GI pipes of dia more than 2" upto 4" - Medium class including bending, fixing of fittings etc(per metre)

Laying of 25 mm wide x 3 mm thick- galvanised flat including cutting, welding, bolting, drilling holes, covering the joints etc. (per metre)



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6	Supply & Installation of Distribution Boards enclosed in a metal enclosure(each per one number)
	With Three phase Energy Meter & 100 Amps MCCB
	With Three phase Energy Meter & 200 Amps MCCB
	With Three phase Energy Meter & 250 Amps MCCB
	Details of all above Energy meters will be given during detailed engineering. No additional cost will be given to vendor for this. Energy meters will be as per standard industry requirements.
7	Supply & Installation of Distribution Boards enclosed in a metal enclosure having below
	4 pole 63 Amps, MCCB - 01 No As Incomer,
	4 pole 32 Amps, MCCB - 02 Nos As outgoing
	4 pole 63 Amps, MCCB - 01 No As Incomer,
	4 pole 32 Amps, MCCB - 03 Nos As outgoing
	4 pole 100 Amps, MCCB - 01 No As Incomer,
	4 pole 32 Amps, MCCB - 04 Nos As outgoing
	4 pole 100 Amps, MCCB - 01 Nos As Incomer,
	4 pole 32 Amps, MCCB - 05 Nos As outgoing

It is mandatory for the bidder to quote for these jobs in the Price Bid Sheet format provided for in the Tender, and to carry out these works, as and when authorized by BHEL.

19.TYPE TESTING

Sl no.	Criteria	Parameter	Clause no. Of AIS 138 Part 1
1	Safety Functions Verifications	Earth presence detection (Socket –EVSE)	6.4.1.1
		Earth Continuity check(EVSE-EV)	6.4.1.2
		Over current and short circuit protection	6.4.1.5
		Leakage current(RCD)	6.4.1.6
		Dielectric Withstand Voltage	11.6.1



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2	Mechanical Stability	Mechanical Imnpact	11.11.2.2
		IP Testing	11.11.2.4
3	Climatic environmental tests	Ambient air temperature	11.11.1.2
		Ambient Humidity	11.11.1.4
4	EMC Verification	Immunity to electrostatic discharges	11.11.3.2
		Supply voltage dips and interruptions	11.11.3.2
		Fast Transient bursts	11.11.3.2
		Voltage surges	11.11.3.2
		Radiated electromagnetic Disturbances Electrical field (30 MHz-1000 MHz)	11.11.3.3

NOTE: The creation and operation of the Mobile app mentioned in the specifications above is not in the scope of the vendors for this Tender. However, the charging equipment shall be compliant with the protocols including OCPP, as mentioned in the Tender. A System Integrator shall develop a single consolidated Mobile app to operate with all the different makes' charging equipment, and shall manage the charging and payment infrastructure.



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20.CERTIFICATION:

The DC -001 FC must be ARAI certified. One number of DC-001 charger should be ARAI certified before despatch, for the first lot to be supplied.

21. QUALITY CONTROL AND INSPECTION:

- The vendor shall be wholly responsible for the quality and performance of the supplied charging equipment as per the tendered technical specifications.
- BHEL reserves the right to visit the manufacturing site or the supply chain for quality inspection at any time. BHEL at its discretion may order the testing of random samples either at the implementation partner's premises (if an ARAI-accredited Testing Laboratory is available) or at any other third-party ARAI-accredited laboratory.
- After testing, if the charging equipment are found not matching the specifications at given test parameters, BHEL at its discretion may order for cancellation of complete order or cancellation of the complete lot of product. The complete loss shall be to the account of the vendor.
- The items will be supplied in proper packing (as per relevant IS, if any) to avoid any damage during transit, storage and delivery. The vendor shall be responsible to transport and insure the charging equipment till their delivery at project site (locations shall be intimated later).

Pre-Dispatch Inspection

All materials/equipment manufactured by the vendor shall be subject to inspection, check and/or test by the BHEL or its authorized representative at all stages and place, before, during and after the manufacture.

The vendor shall maintain and provide statutory test certificates for each supplied batch, confirming compliance to the technical specifications and other tender requirements. The Test Certificate needs to be transmitted electronically to BHEL at least 48 hours in advance of pre-dispatch inspection date. Only those batches meeting compliance shall be dispatched by the vendor.

If upon delivery, the material/equipment does not meet the specifications, the material/equipment shall be rejected and returned to the vendor for repairs / modification, etc. or for replacement. In such cases, all expenses including the to-and-fro freight, repacking charges, any other costs, etc. shall be to the account of the vendor. The bidder shall arrange removal of the rejected items within 15 days from the date of notification. In the event the vendor fails to lift the material in 15 days, BHEL is at liberty to dispose the rejected items in any manner as it may deem fit.

All tests shall be carried out as per AIS 138, and the vendor shall submit the relevant test reports. BHEL / Customer representative will be present at manufacturer's works for witnessing of final testing. This is to be incorporated in the Quality Plan. **No charges shall be applicable for witnessing of final tests.** Boarding and Lodging is to BHEL/Customer account.

22. STORAGE AT SITE:

The bidder shall have to arrange for storage of the charger at the site without any extra cost implication to BHEL.



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23. DOCUMENTATION ALONG WITH SUPPLY OF CHARGING EQUIPMENT

The vendor shall provide the following documents (both hard copy and soft copy) to BHEL for reference:

- a) Manual / Guide: User Manuals, FAQ, OEM Functional Manuals and Installation Guides, Business Process Guides and Troubleshooting Guides.
 - b) Firmware.
- Certificates: Equipment Warranty, Insurance, tests.

24. INSTALLATION AND COMMISSIONING:

All electric and civil work including the related supplies i.e cables, glands, fasteners, distribution box (including but not limited to) etc required for Installation and commissioning shall be under vendor's scope. Commissioning of Charger System at Customer place shall be in the scope of Vendor. Final Acceptance shall be based on successful completion of the same. Any replacement of failed/damaged items during commissioning shall be exclusively at Vendor's cost. Vendor is advised to stock necessary spares and ensure easy availability to facilitate trouble free commissioning. The Vendor is expected to work with project managers from communication/system integrator/ utilities for resolving the following risks (non exhaustive indicative list): poor equipment performance, project scope creep, unavailability of internal and external sources, Rectification of equipment faults.

25. COMPREHENSIVE ON-SITE EXTENDED WARRANTY AND AMC:

Vendor should be able to provide On-site extended warranty and AMC for a period of 5 years at a later stage when BHEL required.

26. SPECIFIC EXCLUSIONS:

- 1 Operation of Charging Equipment.
2. HT to LT Conversion

Acronyms:

1. BEVC - Bharat EV Charger
2. CCC - Controlled Current Charging
3. CMS - Central Management System
4. CVC - Controlled Voltage Charging
5. EV - Electric Vehicle
6. EVSE - Electric Vehicle Safety Equipment
7. FC - Fast Charger
8. IP - Ingress Protection



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Sl. No.	Parameter	Specification
27	Maintenance	The procedure for maintenance of DC Charger panels and the schedule thereof shall be mentioned in the offer.
28	Confirmations/ Deviations to Specification	Point-wise confirmation to this specification to be given along with offer. Deviations, if any, shall be indicated separately. If there are no deviations to the specifications, supplier shall mention the same explicitly. A reply from vendor stating that “ Equipment will generally meet the specifications ” will not be accepted by BHEL. Clause-wise Confirmation / Clarifications of all the Clauses in this Purchase Specifications shall be furnished in the format below. This is mandatory. Deviations furnished below ONLY will be considered by BHEL. Deviations mentioned elsewhere will not be allowed. BHEL have the right to not accept the deviations mentioned by Vendor.

Point No.	Page No.	Confirmation / Clarification / Information/Deviations	Details	Remarks, if any

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29. DOCUMENTATION:

Sl. No.	Parameter	Specification
1	Technical Information required along with Offer	a) Dimensional Drawing of Panels along with minimum clearance to be maintained for effective cooling, and Weight b) Technical Catalogue of DC Charger System being offered c) Reference list for similar rating DC Chargers giving the following: Model number, Application, Rating, Year of supply and commissioning. d) Confirmation / Clarification / Information/Deviations List as per Point 28 above.
2	Information / Confirmations required along with offer	a) After Sales Service and Support shall be given by the Vendor for a minimum period of 10 (ten) years after commissioning. Address of the Sales and Service Representatives in India with complete contact details: Name/Telephone/Email are to be provided during detailed Engineering. b) Vendor shall give a notice of at least 1 year to the end user of the equipment and BHEL before phasing out the product / spares to enable the end user for placement of order for spares and services.



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Sl. No.	Parameter	Specification
3	Technical (unpriced) and Commercial (priced) Bids – For Evaluation	a) DC Charger System(38 nos) b) Commissioning Charges(lumpsum for 38 nos) c) Comprehensive AMC Charges (for 5years for 38 nos-yearwise) d) Electrical and civil works from DC Charger to Distribution board upto 10 m. (38 Nos) *e)Type testing for 1 No at ARAI laboratory *f) Canopy Charges(38 Nos) *g)Electrical and civil works prior to distribution board (38 Nos)
4	Information required for Customer / Consultant Approval (within 2 weeks from the date of LOA of rate contract)	a) Dimensional Drawing of Panels along with minimum clearance to be maintained for effective cooling, and Weight b) Schematic Diagram c) Bill of Materials for equipment to be supplied d) Feeder Requirements – UPS, 230V AC and 415V supply e) Losses at Rated Load (including Fans) f) Technical Catalogue of DC Charger System being offered h) Test Protocol and Quality Plan i) Type test certificates of similar rating equipment 1)Short circuit test and Impulse withstand for the panels 2) Degree of protection and EM immunity and Emission for DC Charger panels
5	Information Required along with Supply. Maintenance Manuals and Documentation	a) Erection, Commissioning and Maintenance Manuals along with Final Drawings and Documentation, FAQ, OEM Functional manuals, Installation guides, Business process guides and troubleshooting guides – 3 Copies b) 1 no. CD ROM consisting of the above. c) Test and Guarantee/Warranty Certificates. d) Complete Bill of Material (item wise) for the equipment supplied. e) Firmware f) Certificates: Insurance, tests

Note: All prices to be quoted. No deviation allowed.

3(f) charges will be paid on pro rata basis.

3(g) charges will be paid on pro rata basis.

3(e) will be paid after conduction of test based on customer requirement.



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QUALITY CONTROL/INSPECTION BY BHEL/CUSTOMER:

1. The bidder shall be wholly responsible for the quality and performance of the supplied charging equipment as per the tendered specifications.
2. BHEL/Customer reserves the right to visit the manufacturing site or the supply chain for quality inspection at any time. BHEL/Customer at its discretion may order the testing of random samples either at the implementation partner's premises (if an ARAI-accredited testing laboratory is available) or at any other third-party ARAI accredited laboratory at cost of the successful bidder
3. After testing, if the charging equipment are found not matching the specifications at given test parameters, BHEL/Customer at its discretion may order for cancellation of complete order or cancellation of the complete lot of product. The complete loss shall be to the account of the bidder.
4. The items shall be supplied in proper packing (as per relevant IS, if any) to avoid any damage during transit, storage and delivery. The bidder shall be responsible to transport and insure the charging equipment till their delivery at project site.

PRE-DISPATCH INSPECTION:

5. All materials/equipment manufactured by the bidder against the letter of award (LOA) shall be subjected to inspection, check and/or test by the BHEL/Customer or its authorized representative at all stages and place, before, during and after the manufacture.
6. The bidder shall maintain and provide statutory test certificates for each supplied batch, confirming compliance to the technical specifications and other tender requirements. The test certificates need to be transmitted electronically to BHEL/Customer, at least 48 hours in advance of pre-dispatch inspection date. Only those batches meeting compliance shall be dispatched by the supplier.
7. If upon delivery, the material/equipment does not meet the specifications, the material/equipment shall be rejected and returned to the bidder for repairs/modifications etc. or for replacement. In such cases, all expenses including the to-and-fro freight, repacking charges, any other costs etc shall be to the account of the vendor.
8. All tests shall be carried out as per AIS 318: and the successful bidder shall submit the relevant test reports.

TESTS:

9. The vendor needs to get the samples for the first lot to be type-tested under BHEL/Customer supervision at an ARAI laboratory. The samples for such tests would be identified by BHEL/Customer and cost of the sample and shipping shall be borne by the Vendor.
10. During the contract duration, BHEL/Customer at bidder cost shall conduct additional type tests at ARAI-accredited laboratory to maintain check on the supplied product. The random sample for such tests would be identified by BHEL/Customer and can be from the manufacturing/supply chain/customer facility.



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Summary of DC Charger Specifications:

A. General Requirements

S.No	Parameter	Description
1	EVSE Type	Dual-Connector DC EVSE
2	Energy Transfer Mode	Conductive
3	Charging Mode	Mode 4
4	Reliability and Serviceability	Modularity, self-diagnostic features, fault codes and easy serviceability in the field

B. System Structure

1	Regulation Method	Regulated DC EV charging station with combination of CVC or CCC but not simultaneously
2	Isolation	Each output isolated from each other with proper insulation
3	Environmental conditions	Outdoor use
4	Power supply	DC EV Charging station connected to AC mains
5	DC Output Voltage rating	Up to and including 100V
6	Charge Control communication	Communicate by digital and analog signals
7	Interface inter-operability	Inter-operable with any EV(non-dedicated, can be used by any consumer)
8	Operator	Operated by a trained person or EV Owner

C. Input Requirements

1	AC Supply system	3 phase, 5 wire AC system(3ph+N+E)
2	Nominal Input Voltage	3Ph, 415V(+6% and -10%) as per IS 12360
3	Input Frequency	50Hz, +/-1.5Hz
4	Input Supply failure backup	Battery backup for minimum 1 hour for control system and billing unit, to enable activities such as billing, to be provided.

D. Output Requirements

1	Output Details	Suitable for 48V/60V/72V vehicle battery configuration
2	Charger Configuration Types	Type 2: Single vehicle charging at 48V with a maximum of 10kW power or 60V/72V with a maximum of 15kW power or a 2W vehicle charging at 48V with maximum power of 3.3kW
3	Output Current	200 A max
4	Number of Outputs	2
5	Output Connectors	2 output connectors
6	Output Connector compatibility	One connector with GB/T 20234.3 as per Annex C1+1 connectors to be defined for 3.3kW output
7	Converter Efficiency	>92% at nominal output power
8	Power factor	>=0.90(full load)



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E. Cable Requirements

1	Charging Cable length	5 meter, straight cable
2	Cable Type	Charging cable and connector permanently attached to DC FC

F. Environmental Requirements

1	Ambient Temperature Range	0degC to 55 degC
2	Ambient Humidity	5 to 95%
3	Ambient pressure	86kpa to 106kpa
4	Storage Temperature	0 to 60degC

G.Mechanical Requirements

1	Ingress Protection	IP 55
2	Mechanical stability	Shall not be damaged by mechanical impact as defined in section 11.11.2 of IEC 61851-1
3	Cooling	Air cooled
4	Mechanical Impact	Shall not be damaged by mechanical impact as defined in section 11.11.3 of IEC 61851-1
5	Dimension(W*H*D)/Weight	Will be informed later

H.User Interface & Display Requirements

1	ON-OFF(start-stop) switches	Mandatory
2	Emergency Stop switch	Simple push button type in Red color, visible and easily accessible
3	Visual indicators	Error indication, presence on Input supply indication, state of charge process indication
4	Display	Minimum 3.5'' inches with 720X480pixels TFT LCD screen, user interface with touch screen or keypad
5	Support Language	English
6	Display Messages	EVSE should display appropriate messages for user during the various chaging states like: Vehicle plugged in/Vehicle plugged out Duration since start of charge. kWh User authorization status Idle/Charging in process:SOC Fault conditions Metering Information: Consumption Units
7	Authentication	As per OCPP(through mobile application



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I. Performance Requirements

1	DC Output Voltage and Current Tolerance	DC Output regulation in constant current charging(CCC):+/- 2.5A for the requirement below 50A, and +/-5% of the required value for 50A or more DC Output voltage regulation in constant Voltage charging(CVC): Max 2% for the max rated voltage of the EVSE
2	Control delay of charging current in CCC	DC output current demand response time< 1S Ramp up rate:20 A/s or more, Ramp Down rate: 100 A/s or more
3	Descending rate of charging current	EVSE should be able to reduce DC current with th descending rate of 100 A/s or more
4	Periodic and random deviation(current ripple)	DC output current ripple limit of EVSE:1.5A below 10Hz, 6A below 5kHz, 9A below 150kHz
5	Periodic and random deviation(voltage ripple)	Max. ripple voltage:+/-5V. Max slew rate:+/- 20V/ms

J.Communication Requirements

1	Communication between EVSE and vehicle	CAN based as per Annex G of AIS138-2
2	Communication interface between charger and central management system(CMS)	Ethernet(standard)/Wi-Fi/2G/3G/4G
3	Communication between EVSE and central server	Open charge point protocol (OCPP) 1.5 protocol or higher versions compatible to OCPP 1.5. Metering: Grid responsive metering

K.Billing Requirements

1	Billing	Grid responsive metering
2	Payment	BHIM/Bharat QR or UPI compliant mobile application payment

L. Safety

1	Safety Parameters	Over current, Under voltage, over voltage, residual current, surge protection, short circuit, earth fault at input and output, input pahse reversal, emergency shutdown with alarm, over temperature, protection against electric shock
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M.Marking

1	Marking Requirement	The BEVC shall bear the markings in a clear manner as per clause No.11.14.3 of AIS 138 part 1. Logo, markings and paint of BEVC to be approved by BHEL. Logo of BHEL should be printed on EV Charger.
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The scope of the vendor shall include location survey, planning, designing, engineering, manufacturing, testing, inspection, packing, supply, transportation & insurance (till delivery at site), delivery to project site (the delivery location would be in Delhi-Chandigarh national highway), unloading, handling and storage and erection & Commissioning of the charging equipment. The civil work associated with erection of charger (including ceramic tiles on pedestal) and electrical connection from charger to distribution box (upto 10m) is with in the scope of the bidder. The charging equipment must come with a comprehensive extended on-site warranty and AMC package (repair/replacement, as applicable) of atleast 5 years from the date of installation and commissioning of the charging equipment life of 10 years. All the electrical works should be carried out by trained and qualified professional (minimum ITI trained)

This is to clarify that the successful bidder owns the responsibility for the charging equipment's compliance with all requirements captured in the technical specifications mentioned below. It is assumed that bidder submitting its response to this tender is prepared to comply with the below mentioned standards/regulations. The charging equipment before delivery, should be type tested as per AIS 138 at an ARAI (Automotive Research Association of India) laboratory.

Exact location of site will be on Delhi-Chandigarh national highway. Number of chargers to be installed and locations would be specified by BHEL in confirmatory LOA issued to successful bidder.

BHEL will send its representative to verify if the product meets the standards.

Earthing is within the scope of the vendor from Distribution Board to Charger.

Central Management system shall be in Customer scope. The chargers should have the requisite hardware for CMS. It should be compatible with OCPP. The software development is also with in the scope of Customer.

Electricity supply would be provided till Distribution Box. Cabling work from DB to chargers would be within the scope of the bidder.

The vendor have to arrange for storage of the chargers at the site without any extra cost implication to BHEL. As regards the insurance, the supplier shall have to arrange for insurance till handing over after the commissioning.

Secured and reliable internet connectivity shall be provided by customer up to each charger.

Central management system is excluded from the scope of vendor. Suitable interface between charger and CMS shall be provided by Bidder on the charger equipment.



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1. Service Level Agreement (SLA)

a) The Bidder(s) shall ensure that all information security aspects are exercised tested, implemented and where necessary enhanced not diluted at any point of time.

b) Meter shall record precisely all the incidences and metering parameters required as per specifications.

The SLA is mentioned in the table below:

S. No.	Defined Parameter	Service Level requirement	Validation Procedure
1	Commissioning of Charging equipment: Bidder(s) must ensure that charging equipment Confirmatory Purchase Orders/ Indents placed pursuant to issuance of LOA are supplied, installed & commissioned as per the scheduled date(s) set out in the order at the designated place, as agreed.	Within 06 weeks of Issuance of Confirmatory PO. However, delivery must Commence within 04 weeks of issuance of the PO/Indent.	Delivery challan and Commissioning Report signed by BHEL/ End user.
2	Replacement of faulty Charging equipment : faulty charging equipment to be replaced or repaired (under warranty only) by the bidder(s) within defined duration.	The faulty charging equipment should be repaired and/or replaced within 24 hours of the complaint.	Acknowledgment by the charging station operator in writing.
3	Firmware support: Charger manufacturer shall provide respective firmware in case of a malfunctioning or a feature request at no extra cost to BHEL.	5 days within receipt of charging equipment.	Date of written request by System Integrator/ BHEL/ end user.
4	Availability of charging equipment in working condition	Bidder must ensure that the charging equipment must be online for at least 98% of the time. (Power failure related downtime is excluded)	Through report generated by the equipment



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भारत हेवी इलेक्ट्रिकल्स लिमिटेड

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Bharat Heavy Electricals Ltd.,
(A Government of India undertaking)
Electronics Division

CE: PR: 003- Rev 01

PB 2606 , Mysore Road Bangalore , 560026 INDIA

SPECIAL COMMERCIAL CONDITIONS OF CONTRACT

Reference is brought to BHEL's Instructions to Bidders (Document Ref: CE: PR: 001- Rev 02) and General Commercial Conditions for Contract (Document Ref: CE: PR: 002- Rev 01).

These two documents along with Special Conditions of Contract annexed to this RFQ will form an integral part of the contract as and when the RFQ culminates into a Purchase Order / Contract.

RFQ No: MGR0000287 {Rate Contract (RC) for a period of 01 year}

RFQ Date: 04/04/19 Due Date: 11/04/19

Customer/Project: DHI/Establishment of Low voltage Electric Vehicle (EV) charging stations in India

Item Description: DC (15 KW) & AC (3x3.3 KW) chargers for Electric Vehicle (EV)

TYPE OF BID: ~~SINGLE PART BID~~ / TWO PART BID (Pre-Qualification Bid + Techno-commercial bid: Part-I; Price-bid: Part-II) / ~~THREE PART BID~~

Purchase Executives: Clarifications with regard to the tender shall be addressed to purchase officers whose e-mail IDs are given below:

mounishg@bhel.in or kanimozhid@bhel.in

~~**Splitting of tendered quantity to MSE vendors:** The tendered quantity will be split to MSE vendor/s subject to submission of relevant documents by vendors. Refer clause-I of Instructions to Bidders for conditions applicable and for information on documents to be submitted.~~

Destination: a) For Indigenous scope of supply, items are to be directly despatched to designated warehouse/location in Delhi-Chandigarh national highway. Exact location of site will be at different locations. Number of chargers to be installed and locations would be specified by BHEL in confirmatory PO issued to successful bidder. Detailed Consignee details will be issued by BHEL along with Despatch Clearance.

b) For Imported scope of supply, destination is Bangalore port. In case of shipment by sea, port of discharge will be Chennai seaport and port of delivery shall be ICD, Bangalore.

Note: Please ensure the suitable packing standard to avoid damages during transit.

Project Benefits:

Imported scope of supply:

- a) ~~DEEC / SEZ/EPCG/DFIA/ Physical Export contract: Eligible for "NIL" Basic Customs Duty.~~
- b) ~~Project Imports: Eligible for Concessional Basic Customs Duty.~~
- c) ~~Basic Custom duty and Cess on Basic Custom duty are reimbursable by customer.~~

Terms of Delivery:

- **Indigenous scope of supply:** FOR, designated location in Delhi-Chandigarh national highway. Following are in bidder's scope and are to be taken care in the offer:
 - i) Packaging and forwarding charges.
 - ii) Freight and insurance charges covering transportation up to designated location.
 - iii) Unloading at designated warehouse.
 - iv) Installation and Commissioning of the product.
 - v) All applicable taxes.
 - vi) All other costs such as logistics, lodging, boarding, travel expenses, tools, equipment, labour, material, transportation, all incidental expenses, etc. for execution of the complete work, including all the statutory compliances.
- **Imported scope of supply:**

F.C.A. (for air consignments) < indicate international port of dispatch > / C.I.F. (for sea consignments)
< ICD, Bangalore > (including Packing, Forwarding, Handling, Ancillary charges like processing of Sight Draft/ Letter of Credit, negotiation of bank documents, Export declaration, Country of Origin etc.).

Kindly indicate the approximate weight of the total imported consignment, which is required for calculating air-freight charges:

I. Bidders to mandatorily provide confirmation/compliance for the under-mentioned terms:

SL NO.	TERMS	BHEL ACCEPTABLE TERM	BIDDER'S CONFIRMATION	REMARKS,if any
01	Reverse Auction	BHEL's decision for opting Reverse Auction or price-bid opening, will be intimated separately to qualified bidders after finalization of techno-commercial evaluation. In case BHEL does not resort to Reverse Auction, the price bids and price impacts (if any) shall be opened as per BHEL's standard practice. Note: Non-acceptance to participate in RA may result in non-consideration of the bid, in case BHEL decides to go for RA.	AGREE	
02	Parting of license for imported raw materials	In case of projects where Basic Custom Duty is NIL and vendor is importing any raw materials / components for the enquired item, same are eligible for Zero Customs duty. As per EXIM policy, BHEL will part the import licence with the vendors to obtain import licence by themselves and custom clear the raw materials/ components by availing zero customs duty. Hence, please furnish list of raw materials / components to be imported by you with Quantity and CIF value (for which BHEL has to share import licence). The benefit due to the above shall be passed on to BHEL and confirmed in the quotation. If there are no imported raw materials/components, same shall be confirmed in the offer.	AGREE CIF value Yes, benefit passed on to BHEL in the priced quotation. (or) We confirm that there are no imported components	
03	Delivery Period	Within <u>04</u> weeks from the date of issue of Manufacturing clearance along with approved document. Delay in contractual delivery will attract Penalty as per GCC Clause no.:04.b.	AGREE weeks	
04	Terms of Payment at the time of material supply	Refer Clause "F" of Instructions to Bidder for BHEL standard Payment terms and loading factors applicable for non-compliance against payment terms: Indigenous Scope : a)Supply with Erection & Commissioning b)Supply with Erection Supervision & Commissioning c)Supply only Imported Scope : d)Supply with Erection & Commissioning e)Supply with Erection Supervision & Commissioning f)Supply only High-Sea sales : g)Supply with Erection & Commissioning h)Supply with Erection Supervision & Commissioning i)Supply only Spares: e) and/or f)/i) depending upon the scope	AGREE	
05	Please provide Percentage of local content and details of location(s) at which the local value addition is made:	'Local content' means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.	Percentage of local content : _____% Location(s) at which the local value addition is made : _____	

Under-mentioned details shall be provided against indigenous supplies and services:

a. GSTIN (no.) of place of supply: _____

b. HSN (Harmonized System of Nomenclature) code: _____
Applicable tax and Rate: _____ & _____

c. SAC (Service Accounting Code) no.: _____
Applicable tax and Rate: _____ & _____

d. GSTIN (no.) of place of supply of service: _____

II. Bidder to note that Deviations shall not be permitted for the below mentioned terms and are deemed to be complied. In case of non-compliance/deviation, offer shall be liable for rejection:

- (1) **Submission of documents post PO viz., drawings /data sheet etc. as indicated in Cl: 04 of GCC:** Within 04 days from the date of receipt of Purchase Order. Delay in submission of complete set of specified documents in NIT, will attract Penalty as per GCC Clause no.:04.a.
- (2) **Validity:** The offer will be valid for a period of 75 days from the date of part-I bid opening and in case of Negotiation/ Counter-offer/Reverse Auction, price validity will apply afresh for a period of 25 days from the date of according final price by bidder (or) up to original validity period, whichever is later.
- (3) **Warranty:** 13 months from the date of dispatch of goods or 12 months from the date of commissioning of goods, whichever is earlier.
- (4) **Insurance:** The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, Storage and delivery. For delivery of goods at site, the insurance shall be obtained by the Contractor, for an amount not less than the Contract Price of the goods from "warehouse to "warehouse" (final destinations) on "All Risks" basis including War risks and strikes.
- (5) **Performance Bank Guarantee (PBG):** PBG will be applicable for a period of 13 months from the date of dispatch of goods + claim period of 03 months, for a value equal to 10% of the basic value of purchase order.
Refer Clause "H" of Instructions to Bidders. Also note that PBG should be in the format specified in Annexure VII of ITB and no deviation to this format will be allowed.
Note: In case PBG is not furnished, the 10% basic amount will be withheld from the supply invoice. This withheld amount will be paid either against submission of supplementary invoice & Original PBG (or) against supplementary invoice without PBG after expiry of Warranty period.
- (6) **Despatch Documents:** Complete set of despatch documents (original + 1 photocopy set) as per Purchase Order shall be forwarded to Purchase Executive/BHEL directly. Depending upon the project/customer demands, despatch documents may include one or more documents from the following: Invoice (01 original and 01 copy with original sign & seal), Lorry Receipt (L/R), Packing List, NIL Short-Shipment Certificate, insurance intimation letter, Original Performance Bank Guarantee (directly from issuing bank to BHEL) and POD (Proof of Delivery) on L/R.
The precise list of despatch documents needed for the project will be specified in the Purchase Order.
One set of Invoice, Packing List and L/R shall be e-mailed immediately to BHEL-EDN after despatch.
- (7) **Inland transportation including loading, un-loading, transfer to designated location, insurance and other costs incidental to delivery (demurrage, wharfage, etc.):** The supplier is required under the Contract to transport the Goods to place of destination defined as Site. Exact location of site may be anywhere in Delhi-Chandigarh national highway. Number of chargers to be installed and locations would be specified by BHEL in confirmatory PO issued to the successful bidder.

Vendor shall book the consignment through vendor's approved Road carriers on "Freight pre-paid" basis & to be claimed from BHEL through a separate invoice against proof of acknowledged L/R. Reimbursement of Freight charges will be limited to the freight finalized in contract.
- (8) **Evaluation criteria for tendered items:**
Evaluation of the lowest bidder will be done as a combined package by considering DC chargers & AC chargers together. For this procurement, Public procurement (Preference to Make in India), Order 2017 dated 15.06.2017 & 28.05.2018 and subsequent Orders issued by the respective Nodal Ministry shall be applicable even if issued after issue of this NIT but before finalization of contract/PO against this NIT.
- (9) **Comprehensive Annual Maintenance Contract** may be applicable for a period of 05 years subsequent to expiry of Warranty period.
Prices for Comprehensive AMC should be valid up to 05 years from date of supply and order may be placed by BHEL anytime before the expiry of validity.

Placement of AMC order is optional for BHEL and the period (maximum of 05 years from date of expiry of warranty period) for which AMC is required, will be mentioned in the order.

~~(10) Integrity Pact:~~ Execution of Integrity Pact is applicable for this tender (Refer clause "K" of Instructions to Bidders)

Details of IEM for this tender are mentioned below:

Name: _____ Address: _____ Email: _____

With this, we hereby confirm that all the terms & conditions as indicated in Instructions to Bidders (Document Ref: CE: PR: 001- Rev 02) & General Commercial Conditions for Contract (Document Ref: CE: PR: 002- Rev 01) are accepted without any deviation.

Vendor's Signature with Seal



ಭಾರತ್ ಹವಿ ಎಲೆಕ್ಟ್ರಿಕಲ್ಸ್ ಲಿಮಿಟೆಡ್
भारत हेवी इलेक्ट्रिकल्स लिमिटेड

Bharat Heavy Electricals Ltd.,
(A Government of India undertaking)
Electronics Division

PB 2606 , Mysore Road Bangalore , 560026 INDIA

CE:PR:001- Rev 02

INSTRUCTIONS TO BIDDERS

Bidder is requested to read the instructions carefully and submit their quotation taking into consideration of all the points:

A. GENERAL INSTRUCTIONS:

1. Any Purchase Order resulting from this enquiry shall be governed by the Instructions to Bidders (document reference: CE: PR: 001 – Rev 02), General Conditions of Contract (document reference: CE: PR: 002 - Rev 01) and Special Conditions of Contract, if any, of the enquiry.
2. Any deviations from or additions to the “General Conditions of Contract” or “Special Conditions of Contract” require BHEL’s express written consent. The general terms of business or sale of the bidder shall not apply to this tender.
3. Regret letter (either through post or by mail or by EPS) indicating reasons for not quoting must be submitted without fail, in case of non-participation in this tender. Supplier shall be liable for removal as a registered vendor of BHEL when the supplier fails to quote against four consecutive tender enquiries for the same item or all enquiries in last two years for the same item, whichever is earlier.
4. Procurement directly from the manufacturers is preferred. However, if the OEM/ Principal insist on engaging the services of an agent, such agent shall not be allowed to represent more than one manufacturer/ supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer/ supplier or the manufacturer/ supplier could bid directly but not both. Agent/Representative authorized by the OEM/Principal in turn cannot further sub authorize any other firm for submitting the offer or for placement of order.

In case bids are received from the manufacturer/ supplier and his agent, bid received from the agent shall be ignored.

5. Consultant / firm (and any of its affiliates) shall not be eligible to participate in the tender/s for the related goods for the same project if they were engaged for consultancy services for the same project.
6. If an Indian representative/associate/liaison office quotes on behalf of a foreign based bidder, such representative shall furnish the following documents:
 - a. Authorization letter to quote and negotiate on behalf of such foreign-based bidder.
 - b. Undertaking from such foreign based bidder that such contract will be honored and executed according to agreed scope of supply and commercial terms and conditions.
 - c. Undertaking shall be furnished by the Indian representative stating that the co-ordination and smooth execution of the contract and settlement of shortages/damages/replacement/repair of imported scope till the equipment is commissioned and handed over to customer will be the sole responsibility of the Indian representative/associates/agent/liaison office.
 - d. Refer **Annexure I** on “Guidelines for Indian Agents”.
7. In case of imported scope of supply, customs clearance & customs duty payment will be to BHEL account after the consignment is received at Indian Airport /Seaport. Bidders must provide all original documents required

for completing the customs clearance along with the shipment. Warehousing charges due to incomplete or missing documentation will be to supplier's account. All offers for imported scope of supply by air, must be made from any of the gateway ports (within the country) indicated (**Refer Annexure II**).

8. The offers of the bidders who are on the banned list and also the offers of the bidders, who engage the services of the banned firms, shall be rejected. The list of the banned firms is available on BHEL website: http://www.bhel.com/vender_registration/vender.php
9. Business dealings with bidders will be suspended if they are found to have indulged in any malpractices/misconduct which are contrary to business ethics like bribery, corruption, fraud, pilferage, cartel formation, submission of fake/false/forged documents, certificates, information to BHEL or if they tamper with tendering procedure affecting the ordering process or fail to execute a contract, or rejection of 3 consecutive supplies or if their firms / works are under strike/lockout for a long period. Bidder may refer "Guidelines for Suspension of Business Dealings with Suppliers/ Contractors" available on www.bhel.com for more details.
10. The 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 your notice.
11. For this procurement, Public procurement (Preference to Make in India), Order 2017 dated 15.06.2017 & 28.05.2018 and subsequent Orders issued by the respective Nodal Ministry shall be applicable even if issued after issue of this NIT but before finalization of contract/PO against this NIT.

In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and/or local content in respect of this procurement, same shall be applicable.

B. GUIDELINES FOR PREPARATION OF OFFER:

1. Quotation shall be submitted in Single Part Bid, Two Part Bid or Three Part Bid, as called for in the tender:
 - **SINGLE PART BID:** Technical and Commercial Bid with prices along with price summary & filled in BHEL Standard Commercial terms and conditions in a single sealed envelope.
 - **TWO PART BID:** Unpriced offer i.e. "Techno-commercial Bid" with filled in BHEL Standard Commercial terms and conditions in a sealed envelope **along with the copy of the "Price Bid" without the prices** should be enclosed in one cover and the cover must be super scribed "**Techno-commercial offer**) and Priced offer i.e. "Price Bid" containing price summary in a separate sealed envelope and must be super scribed "**Price Bid**". Both these envelopes shall be enclosed in a single sealed envelope superscribed with enquiry number, due date of tender and any other details as called for in the tender document.
 - **THREE PART BID:** Pre-qualification Bid (Part-I), Techno Commercial Bid with filled in BHEL Standard Commercial terms and conditions (Part-II), and Price Bid (Part-III). All three envelopes shall be enclosed in a single sealed envelope superscribed with enquiry number, due date of tender and any other details as called for in the tender document.

If any of the offers (Part I, Part II or Part III) are not submitted before the due date and time of submission (or) if any part of the offer is incomplete, the entire offer of the bidder is liable for rejection.

2. Supplier shall ensure to superscribe each envelope with RFQ number, RFQ Date, RFQ Due date and time, Item Description and Project clearly & boldly. Also mention on the envelope whether it is "Techno Commercial Bid" or "Price Bid" or "Pre-Qualification Bid". Please ensure complete address, department name and purchase executive name is mentioned on the envelope (before dropping in the tender box or handing over) so that the

tender is available in time for bid opening.

3. BHEL standard Commercial Terms and Conditions (duly filled, signed & stamped) must accompany Technical-Commercial offer without fail and should be submitted in original only.

The above indicated submission of Offers in “sealed envelope/hard copy” as mentioned in points B.1-B.3 is applicable for tenders that are not floated through E-Procurement System (EPS).

4. Validity: Unless otherwise specified in SCC (special commercial conditions of contract), the offer will be valid for a period of 90 days from the date of part-I bid opening and in case of Negotiation/Counter-offer/Reverse Auction, price validity will apply afresh for a period of _60_ days from the date of according final price by bidder (or) upto original validity period, whichever is later.
5. Any of the terms and conditions not acceptable to supplier, shall be explicitly mentioned in the Techno-Commercial Bid. If no deviations are brought out in the offer it will be treated as if all terms and conditions of this enquiry are accepted by the supplier without deviation.
6. Deviation to this specification/item description, if any, shall be brought out clearly indicating “DEVIATION TO BHEL SPECIFICATION” without fail, as a part of Techno-Commercial Bid. If no deviations are brought out in the offer it will be treated as if the entire specification of this enquiry is accepted without deviation.
7. Suppliers shall submit one set of original catalogue, datasheets, bill of materials, dimensional drawings, mounting details and/or any other relevant documents called in purchase specification as part of Technical Bid.
8. “Price Bid” shall be complete in all respects containing price break-up of all components along with all applicable taxes and duties, freight charges (if applicable) etc. Once submitted no modification / addition / deletion will be allowed in the “Price Bid.” Bidders are advised to thoroughly check the unit price, total price to avoid any discrepancy.
9. In addition, bidder shall also quote for erection & commissioning charges/erection supervision & commissioning charges (E&C service charges) if applicable, documentation charges, testing Charges (type & routine), training charges etc. as applicable along with corresponding tax. The price summary must indicate all the elements clearly.
10. For Physical Export projects or wherever services are rendered by foreign suppliers in India, bidders should indicate “lumpsum” Erection and Commissioning (or) Erection Supervision and Commissioning charges, as applicable (including To & Fro Fare, Boarding, Lodging, Local Conveyance etc.) for carrying out E&C activity and further handing over to customer. The quotation shall clearly indicate scope of work, likely duration of commissioning, pre-commissioning checklist (if any).
11. Wherever bidders require PAC (Project Authority Certificate)/applicable certificates for import of raw materials, components required for DECC,EPCG Power Projects, Export Projects or other similar projects wherein supplies are eligible for customs duty benefits, lists and quantities of such items and their values (CIF) has to be mentioned in the offer. Prices must be quoted taking into account of such benefits.
12. Prices should be indicated in both figures & words. 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. Any typographical error, totalling mistakes, currency mistake, multiplication mistake, summing mistakes etc. observed in the price bids will be evaluated as per **Annexure III** “Guidelines for dealing with Discrepancy in Words & Figures – quoted in price bid” and BHEL decision will be final.
13. Documents submitted with the offer shall be signed and stamped in each page by authorized representative of the bidder. However, this requirement is not mandatory for offers uploaded through E-Procurement System (EPS).

C. GUIDELINES FOR OFFER SUBMISSION:

The under-mentioned clauses 1, 2&3 will not be applicable for EPS tenders.

1. Offers / Quotations must be dropped in tender box before 13.00 Hrs. on or before due date mentioned in RFQ. The offers are to be dropped in the proper slot of the Tender Box kept in our reception area with caption "CE, SC&PV, DEFENCE". Tenders are opened on 3 days in a week (Monday/Wednesday/Friday). Tender must be deposited in the slot corresponding to the day (Monday - Box no.4/Wednesday - Box no. 6 /Friday - Box no.8) while depositing the offer.
2. E-Mail/ Internet/EDI offers received in time shall be considered only when such offers are complete in all respects. In case of offers received through E-mail, please send the offer to the email ID specified in the SCC document of the tender.
3. Offers of Vendors who already have a valid Technical/Commercial MOU with BHEL-EDN for the items of the RFQ shall mention the relevant MOU reference no. and give only such other details not covered in the MOU.
4. In cases where tender documents are bulky, or due to some reasons tender documents are required to be submitted by hand or through posts/couriers, the offers are to be handed over either of the two purchase officers whose names are mentioned in the SCC document of tender RFQ.
5. Tenders will be opened on due date, time and venue as indicated in the RFQ in the presence of bidders at the venue indicated in the RFQ. For EPS tenders, e-mail notifications will be automatically generated and forwarded to registered e-mail ID/s of bidders during opening of tenders.
6. Bidder will be solely responsible:
 - a. For submission of offers before due date and time. Offers submitted after due date and time will be treated as "Late offers" and will be rejected.
 - b. For submission of offers in the correct compartment of the tender box based on the day of due date (Monday/Wednesday/Friday). Please check before dropping your offer in the correct tender box.
 - c. For depositing offers in proper sealed condition in the tender box. If the bidder drops the tender in the wrong tender box (or) if the tender document is handed over to the wrong person, BHEL will not be responsible for any such delays.
 - d. For offers received through email etc., suppliers are fully responsible for lack of secrecy on information and ensuring timely receipt of such offers in the tender box before due date & time (This clause will not be applicable for EPS tenders).

The above indicated submission of Offers as mentioned in points 6.a-6.d is applicable for tenders that are not floated through EPS.

- e. In case of e-tender, all required documents should be uploaded before due date and time. Availability of power, internet connections, system/software requirements etc. will be the sole responsibility of the bidder. Wherever assistance is needed for submission of e-tenders, help-line numbers as available in the web-site of service provider of BHEL may be contacted.

Purchase Executive/ BHEL shall not be responsible for any of the activities relating to submission of offer.

D. PROCESSING OF OFFERS RECEIVED:

1. Any discount/ revised offer submitted by the supplier on its own shall be accepted provided it is received on or before the due date and time of offer submission (i.e. Part-I bid). The discount shall be applied on pro-rata basis to all items unless specified otherwise by the bidder.
2. Changes in offers or Revised offers given after Part-I bid opening shall not be considered as a part of the original offer unless such changes/revisions are requested by BHEL. In case of withdrawal of any Technical/Commercial deviation(s) by the bidder before opening of price bids/conducting the Reverse Auction, revision of price/impact bid will not be accepted.
3. In case there is no change in the technical scope and/ or specifications and/ or commercial terms & conditions, the supplier will not be allowed to change any of their bids after Technical bids are opened (after the due date and time of tender opening).
4. In case of changes in scope and/ or technical specifications and/ or commercial terms & conditions by BHEL and it accounts for price implications from bidders, all techno-commercially acceptable bidders shall be asked by BHEL (after freezing the scope, technical specifications and commercial terms & conditions) to submit the impact of such changes on their price bid. Impact price will be applicable only for changes in technical specification / commercial conditions by BHEL. The impact price must be submitted on or before the cut-off date specified by BHEL and the original price bid and the price impact bid will be opened together at the time of price bid opening.
5. BHEL reserves the right to adopt Reverse Auction or standard Price Bid Opening procedure for price evaluation, at its discretion. This shall be decided after completion of techno-commercial evaluation of tender (Refer BHEL website http://www.bhel.com/vender_registration/vender.php for Guidelines of Reverse Auction). In case BHEL does not resort to Reverse Auction, the price bids and price impacts (if any) already submitted and available with BHEL shall be opened as per BHEL's standard practice.
6. Un-opened bids (including price bids) will be returned to the respective bidders after release of Purchase order. Regarding Offers for EPS tenders that get rejected on PQC/ techno-commercial grounds, the bids for the subsequent parts will not be opened i.e., both technical bid and price bid (Parts-II & III) will not be opened in case of rejection on PQC ground and price bid (Part-II/Part-III, as applicable) will not be opened in case of rejection on techno-commercial ground.
7. After receipt of Purchase Order, supplier should submit required documents viz., specified drawings, bill of materials, datasheets, catalogues, quality plan, test procedure, type test report, O & M Manuals and/or any other relevant documents as per Specification/Purchase Order, as and when required by BHEL/Customer.
8. Any deviation to the terms and conditions not mentioned in the quotation by supplier in response to this enquiry will not be considered, if put forth subsequently or after issue of Purchase Order, unless clarification is sought for by BHEL and agreed upon in the Purchase Order.
9. Evaluation shall be on the basis of delivered cost (i.e. "Total Cost to BHEL").

"Total Cost to BHEL" shall include total basic cost, packing & forwarding charges, taxes and/or duties (as applicable), freight charges, taxes on Services, customs clearance charges for imported items, any other cost indicated by bidder for execution of the contract and loading factors (for non-compliance to BHEL Standard Commercial Terms & Conditions). Benefits arising out of Nil Import Duty on DEEC, EPCG, DFIA Projects, Physical Exports or such 100% exemptions (statutory benefits), project imports, customer reimbursements of statutory duties (like Basic Customs Duty and cess on customs duty), Input tax credits as applicable will also

be taken into account for arriving at the Total cost to BHEL (wherever applicable and as indicated in SCC document of tender).

For EPS tenders, it shall be noted that the prices (including discounts) vis-a-vis currency quoted in EPS portal only will be considered as Final for the purpose of evaluation of the lowest bidder. Bidder shall ensure to indicate the applicable taxes against each line item in online portal, failing to which the same will be considered as inclusive/NIL.

10. For evaluation of offers in foreign currency, the exchange rate (TT selling rate of SBI) shall be taken as under:

Single part bids: Date of tender opening

Two/three part bids: Date of Part-I bid opening

Reverse Auction: Date of Part-I bid opening

In case of Performance Bank Guarantee (PBG) also, exchange rate will be considered as mentioned above for converting foreign currency to Indian currency and vice versa.

If the relevant day happens to be a bank holiday, then the exchange rate as on the previous working day of the bank (SBI) shall be taken.

11. Ranking (L-1, L-2 etc.) shall be done only for the techno-commercially acceptable offers.

E. INFORMATION ON PAYMENT TERMS:

1. All payments will be through Electronic Fund transfer (EFT). Vendor has to furnish necessary details as per BHEL standard format (**Refer Annexure IV**) for receiving all payments through NEFT.(Applicable for Indian vendors only).
2. In case of High Sea Sales transaction, customs clearance of the consignment landed on Indian Sea/Air ports will be done by BHEL based on the original HSS documents provided by vendors. All warehousing charges due to delay in submission of complete and or correct HSS documents to BHEL will be to supplier's account only. Such recovery will be made out of any of the available bills (**Refer Annexure V**).
3. Statutory deductions, if any, will be made and the deduction certificate shall be issued.
 - A. In case vendor does not provide PAN details, the TDS deduction shall be at the maximum percentage stipulated as per the provisions of Income Tax Act.
 In addition to the above, Foreign vendors shall also submit relevant details of their bankers like Swift Code, Banker's Name &Address etc.
 - B. TDS deduction as per section 51 of CGST Act,2017 shall be applicable as per Gazette Notification No. 50/2018-Central Tax, Dated: 13th September 2018 and subsequent notification/s, as and when released by Govt. authorities.
4. Incomplete documentation will not be accepted. Delayed submission of invoice / documents may result in corresponding delay in payment. In this connection, request to also refer clause: G about invoicing & payment formalities under GST regime. Applicable documents shall be submitted to the purchaser at the time of execution of supplies/services for availing GST input credits.

F. STANDARD PAYMENT TERMS OF BHEL-EDN:

<u>PURCHASE ORDERS FOR:</u>	<u>SUPPLY WITH ERECTION & COMMISSIONING</u>	<u>SUPPLY WITH ERECTION SUPERVISION & COMMISSIONING</u>	<u>SUPPLY ONLY</u>
<u>INDIGENOUS PROCUREMENT</u>	a. 90% of basic value + 100% of taxes and freight charges will be paid in 45 days from the date of dispatch or 15 days from the date of submission of complete set of documentation, whichever is later. Balance 10% of basic value (Retention money) will be paid in 15 days from the date of submission of supplementary invoice/documents against proof of completion of E&C. <u>Note:</u> In case PBG is not furnished, only 80% payment will be released against 90% claim without the consent of Vendor. This 10% basic amount withheld towards PBG will be paid either against submission of supplementary invoice & Original PBG (or) against supplementary invoice without PBG after expiry of Warranty period.	b. 95% of the basic value + 100% of taxes and freight charges will be paid in 45 days from the date of dispatch or 15 days from the date of submission of complete set of documentation, whichever is later. Balance 5% of basic value (Retention money) will be paid in 15 days from the date of submission of supplementary invoice/documents against proof of completion of commissioning. <u>Note:</u> In case PBG is not furnished, only 85% payment will be released against 95% claim without the consent of Vendor. This 10% basic amount withheld towards PBG will be paid either against submission of supplementary invoice & Original PBG (or) against supplementary invoice without PBG after expiry of Warranty period.	c. 100% of PO value with taxes and freight will be paid in 45 days from the date of dispatch or 15 days from the date of submission of complete set of documentation, whichever is later.
<u>IMPORT PROCUREMENT</u>	d. 90% of the basic value will be paid on the 45th day, against usance draft of 45 days, from the date of AWB/BOL on submission of complete set of documents. Balance 10% of basic value (Retention money) will be paid in 15 days from the date of submission of supplementary invoice/documents against proof of completion of E&C. <u>Note:</u> In case PBG is not furnished, only 80% payment will be released against 90% claim without the consent of Vendor. This 10% basic amount withheld towards PBG will be paid either against submission of supplementary invoice & Original PBG (or) against supplementary invoice without PBG after expiry of Warranty period.	e. 95% of the basic value will be paid on the 45th day, against usance draft of 45 days, from the date of AWB/BOL on submission of complete set of documents. Balance 5% of basic value (Retention money) will be paid in 15 days from the date of submission of supplementary invoice/documents against proof of completion of commissioning. <u>Note:</u> In case PBG is not furnished, only 85% payment will be released against 95% claim without the consent of Vendor. This 10% basic amount withheld towards PBG will be paid either against submission of supplementary invoice & Original PBG (or) against supplementary invoice without PBG after expiry of Warranty period.	f. 100% of PO value will be paid against usance draft of 45 days from the date of AWB/BOL on submission of complete set of documents.

<u>PURCHASE ORDERS FOR:</u>	<u>SUPPLY WITH ERECTION & COMMISSIONING</u>	<u>SUPPLY WITH ERECTION SUPERVISION & COMMISSIONING</u>	<u>SUPPLY ONLY</u>
<u>HIGH-SEA SALES PROCUREMENT</u>	g. 90% of basic value will be paid in 45 days from the date of signing of High Sea Sale agreement or 15 days from the date of submission of complete set of documentation, whichever is later. Balance 10% of basic value (Retention money) will be paid in 15 days from the date of submission of supplementary invoice/documents against proof of completion of E&C. <u>Note:</u> In case PBG is not furnished, only 80% payment will be released against 90% claim without the consent of Vendor. This 10% basic amount withheld towards PBG will be paid either against submission of supplementary invoice & Original PBG (or) against supplementary invoice without PBG after expiry of Warranty period.	h. 95% of the basic value will be paid in 45 days from the date of signing of High Sea Sale agreement or 15 days from the date of submission of complete set of documentation, whichever is later. Balance 5% of basic value (Retention money) will be paid in 15 days from the date of submission of supplementary invoice/documents against proof of completion of commissioning. <u>Note:</u> In case PBG is not furnished, only 85% payment will be released against 95% claim without the consent of Vendor. This 10% basic amount withheld towards PBG will be paid either against submission of supplementary invoice & Original PBG (or) against supplementary invoice without PBG after expiry of Warranty period.	i. 100% of basic value will be paid in 45 days from the date of signing of High Sea Sale agreement or 15 days from the date of submission of complete set of documentation, whichever is later.

j. Comprehensive Annual Maintenance Contract:

Evaluation methodology: Unless and otherwise specified in SCC, CAMC will be applicable for a period of 04 years from the date of expiry of warranty period (or) from the date of completion of commissioning of equipment, whichever is later and the total CAMC value should not be less than 20% of the main supply value. In case the quoted total CAMC value is less than 20% of the main supply value, BHEL shall evaluate Bidders Price deducting differential amount from main supply price and apportioning towards CAMC charges.

Payment terms: 100% CAMC charges along with tax as applicable, will be paid in 15 days from the date of submission of supplementary invoice/documents against proof of completion of CAMC on yearly basis.

k. Terms of Payment for Training: 100% payment will be made in 45 days from the date of completion of Training or 15 days from the date of submission of complete set of invoice along with documentary evidence, whichever is later.

LOADING FACTORS FOR DEVIATION IN PAYMENT TERMS (APPLICABLE FOR IMPORT PROCUREMENT ONLY):

- 1) For offers received with Sight draft payment term in place of Usance draft, loading applicable will be 1.0% of basic value.
- 2) For offers received with Letter of Credit payment term with Usance of 45 days, loading applicable will be 2.5% of basic value.
Additional loading of 2% will be applicable for payment term as Letter of Credit at Sight.

l. Any payment term with credit period of less than 45 days for indigenous supply/HSS and any other variation of payment terms are liable for rejection.

m. Standard payment terms indicated in Clauses: F (a), (b), (c), (d), (e), (f), (g), (h), (i), (j) & (k) will not attract any loading.

Note 1: Basic value of Purchase Order mentioned above will include all components of the purchase order and will exclude only taxes, duties, freight, training charges, E&C and AMC charges (wherever applicable). Wherever the Purchase Order is split into import portion and indigenous portion of supply, the retention money will be 10% (where scope includes E&C) or 05% (where scope includes Erection supervision & Commissioning) of both purchase order values put together.

Note 2: If the E&C could not be completed till the end of the Warranty period due to reasons not attributable to the supplier, BHEL will release the retention money to the supplier against Bank Guarantee for equivalent value valid for an initial period of one year.

Note 3: In case of Physical Export projects or wherever services are rendered by foreign suppliers in India, E&C charges (if quoted separately/extra by bidder) will be paid in 15 days from the date of submission of supplementary invoice/ documents against proof of completion of E&C.

Note 4: In case of multiple packages/units in a power plant, payment of retention money/E&C charges will be processed on pro-rata basis.

Note 5: No deviation will be permitted from the duration of Guarantee/Warranty and/or Comprehensive Annual Maintenance Contract period specified in SCC.

G. Terms & Conditions to be complied under GST regime:

1. All invoices to contain BHEL-EDN (buyer) GSTIN number: 29AAACB4146P1ZB. However for CGST +SGST/UGST billing outside the state of Karnataka, invoice has to be generated with BHEL's Nodal Agency GSTIN number. Address of Nodal Agency along with GSTIN number will be provided by BHEL at the time of issuing dispatch clearance.
2. The Bidder shall mention Bidder's GSTIN number in all quotations and Invoices submitted.
3. The Bidder shall also mention HSN (Harmonized System of Nomenclature) / SAC (Services Accounting Code) mandatorily in all quotations and invoices submitted.
4. Invoice submitted should be in the format as specified under GST Laws viz., all details as mentioned in Invoice Rules like GST registration number(GSTIN), invoice number with date of issue, quantity, rate, value, taxes with nomenclature – CGST, SGST, UGST,IGST mentioned separately, HSN Code / SAC Code etc. Invoice should be submitted in original for buyer plus duplicate for credit availment.
5. Payment of GST to Vendor will be made only if it is matching with data uploaded by the Vendor in GST portal.
6. For invoices paid on Reverse charge basis – "Tax payable on reverse charge basis" to be mentioned on the invoice.
7. In case GST credit is delayed/denied to BHEL due to non/delayed receipt of goods and/or tax invoice or expiry of timeline prescribed in GST law for availing such ITC, or any other reasons not attributable to BHEL, GST amount will be recoverable from vendor along with interest levied/ leviable on BHEL.

8. In case vendor delays declaring such invoice in his return and GST credit availed by BHEL is denied or reversed subsequently as per GST law, GST amount paid by BHEL towards such ITC reversal as per GST law will be recoverable from vendor/contractor along with interest levied/leviable on BHEL.
9. Vendor should intimate BHEL immediately on the same date of invoicing without any delay.
10. In case of discrepancy in the data uploaded by supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTN portal or issue credit note (details to be uploaded in GSTN portal) for the shortages or rejections in the supplies, within the calendar month notified by BHEL.
11. Bidders to note that Rules & Regulations pertaining to E-way bill system are to be strictly adhered to, as and when notified by Govt. authorities.

H. Performance bank guarantee (PBG):

Performance bank guarantee (PBG) will be applicable as called in the tender documents. Unless otherwise specified in the SCC, the PBG against performance of the contract shall be valid for a period of 24 months from the date of dispatch of goods + claim period of 03 months, for a value equal to 10 % of the basic value of the purchase order which will include all components of the purchase order and will exclude only taxes, duties, freight, training charges, E&C and AMC charges (wherever applicable).

1. The BG issued in Indian Rupees by Banks in India is to be executed 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/Bank issuing the guarantee.
2. No deviation for the duration and value of PBG will be permitted.
3. PBG shall be from any of the BHEL consortium of bankers (**refer Annexure VI**).
4. PBGs from nationalized banks are also acceptable.
5. PBG should be sent directly by the bank to the dealing executive mentioned in the purchase order located at the address mentioned in the purchase order.
6. PBG should be in the format specified (**refer Annexure VII**). No deviation to this format will be allowed. However in case BHEL changes the PBG format, bidder shall honor the same.
7. Bank Guarantee should be enforceable in Bangalore.
8. 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 Bangalore.
 - b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)
 - b.1 Please note 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 shall be noted that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor.

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 is 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).

9. Expired BGs / PBGs will be returned only after expiry of the claim period or on completion of the contractual obligation with respect to Purchase Order.

10. PBG shall not be applicable for spares.

I. PROVISIONS APPLICABLE FOR MSE VENDORS (MICRO AND SMALL ENTERPRISES) :

Benefits/facilities as applicable for Micro and Small Enterprises (MSEs) shall be available to MSEs registered with Government designated authorities as per the Purchase & Price Preference Policy of the Government subject to them becoming eligible otherwise.

Vendors who qualify as MSE vendors are requested to submit applicable certificates (as specified by the Ministry of Micro, Small and Medium Enterprises) at the time of vendor registration. Vendors have to submit any of the following documents along with the tender documents in the Part-I bid to avail the applicable benefits:

- a. Attested copy of valid NSIC certificate or
- b. Attested copy of either Entrepreneur's Memorandum part II (EM II) certificate/Udyog Aadhar certificate having deemed validity (five years from the date of issue of acknowledgement in EM II/Udyog Aadhar) or
- c. EM II/ Udyog Aadhaar certificate along with attested copy of a CA certificate (Format enclosed at Annexure VIII where deemed validity of EM II certificate/ Udyog Aadhar certificate of five years have expired) applicable for the relevant financial year (latest audited).

Date to be reckoned for determining the deemed validity will be the date of bid opening (Part-I in case of two-part bid and three-part bid).

Documents have to be notarized/attested by a Gazetted officer and must be valid as on the date of part I bid opening for the vendors to be eligible for the benefits applicable for MSE vendors. Please note that no benefit shall be applicable if any deficiency in the above required documents are not submitted before the price bid opening/Reverse Auction. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal.

Bidders to however note the documents that shall be furnished in order to establish credentials as MSE vendor should be as per the extant statutory requirements specified by the Ministry of Micro, Small and Medium Enterprises.

d. PURCHASE PREFERENCE FOR MSE VENDORS:

MSE vendors quoting within a price band of L1 + 15% shall be allowed to supply up to 25% of the requirement against this tender provided

1. The MSE vendor matches the L1 price.
2. L1 price is from a non MSE vendor.
3. L1 price will be offered to the vendor nearest to L1 in terms of price ranking (L2 - nearest to L1). In case of non-acceptance by the MSE vendor (L2), next ranking MSE vendor will be offered who is within the L1 + 15% band (if L3 is also within 15% band).
4. 3% of the 25% will be earmarked for women owned MSEs.
5. 25% of the 25% (i.e., 6.25% of the total enquired quantity) will be earmarked for SC/ST owned MSE firms provided conditions as mentioned in (1) & (2) are fulfilled.

6. In case where no SC/ST category firms are meeting the conditions mentioned in (1) and (2) or have not participated in the tender, the 6.25% of earmarked quantity for SC/ST owned MSE firms will be distributed among the other eligible MSE vendors who have participated in the tender.
7. In case after the bid opening it is seen that no MSE has become L1, then depending on the nature of the item, if it is not possible to split the tendered items/quantities on account of reasons like customer contract requirements of supplying one make for a given project or technical reasons like the tendered item being a system etc., then BHEL would not counter offer the L1 prices even though there may be MSE bidders within the +15% band of L1. Such information that tendered quantity will not be split shall be indicated in the SCC.

J. INTEGRITY COMMITMENT IN THE TENDER PROCESS, AND EXECUTION OF CONTRACTS:

1. Commitment by BHEL: BHEL commits to take all measures necessary to prevent corruption in connection with the Tender process and execution of the Contract. BHEL will, during the tender process, treat all bidder / suppliers in a transparent and fair manner, and with equity.
2. Commitment by Bidder(s)/ Contractor(s):
 - a. The Bidder(s)/ Contractor(s) commit(s) to take all measures to prevent corruption and will not directly or indirectly try to influence any decision or benefit which he is not legally entitled to.
 - b. The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding or any actions to restrict competition.
 - c. The Bidder(s)/ Contractor(s) will not commit any offence under the relevant Acts. 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 BHEL as part of business relationship.
 - d. 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 and shall adhere to the relevant guidelines issued from time to time by Government of India/ BHEL.

If the Bidder(s) / Contractor(s), before award or during execution of the Contract commit(s) a transgression of the above or in any other manner such as to put his reliability or credibility in question, BHEL is entitled to disqualify the Bidder(s) / Contractor (s) from the tender process or terminate the contract and/ or take suitable action as deemed fit.

K. Integrity Pact (IP):

- a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner.
A panel of independent External Monitors (IEMs) have been appointed to oversee implementation of IP in BHEL.
The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory who signs in the offer) along with techno-commercial 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.
- b) Please refer Section-8 of the IP for Role and Responsibilities of IEMs (Annexure IX). In case of any complaint arising out of the tendering process, the matter may be referred to the IEM mentioned in the tender.

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."

Annexure

Annexure I
Guidelines for Indian Agents

- **Definition of Indian Agent:** An Indian Agent of foreign principal is an individual, a partnership, an association of persons, a private or public company, that carries out specific obligation(s) towards processing of BHEL tender or finalization or execution of BHEL's contract on behalf of the foreign supplier.

In case of yes, vendor to note the following and reply accordingly:

- i. BHEL shall deal directly with foreign vendors, wherever required, for procurement of goods. However, if the foreign principal desires to avail of the services of an Indian agent, then the foreign principal should ensure compliance to regulatory guidelines - which require mandatory submission of an Agency Agreement.
- ii. It shall be incumbent on the Indian agent and the foreign principal to adhere to the relevant guidelines of Government of India, issued from time to time.
- iii. The Agency Agreement should specify the precise relationship between the foreign OEM / foreign principal and their Indian agent and their mutual interest in the business. All services to be rendered by agent/ associate, whether of general nature or in relation to the particular contract, must be clearly stated by the foreign supplier/ Indian agent. Any payment, which the agent or associate receives in India or abroad from the OEM, whether as commission or as a general retainer fee should be brought on record in the Agreement and be made explicit in order to ensure compliance to laws of the country.
- iv. Any agency commission to be paid by BHEL to the Indian agent shall be in Indian currency only.
- v. Tax deduction at source is applicable to the agency commission paid to the Indian agent as per the prevailing rules.
- vi. In the absence of any agency agreement, BHEL shall not deal with any Indian agent (authorized representatives / associate / consultant, or by whatever name called) and shall deal directly with the foreign principal only for all correspondence and business purposes.
- vii. The "Guidelines for Indian Agents of Foreign Suppliers" enclosed at annexure - 'A' shall apply in all such cases.

- viii. The supply and execution of the Purchase Order (including indigenous supplies/ service) shall be in the scope of the OEM/ foreign principal. The OEM/ foreign principal should submit their offer inclusive of all indigenous supplies/ services and evaluation will be based on 'total cost to BHEL'. In case OEM/ foreign principal recommends placement of order(s) towards indigenous portion of supplies/ services on Indian supplier(s)/ agent on their behalf, the credentials/ capacity/ capability of the Indian supplier(s)/ agent to make the supplies/ services shall be checked by BHEL as per the extant guidelines of Supplier Evaluation, Approval & Review Procedure (SEARP), before opening of price bids. In this regard, details may be checked as per Annexure-B (copy enclosed). It will be the responsibility of the OEM/ foreign principal to get acquainted with the evaluation requirements of Indian supplier/ agent as per SEARP available on www.bhel.com.

The responsibility for successful execution of the contract (including indigenous supplies/ services) lies with the OEM/ foreign principal. All bank guarantees to this effect shall be in the scope of the OEM/ foreign principal.

—X—

Vendor's Signature with Seal

Guidelines for Indian Agents of Foreign Suppliers

- 1.0 There shall be compulsory registration of agents for all Global (Open) Tender and Limited Tender. An agent who is not registered with BHEL shall apply for registration in the registration form in line with SEARP.
- 1.1 Registered agents will file an authenticated Photostat copy duly attested by a Notary Public/Original certificate of the Principal confirming the agency agreement and giving the status being enjoyed by the agent and the commission/ remuneration/ salary/ retainership being paid by the principal to the agent before the placement of order by BHEL.
- 1.2 Wherever the Indian representatives have communicated on behalf of their principals and the foreign parties have stated that they are not paying any commission to the Indian agents, and the Indian representative is working on the basis of salary or as retainer, a written declaration to this effect should be submitted by the party (i.e. Principal) before finalizing the order.
- 2.0 **Disclosure of particulars of agents/ representatives in India, if any.**
- 2.1 Tenderers of Foreign nationality shall furnish the following details in their offers:
 - 2.1.1 The Bidder(s)/ Contractor(s) of foreign origin shall disclose the name and address of the agents/ representatives in India if any and the extent of authorization and authority given to commit the Principals. In case the agent/ representative be a foreign Company, it shall be confirmed whether it is existing Company and details of the same shall be furnished.
 - 2.1.2 The amount of commission/ remuneration included in the quoted price(s) for such agents/ representatives in India.
 - 2.1.3 Confirmation of the Tenderer that the commission/ remuneration, if any, payable to his agents/ representatives in India, may be paid by BHEL in Indian Rupees only.
- 2.2 Tenderers of Indian Nationality shall furnish the following details in their offers:
 - 2.2.1 The Bidder(s)/ Contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any, indicating their nationality as well as their status, i.e. whether manufacturer or agents of manufacturer holding the Letter of Authority of the Principal specifically authorizing the agent to make an offer in India in response to tender either directly or through the agents/ representatives.
 - 2.2.2 The amount of commission/ remuneration included in the price (s) quoted by the Tenderer for himself.
 - 2.2.3 Confirmation of the foreign principals of the Tenderer that the commission/ remuneration, if any, reserved for the Tenderer in the quoted price(s), may be paid by BHEL in India in equivalent Indian Rupees on satisfactory completion of the Project or supplies of Stores and Spares in case of operation items.
- 2.3 In either case, in the event of contract materializing, the terms of payment will provide for payment of the commission/ remuneration, if any payable to the agents/ representatives in India in Indian Rupees on expiry of 90 days after the discharge of the obligations under the contract.
- 2.4 Failure to furnish correct and detailed information as called for in paragraph 2.0 above will render the concerned tender liable to rejection or in the event of a contract materializing, the same liable to termination by BHEL. Besides this there would be a penalty of banning business dealings with BHEL or damage or payment of a named sum.

ANNEXURE - II
LIST OF INTERNATIONAL GATEWAY AIRPORTS

For air based consignment, terms of delivery will be on FCA basis from following listed airports only. Vendors are requested to verify this list for use before submission of offer.

SCHEDULE NO	COUNTRY	CURRENCY CODE	AIRPORT
D01	UK	GBP	LONDON (HEATHROW)
D02	UK	GBP	NEW CASTLE
D03	UK	GBP	OXFORD. CHETLAM
D04	UK	GBP	BRISTOL. WELLINGBOROUGH
D05	UK	GBP	BIRMINGHAM
D06	UK	GBP	EAST MIDLANDS
D07	UK	GBP	MANCHESTER
D08	UK	GBP	LEEDS
D09	UK	GBP	GLASGOW
D10	FRANCE	EURO	PARIS (ROISSY) & LYON
D11	SWEDEN	EURO	STOCKHOLM
D12	SWEDEN	EURO	GOTHENBERG & MALMO
D13	ITALY	EURO	ROMA, MILAN
D14	ITALY	EURO	TURIN, BOLOGNA, FLORENCE
D15	NETHERLANDS	EURO	AMSTERDAM, ROTTERDAM
D16	AUSTRIA	EURO	VIENNA, LINZ, GRAZ
D17	BELGIUM	EURO	ANTWERP, BRUSSELS
D18	DENMARK	DKK	COPENHAGEN
D19	JAPAN	JPY	TOKYO, OSAKA
D20	SINGAPORE	SGD	SINGAPORE
D21	CANADA	CAD	TORONTO
D22	CANADA	CAD	MONTREAL
D23	USA	USD	NEW YORK, BOSTON
D24	USA	USD	CHICAGO
D25	USA	USD	SAN FRANCISCO, LOS ANGELES
D26	USA	USD	ALANTA, HOUSTON
D27	GERMANY	EURO	MUNICH, KOLN, DUSSELDORF, HANNOVER, HAMBURG, STUTTGART, DAMSTADT, MANIHIEM, NURUMBERG
D28	GERMANY	EURO	FRANKFURT
D29	GERMANY	EURO	BERLIN
D30	SWITZERLAND	SFR	BASLE, ZURICH, GENEVA
D31	SPAIN	EURO	BARCELONA
D32	AUSTRALIA	AUD	SYDNEY
D33	AUSTRALIA	AUD	MELBOURNE
D34	AUSTRALIA	AUD	PERTH
D35	CZECH	EURO	PRAGUE
D36	HONG KONG	HKD	HONG KONG
D37	NEW ZELAND	NZD	AUCKLAND
D38	RUSSIA	USD	MOSCOW
D39	SOUTH KOREA	USD	KIMPO INTERNATIONAL, INCHEON
D40	FINLAND	EURO	HELSINKI
D41	ROMANIA	EURO	BUCHAREST
D42	NORWAY	EURO	OSLO
D43	IRELAND	EURO	DUBLIN
D44	ISRAEL	USD	TEL AVIV
D45	UAE	USD	DUBAI
D46	OMAN	USD	MUSCAT
D47	EGYPT	USD	CAIRO
D48	TAIWAN	USD	TAIPEI
D49	UKRAINE	USD	KIEV
D50	CHINA	USD	SHANGHAI, SHENZHEN
D51	PHILIPINES	USD	MANILA
D52	MALAYSIA	USD	KUALALUMPUR, PE NANG
D53	CYPRUS	USD	LARNACA
D54	SOUTH AFRICA	USD	JOHANNESBERG, DURBAN
D55	SLOVAKIA	EURO	BARTISLOVA
D56	SAUDI ARABIA	SAR	RIYADH
D57	TURKEY	EURO	ISTANBUL
D58	THAILAND	USD	BANGKOK
D59	BRAZIL	USD	SAO PAULO, RIO DE JANEIRO

ANNEXURE – III

DISCREPANCY IN WORDS & FIGURES – QUOTED IN PRICE BID

Following guidelines will be followed in case of discrepancy in words & figures-quoted in price bid:

(a) If, in the price structure quoted for the required goods/services/works, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of the purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly.

(b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and

(c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

(d) If there is such discrepancy in an offer, the same shall be conveyed to the bidder with target date upto which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of the purchaser, the bid is liable to be ignored.

ANNEXURE - IV
Electronic Funds Transfer (EFT) OR
Paylink Direct Credit Form

Please Fill up the form in **CAPITAL LETTERS** only.

TYPE OF REQUEST(Tick one): ☐ CREATE ☐ CHANGE

BHEL Vendor / Supplier Code:

Company Name :

Permanent Account Number(PAN):

Address

City:

PINCODE

STATE

Contact Person(s)

Telephone No:

Fax No:

e-mail id:

1 Bank Name:

2 Bank Address:

3 Bank Telephone No:

4 Bank Account No:

5 Account Type: Savings/Cash Credit

6 9 Digit Code Number of Bank and branch

appearing on MICR cheque issued by Bank

7 Bank IFSC Code(applicable for NEFT)

8 Bank IFSC code(applicable for RTGS)

(Indian Financial System Code)

- A I hereby certify that the particulars given above are true, correct and complete and that I, as a representative for the above named Company, hereby authorise BHEL, EDN, Bangalore to electronically deposit payments to the designated bank account.
- B If the transaction is delayed or not effected at all for reasons of incomplete or incorrect information, I would not hold BHEL / transferring Bank responsible.
- C This authority remains in full force until BHEL, EDN, Bangalore receives written notification requesting a change or cancellation.
- D I have read the contents of the covering letter and agree to discharge the responsibility expected of me as a participant under ECS / EFT.

Date:

Authorised Signatory:

Designation:

Telephone No. with STD Code

Company Seal

Bank Certificate

We certify that _____ has an Account No _____ with us and we confirm that the bank details given above are correct as per our records.

Date:

(.....)

Place:

Signature

Please return completed form along with a blank cancelled cheque or photocopy thereof to:

Bharath Heavy Electricals Ltd,

Attn:

Electronics Division, Mysore Road,

BANGALORE - 560 026

In case of any Query, please call concerned purchase executive.

ANNEXURE - V
PRESENT PROCEDURE FOR SALE IN TRANSIT (HIGH SEA SALES)

In case of High Sea Sales, vendor should submit following documents:

1. ORIGINAL HIGH SEA SALES AGREEMENT

- Sale agreement (on Rs. 200/- non-judicial stamp paper & notarised with 2 witnesses with identity) has to be signed between BHEL and the Party importing material. The date of the sale documents should be in between the date of House Air Way Bill / Bill of Lading and before landing of the goods in Indian origin.
- Following shall be included in the High Sea Sales Agreement:
"THE BUYER ALSO UNDERTAKE DISCHARGES, THE OBLIGATION AND FULFILLMENT OF CONDITIONS, IF ANY, ATTACHED TO THE IMPORTATION, ASSESSMENT AND CLEARANCE OF THE GOODS IN TERMS CUSTOMS TARIFF ACT 1975, THE CUSTOMS ACT 1962 & RULES & REGULATIONS MADE THERE UNDER AND OTHER RELEVANT ACTS, ORDERS, NOTIFICATIONS".

2. ORIGINAL INVOICES: INDIGENOUS RUPEE INVOICE & FOREIGN CURRENCY INVOICE

- Prices should be C.I.F., designated airport/seaport basis.
- I.E.C., C.S.T., K.S.T. Nos. to be mentioned.
- Description of item (Nomenclature), Unit & Quantity in both the Foreign Currency & the Indigenous Invoice in Rupee shall be exactly as per Purchase Order Description of item, Quantity and Unit. The Indigenous Invoice value shall be exactly as per Purchase Order value.
- Seller should give Foreign Currency Invoice from the original consignor. The Foreign Currency Invoice value should be at least 2% (two per cent) less than the Indigenous Rupee Invoice value in equivalent foreign currency.

4. ORIGINAL HOUSE AIR WAY BILL/ BILL OF LADING

- The sale agents should duly endorse House Air Way Bill (HAWB) for air shipments or original Bill of Lading (O.B.L.) for sea shipments and Foreign Currency Invoice in favour of BHEL-EDN.

5. ORIGINAL CARGO ARRIVAL NOTICE FROM FORWARDER.

6. ORIGINAL DELIVERY ORDER ISSUED IN NAME OF BHEL-EDN.

7. ORIGINAL PACKING LIST.

8. A LETTER TO THE COMMISSIONER OF CUSTOMS FOR EFFECTING ABOVE SALE.

9. A LETTER TO THE DEPUTY ASSESSOR (OCTROI) FOR EFFECTING ABOVE SALE IN FAVOUR OF BHEL.

REMARKS: In case vendor needs any clarifications on the above, the same may be sought in writing.

Annexure-VI

BHEL MEMBER BANKS (LIST OF CONSORTIUM BANKS)

BANK GUARANTEE (BG) SHALL BE ISSUED FROM THE FOLLOWING BANKS ONLY:

	Nationalised Banks		Nationalised Banks
1	Allahabad Bank	19	Vijaya Bank
2	Andhra Bank		Public Sector Banks
3	Bank of Baroda	20	IDBI
4	Canara Bank		Foreign Banks
5	Corporation Bank	21	CITI Bank N.A
6	Central Bank	22	Deutsche Bank AG
7	Indian Bank	23	The Hongkong and Shanghai Banking Corporation Ltd. (HSBC)
8	Indian Overseas Bank	24	Standard Chartered Bank
9	Oriental Bank of Commerce	25	J P Morgan
10	Punjab National Bank		
11	Punjab & Sindh Bank		Private Banks
12	State Bank of India	26	Axis Bank
13	State Bank of Hyderabad	27	The Federal Bank Limited
14	Syndicate Bank	28	HDFC Bank
15	State Bank of Travancore	29	Kotak Mahindra Bank Ltd
16	UCO Bank	30	ICICI Bank
17	Union Bank of India	31	IndusInd Bank
18	United Bank of India	32	Yes Bank

Note:

- All BGs must be issued from BHEL consortium banks listed above.
- This list is subject to changes. Hence vendors are requested to check this list every time before issuing BGs.
- Bank Guarantees issued by Co-Operative Banks/Financial Institutions cannot to be accepted under any circumstance.

Annexure-VII

BANK GUARANTEE FOR PERFORMANCE SECURITY

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 _____¹ through its Unit at.....(name of the Unit) having awarded to (Name of the Vendor / Contractor / Supplier) with its registered office at _____² hereinafter referred to as the 'Vendor / Contractor / Supplier', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated³ valued at Rs.....⁴ (Rupees -----)/FC.....(in words.....) for⁵ (hereinafter called the 'Contract') and the Vendor / Contractor / Supplier having agreed to provide a Contract Performance Bank Guarantee, equivalent to% (.... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

we,, (hereinafter referred to as the Bank), having registered/Head office at and inter alia a branch at being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer any sum or sums upto a maximum amount of Rs --⁶ (Rupees -----) without any demur, immediately on first demand from the Employer and without any reservation, protest, and recourse and without the Employer 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 notwithstanding any dispute or disputes raised by the Vendor / Contractor / Supplier 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 Vendor / Contractor / Supplier 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 Vendor / Contractor / Supplier and notwithstanding any security or other guarantee that the Employer may have in relation to the Vendor / Contractor / Supplier 's liabilities.

This Guarantee shall remain in force upto and including.....⁷ and shall be extended from time to time for such period as may be desired by Employer.

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 the⁸we shall be discharged from all liabilities under this guarantee thereafter.

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.....⁶
- b) This Guarantee shall be valid up to⁷
- 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.

We, _____ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of
(Name of the Bank)

Dated.....

Place of Issue.....

¹ NAME AND ADDRESS OF EMPLOYER I.e Bharat Heavy Electricals Limited

² NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ CONTRACT VALUE

⁵ PROJECT/SUPPLY DETAILS

⁶ BG AMOUNT IN FIGURES AND WORDS

⁷ VALIDITY DATE

⁸ DATE OF EXPIRY OF CLAIM PERIOD

Annexure – VIII
(Applicable only for MSE suppliers)
Certificate by Chartered Accountant on Letter Head

This is to certify that M/s
.....(hereinafter referred to as 'Company')
having its registered office at is registered under MSMED Act 2006,
(Entrepreneur Memorandum No (Part-11 dtd
Category: (Micro/Small) (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as
per the latest audited financial year..... as per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original
cost excluding land and building and the items specified by the Ministry of Small
Scale Industries vide its notification No.S.O.1722 (E) dated October 5, 2006:
Rs.....Lacs.
2. **For Service Enterprises:** Investment in equipment (original cost excluding land and
building and furniture, fittings and other items not directly related to the service
rendered or as may be notified under the MSMED Act, 2006:
Rs.Lacs.

The above investment of Rs.Lacs in within permissible limit of
Rs.....Lacs for.....Micro / Small (Strike off which is not
applicable) Category under MSMED Act 2006.

Or

The company has been graduated from its original category (Micro/ Small) (**Strike off which is
not applicable**) and the date of graduation of such enterprise from its original category is
..... (dd/mm/yyyy) which is within the period of 3 years from the date of graduation of
such enterprise from its original category as notified vide S.O. No. 3322(E) dated 01.11.2013
published in the gazette notification dated 04.11.2013 by Ministry of MSME.

Date:

(Signature)

Name:

Membership Number:

Seal of Chartered Accountant

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 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

Preamble

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 IPC/ PC 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 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.

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 Bidder(s)/ Contractor(s) undertake(s) to obtain from all subcontractors a commitment consistent with this Integrity Pact and report Compliance to the Principal. This commitment shall be taken only from those sub-contractors whose contract value is more than 20 % of Bidder's/ Contractor's contract value with the Principal. The Bidder(s)/ Contractor(s) shall continue to remain responsible for any default by his Sub-contractor(s).
- 6.2 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
- 6.3 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 /Sub-contractors

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.
- 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 As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or heal the situation, or to take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- 8.6 The Monitor will submit a written report to the CMD, BHEL within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.
- 8.7 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.8 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant IPC / PC 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.

8.9 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.

8.10 The word 'Monitor' would include both singular and plural.

Section 9 – Pact Duration

9.1 This Pact begins and shall be binding on and from the submission of bid(s) by bidder(s). It expires for the Contractor 12 months after the last payment under the respective contract and for all other Bidders 6 months after the contract has been awarded.

9.2 If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified as 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.

For & On behalf of the Principal

(Office Seal)

Place-----

Date-----

Witness: _____

(Name & Address) _____

For & On behalf of the Bidder/ Contractor

(Office Seal)

Witness: _____

(Name & Address) _____



ಭಾರತ್ ಹೆವಿ ಎಲೆಕ್ಟ್ರಿಕಲ್ಸ್ ಲಿಮಿಟೆಡ್
भारत हेवी इलेक्ट्रिकल्स लिमिटेड

Bharat Heavy Electricals Ltd.,
(A Government of India undertaking)
Electronics Division

PB 2606 , Mysore Road Bangalore , 560026 INDIA

CE: PR: 002- Rev 01

GENERAL COMMERCIAL CONDITIONS FOR CONTRACT

These 'General Commercial Conditions for Contract for Purchase' herein after referred to as GCC apply to all enquiries, tenders, requests for quotations, orders, contracts and agreements concerning the supply of goods and the rendering of related services (hereinafter referred to as "deliveries") to Bharat Heavy Electricals Limited and any of its units, regions or divisions (hereinafter referred to as "BHEL" or the Purchaser) or its projects/ customers.

Any deviations from or additions to these GCC require BHEL's express written consent. The general terms of business or sale of the vendor shall not apply to BHEL. Acceptance, receipt of shipments or services or effecting payment shall not mean that the general terms of business or sale of the vendor have been accepted.

Orders, agreements and amendments thereto shall be binding if made or confirmed by BHEL in writing. Only the Purchasing department of BHEL is authorized to issue the Purchase Order or any amendment thereof.

Definitions: Throughout these conditions and in the specifications, the following terms shall have the meanings assigned to them, unless the subject matter or the context requires otherwise.

- 'The Purchaser' means Bharat Heavy Electricals Limited, Electronics division, Mysore road, Bangalore 560 026, a Unit of Bharat Heavy Electricals Limited (A Govt. of India Undertaking) incorporated under the Companies Act having its registered office at BHEL House, Siri Fort, New Delhi-110049, India and shall be deemed to include its successors and assigns. It may also be referred to as BHEL.
- 'The vendor' means the person, firm, company or organization on whom the Purchase Order is placed and shall be deemed to include the vendor's successors, representative heirs, executors and administrator as the case may be. It may also be referred to as Seller, Contractor or Supplier.
- 'Contract' shall mean and include the Purchase Order incorporating various agreements, viz. tender/ RFQ, offer, letter of intent/acceptance/ award, the General Conditions of Contract and Special Conditions of Contract for Purchase, Specifications, Inspection/ Quality Plan, Schedule of Prices and Quantities, Drawings, if any enclosed or to be provided by BHEL or his authorized nominee and the samples or patterns if any to be provided under the provisions of the contract.
- 'Parties to the Contract' shall mean the 'The Vendor' and the Purchaser as named in the main body of the Purchase Order.

Order of Precedence:

In case of any inconsistency or contradiction between any of the documents, the order of precedence shall be Purchase Order, LOI / LOA, Special Conditions of Contract and General Conditions of Contract for commercial conditions; and specific agreement on technical conditions, RFQ/offer and specification for Technical Conditions.

Interpretation:

In the contract, except where the context requires otherwise:

- words indicating one gender include all genders;
- words indicating the singular also include the plural and words indicating the plural also include the singular;

- c) provisions including the word "agree", "agreed" or "agreement" require the agreement to be recorded in writing, and
- d) "Written" or "in writing" means hand-written, type-written, printed or electronically made, and resulting in a permanent record.

Applicable Conditions:

1. **Price Basis:** All prices shall be firm until the purchase order is executed / completed in all respects. No price variations / escalation shall be permitted.
2. **Ordering and confirmation of Order:** Vendor shall send the order acceptance on their company letter head/ through e-mail within a week from the date of receipt of Purchase Order or such other period as specified/ agreed by BHEL. BHEL reserves the right to revoke the order placed if the order confirmation differs from the original order placed. The acceptance of goods/services/supplies by BHEL as well as payments made in this regard shall not imply acceptance of any deviations.
The purchase order will be deemed to have been accepted if no communication to the contrary is received within one week (or the time limit as specified/agreed by BHEL) from the date of receipt of the purchase order.
3. **Documentation:** After receipt of Purchase Order, vendor should submit necessary documents (if & as applicable) like drawings specified, bill of materials, datasheets, catalogues, quality plan, test procedure, type test report, O & M Manuals and/or any other relevant documents as per Specification/Purchase Order, as and when required by BHEL/Customer.
At any stage within the contract period, the vendor shall notify of any error, fault or other defect found in BHEL's documents / specifications or any other items for reference. If and to the extent that (taking account of cost and time) any vendor exercising due care would have discovered the error, fault or other defect when examining the documents/specifications before submitting the tender, the time for completion shall not be extended. However if errors, omissions, ambiguities, inconsistencies, inadequacies or other defects are found in the vendor's documents, they shall be corrected at his cost, notwithstanding any consent or approval.
4. **Penalty:**
 - a. **For delay in documentation:** In the event of delay in submission of complete set of specified documents ((like drawings, bill of materials, datasheets, catalogues, quality plan etc. as called in tender specifications including soft copies wherever applicable) in required sets beyond two(02) weeks (or as agreed/indicated in the SCC/Purchase Order) from the date of receipt of Purchase Order (by email), penalty at 0.5% (half percent) per week or part thereof, limited to a maximum of 5% (five percent) of the basic material value of the Purchase Order will be applicable.

Penalty for delayed documentation if applicable, shall be deducted at the time of first supply payment. If penalty is applicable for duration of less than a week, penalty @ 0.5% (half percent) of the basic material value will be deducted. GST as applicable will be recovered along with penalty amount.
 - b. **For delay in delivery:** In the event of delay in agreed contractual delivery as per Purchase Order, penalty @ 0.5 % (half percent) per week or part thereof but limited to a max of 10% (ten percent) value of undelivered portion (basic material cost) will be applicable. Delivery will commence from the date of issue of Manufacturing clearance along with approved document. The date for which Inspection call is issued by vendor along with test certificates / test reports / Certificate of Conformance / calibration reports, as proof of completion of manufacturing will be treated as date of deemed delivery for penalty calculation. In the absence of furnishing such document indicated above as proof of completion of manufacturing along with inspection call, actual date of inspection will be considered as date of deemed delivery and BHEL will not be responsible for delay in actual date of inspection.



Penalty for delayed delivery if applicable, shall be deducted at the time of first supply payment. If penalty is applicable for duration of less than a week, penalty @ 0.5% (half percent) of the basic material value will be deducted. GST as applicable will be recovered along with penalty amount.

5. Contract variations (Increase or decrease in the scope of supply): BHEL may vary the contracted scope as per requirements at site. If vendor is of the opinion that the variation has an effect on the agreed price or delivery period, BHEL shall be informed of this immediately in writing along with technical details. Where unit rates are available in the Contract, the same shall be the basis for such additional work. Vendor shall not perform additional work before BHEL has issued written instructions/ amendment to the Purchase Order to that effect. The work which the vendor should have or could have anticipated in terms of delivering the service(s) and functionality (i.e.) as described in this agreement, or which is considered to be the result of an attributable error on the vendor's part, shall not be considered additional work.
6. Inspection: Prior written notice of at least 10 days shall be given along with internal test certificates/COC and applicable test certificates. Materials will be inspected by BHEL-EDN-QS/CQS or BHEL nominated Third Party Inspection Agency (TPIA) or BHEL authorized Inspection Agency or Customer / Consultant or jointly by BHEL & Customer / consultant. All tests have to be conducted as applicable in line with approved Quality plan or QA Checklist or Purchase specification and original reports shall be furnished to BHEL-EDN, Bangalore for verification/acceptance for issue of dispatch clearance.
All costs related to inspections & re-inspections shall be borne by vendor. Whether the Contract provides for tests on the premises of the vendor or any of his Sub-contractor/s, vendor shall be responsible to provide such assistance, labour, materials, electricity, fuels, stores, apparatus, instruments as may be required and as may be reasonably demanded to carry out such tests efficiently. Cost of any type test or such other special tests shall be borne by BHEL only if specifically agreed to in the purchase order.
7. Transit Insurance: Transit insurance coverage between vendor's works and project site shall be to the account of BHEL, unless specifically agreed otherwise. However, vendor shall send intimation directly to insurance agency (as mentioned in dispatch instructions issued by BHEL) through fax/courier/e-mail, immediately on dispatch of goods for covering insurance. A copy of such intimation sent by vendor to insurance agency shall be given to BHEL along with dispatch documents. Dispatch documents will be treated as incomplete without such intimation copy. BHEL shall not be responsible for sending intimations to insurance agency on behalf of the vendor.
8. Mode of dispatch:
Indigenous Scope: By road on Door Delivery Consignee Copy attached basis through your approved transporter (unless otherwise indicated in Dispatch Instructions), only on receipt of Despatch Clearance from BHEL.
Imported Scope: By Air/Sea through BHEL approved Freight Forwarder/supplier approved Consolidator respectively as per agreed contractual terms, only on receipt of Dispatch Clearance from BHEL.
9. Changes in Statutory levies:
If any rates of Tax are increased or decreased, a new Tax is introduced, an existing Tax is abolished, or any change in interpretation or application of any Tax occurs in the course of the execution of Contract, which was or will be assessed on the bidder in connection with performance of the Contract, an equitable adjustment of the Contract Price shall be made to fully take into account any such change by addition to the Contract Price or deduction there from, as the case may be. However, these adjustments would be restricted to direct transactions between BHEL and the bidder /agent of foreign bidder (if applicable). These adjustments shall not be applicable on procurement of raw materials, intermediary components etc. by the bidder /agent.
10. Availing duty/tax exemption benefits by bidder, wherever applicable: BHEL shall issue the required Certificate/s, as per relevant policies of the Govt. of India, to facilitate the bidders to avail any such benefits under the Contract. In case of failure of the bidders to receive the benefits partly or fully from the Govt. of India and/or in case of any delay in receipt of such benefits, BHEL shall neither be liable nor responsible in any manner whatsoever.



11. Taxes against sub-vendor dispatches: All taxes/levies, as applicable in respect of all components, equipments and material to be despatched directly from the sub-vendor's works to Site irrespective of the fact whether such taxes and levies are assessable and chargeable on Vendor or the BHEL, shall be to the vendor's account and no separate claim in this regard will be entertained by BHEL.
12. High Sea Sales (HSS): Customs clearance of the consignment landed on Indian Sea/Air ports will be done by BHEL based on the original HSS documents provided by vendors.
Any delay in submission of complete/correct HSS documents to BHEL may incur demurrage charges. All demurrage charges on account of incomplete /incorrect HSS documents submission by vendor will be to vendor's account and all such charges will be recovered from any of the available vendor bills with BHEL.
13. Packaging and dispatch: The Seller shall package the goods safely and carefully and pack them suitably in all respects considering the peculiarity of the material for normal safe transport by Sea/ Air / Rail/ Road to its destination suitably protected against loss, damage, corrosion in transit and the effect of tropical salt laden atmosphere. The packages shall be provided with fixtures/ hooks and sling marks as may be required for easy and safe handling. If any consignment needs special handling instruction, the same shall be clearly marked with standard symbols / instructions. Hazardous material should be notified as such and their packing, transportation and other protection must conform to relevant regulations.
The packing, shipping, storage and processing of the goods must comply with the prevailing legislation and regulations concerning safety, the environment and working conditions. Any Imported/Physical Exports items packed with raw/ solid wood packing material should be treated as per ISPM – 15 (fumigation) and accompanied by Phytosanitary/ Fumigation certificate. If safety information sheets (MSDS – Material Safety Data Sheet) exist for an item or the packaging, vendor must provide this information without fail along with the consignment.
Each package must be marked with Consignee name, Purchase order number, Package number, Gross weight and net weight, dimensions (LxBxH) and Seller's name. Packing list of goods inside each package with PO item number and quantity must also be fixed securely outside the box to indicate the contents of each box. Total number of packages in the consignment must also be indicated in the packing list.
Separate packing & identification of items should be as follows.
 1. Main Scope - All items must be tagged with part no. & item description.
 2. Commissioning accessories/spares - All items must be tagged with part no. & item description.
 3. Mandatory spares - All items must be tagged with part no. & item description.
 Nevertheless, vendor shall adhere to dispatch & packing instructions issued by BHEL at the time of dispatch.
14. Assignment of Rights & Obligations; Subcontracting: Vendor is not permitted to subcontract the delivery or any part thereof to third party or to assign the rights and obligations resulting from this agreement in whole or in part to third parties without prior written permission from BHEL. Any permission or approval given by the BHEL shall, however, not absolve the vendor of the responsibility of his obligations under the Contract.
15. Progress report: Vendor shall render such report as to the progress of work and in such form as may be called for by the concerned purchase officer from time to time. The submission and acceptance of such reports shall not prejudice the rights of BHEL in any manner.
16. Non-disclosure and Information Obligations: Vendor shall provide with all necessary information pertaining to the goods as it could be of importance to BHEL. Vendor shall not reveal any specified confidential information that may be divulged by BHEL to Vendor's employees not involved with the tender/ contract & its execution and delivery or to third parties, unless BHEL has agreed to this in writing beforehand. Vendor shall not be entitled to use the BHEL name in advertisements and other commercial publications without prior written permission from BHEL.
17. Cancellation /Termination of contract: BHEL shall have the right to completely or partially terminate the agreement by means of written notice to that effect. Termination of the Contract, for whatever reason, shall be without prejudice to the rights of the parties accrued under the Contract up to the time of termination.
BHEL shall have the right to cancel/foreclose the Order/ Contract, wholly or in part, in case it is constrained to do so on account of any decline, diminution, curtailment or stoppage of the business.



18. Risk Purchase Clause: In case of failure of supplier, BHEL at its discretion may make purchase of the materials / services not supplied / rendered in time at the RISK & COST of the supplier. Under such situation, the supplier who fails to supply the goods in time shall be wholly liable to make good to BHEL any loss due to risk purchase.

In case of items demanding services at site like erection and commissioning, vendor should send his servicemen/representatives within 7 days from the service call. In case a vendor fails to attend to the service call, BHEL at its discretion may also make arrangements to attend such service by other parties at the **RISK & COST** of the supplier. Under such situation the supplier who fails to attend the service shall be wholly liable to make good to BHEL any loss due to risk purchase/service including additional handling charges due to the change.

19. Shortages: In the event of shortage on receipt of goods and/or on opening of packages at site, all such shortages, caused by supplier's act or omission, shall be made good at free of cost within a reasonable time that BHEL may allow from such intimation.

Transit Damages: In the event of receipt of goods in damaged condition or having found them so upon opening of packages at site, supplier shall make good of all such damages within a reasonable time from such intimation by BHEL. In case BHEL raises an insurance claim, the cost of material limited to insurance settled amount less handling charges will be reimbursed to supplier.

20. Remedial work: Notwithstanding any previous test or certification, BHEL may instruct the vendor to remove and replace materials/goods or remove and re-execute works/services which are not in accordance with the purchase order. Similarly BHEL may ask the vendor to supply materials or to execute any services which are urgently required for any safety reasons, whether arising out of or because of an accident, unforeseeable event or otherwise. In such an event, Vendor shall provide such services within a reasonable time as specified by BHEL.

21. Indemnity Clause: Vendor shall comply with all applicable safety regulations and take care for the safety of all persons involved. Vendor is fully responsible for the safety of its personnel or that of his subcontractor's men / property, during execution of the Purchase Order and related services. All statutory payments including PF, ESI or other related charges have to be borne by the vendor. Vendor is fully responsible for ensuring that all legal compliances are followed in course of such employment.

22. Product Information, Drawings and Documents: All specified drawings, technical documents or other technical information received by Vendor from BHEL or vice versa shall not, without the consent of the other party, be used for any other purpose than that for which they were provided. They may not, without the consent of the Disclosing party, otherwise be used or copied, reproduced, transmitted or communicated to third parties. All information and data contained in general product documentation, whether in electronic or any other form, are binding only to the extent that they are by reference expressly included in the contract.

Vendor, as per agreed date/s but not later than the date of delivery, provide free of charge information and drawings which are necessary to permit and enable BHEL to erect, commission, operate and maintain the product. Such information and drawings shall be supplied in as many numbers of copies as may be agreed upon.

All intellectual properties, including designs, drawings and product information etc. exchanged during the formation and execution of the Contract shall continue to be the property of the disclosing party.

23. Intellectual Property Rights, Licenses: If any Patent, design, Trade mark or any other intellectual property rights apply to the delivery (goods/related service) or accompanying documentation shall be the exclusive property of the Vendor and BHEL shall be entitled to the legal use thereof free of charge by means of a non-exclusive, worldwide, perpetual license. All intellectual property rights that arise during the execution of the Purchase Order/ contract for delivery by vendor and/or by its employees or third parties involved by the vendor for performance of the agreement shall belong to BHEL. Vendor shall perform everything necessary to obtain or establish the above mentioned rights. The Vendor guarantees that the delivery does not infringe on any of the intellectual property rights of third parties. The Vendor shall do everything necessary to obtain or establish the alternate acceptable arrangement pending resolution of any (alleged)



claims by third parties. The Vendor shall indemnify BHEL against any (alleged) claims by third parties in this regard and shall reimburse BHEL for any damages suffered as a result thereof.

24. Force Majeure: Notwithstanding anything contained in the purchase order or any other document relevant thereto, neither party shall be liable for any failure or delay in performance to the extent said failures or delays are caused by the "Act of God" and occurring without its fault or negligence, provided that, force majeure will apply only if the failure to perform could not be avoided by the exercise of due care and vendor doing everything reasonably possible to resume its performance.

A party affected by an event of force majeure which may include fire, tempest, floods, earthquake, riot, war, damage by aircraft etc., shall give the other party written notice, with full details as soon as possible and in any event not later than seven (7) calendar days of the occurrence of the cause relied upon. If force majeure applies, dates by which performance obligations are scheduled to be met will be extended for a period of time equal to the time lost due to any delay so caused.

Notwithstanding above provisions, in an event of Force Majeure, BHEL reserves for itself the right to cancel the order/ contract, wholly or partly, in order to meet the overall project schedule and make alternative arrangements for completion of deliveries and other schedules.

25. Warranty:

Wherever required, and so provided in the specifications/ Purchaser Order, the Seller shall ensure that the goods supplied shall comply with the specifications laid down, for materials, workmanship and performance.

Unless otherwise specified in SCC, warranty period shall be applicable for a period of 24 months from the date of delivery of goods or 18 months from the date of commissioning of goods, whichever is earlier.

The warranty period as described above shall apply afresh to replaced, repaired or re-executed parts of a delivery. Unless otherwise specifically provided in the Purchase Order, Vendor's liability shall be co terminus with the expiration of the applicable warranty period.

26. Limitation of Liability: Vendor's liability towards this contract is limited to a maximum of 100% of the contract value and consequential damages are excluded. However the limits of liability will have no effect in cases of criminal negligence or wilful misconduct.

The total liability of Vendor for all claims arising out of or relating to the performance or breach of the Contract or use of any Products or Services or any order shall not exceed the total Contract price.

27. Liability during warranty: Vendor shall arrange replacement / repair of all the defective materials / services under its obligation during the warranty period. The rejected goods shall be taken away by vendor and replaced / repaired. In the event of the vendor's failure to comply, BHEL may take appropriate action including disposal of rejections and replenishment by any other sources at the cost and risk of the vendor. In case, defects attributable to vendor are detected during Warranty period or where the commissioning call is issued within the warranty period, vendor shall be responsible for replacement/ repair of the goods as required by BHEL at vendor's cost even after expiry of warranty period.

Further if the equipment or any part thereof cannot be used by reason of such defect and/or making good of such defect, the warranty period of the equipment or such part, as the case may be, shall be extended by a period equal to the period during which the equipment or such part cannot be used by BHEL because of any of the aforesaid reasons. Upon correction of the defects in the facilities or any part thereof by repair/replacement, such repair/replacement shall have the warranty period for a period of twelve (12) months from the time such replacement/repair of the equipment or any part thereof has been completed.

28. Liability after warranty period: At the end of the warranty, the Vendor's liability ceases except for latent defects. For the purpose of this clause, latent defects shall be the defects inherently lying within the material or arising out of design deficiency which do not manifest themselves during the warranty Period, but later. The Contractor's liability for latent defects warranty for the equipment including spares shall be limited to a period of six months from the end of the warranty period of the respective equipment including spares or first time commissioning, whichever is later but not later than one (01) year from the date of expiry of warranty period.



29. Compliance with Laws: Vendor shall, in performing the contract, comply with all applicable laws. The vendor shall make all remittances, give all notices, pay all taxes, duties and fees, and obtain all permits, licences and approvals, as required by the laws in relation to the execution and completion of the contract and for remedying of any defects; and the Contractor shall indemnify and hold BHEL harmless against and from the consequences of any failure to do so.
30. Settlement of Disputes: Except as otherwise specifically provided in the Purchase Order, decision of BHEL shall be binding on the vendor with respect to all questions relating to the interpretation or meaning of the terms and conditions and instructions herein before mentioned and as to the completion of supplies/work/services, other questions, claim, right, matter or things whatsoever in any way arising out of or relating to the contract, instructions, orders or these conditions or otherwise concerning the supply or the execution or failure to execute the order, whether arising during the schedule of supply/work or after the completion or abandonment thereof. Any disputes or differences among the parties shall to the extent possible be settled amicably between the parties thereto, failing which the disputed issues shall be settled through arbitration. Vendor shall continue to perform the contract, pending settlement of dispute(s).
31. Arbitration Clause in case of Contract with vendors other than Public Sector Enterprise (PSE) or a Government Department:

ARBITRATION & CONCILIATION

The parties shall attempt to settle any disputes 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, or in connection with this contract through friendly discussions. In case no amicable settlement can be reached between the parties through such discussions, in respect of any dispute; then, either Party may, by a notice in writing to the other Party refer such dispute or difference to the sole arbitration of an arbitrator appointed by Head of the BHEL–EDN. Such Sole Arbitrator appointed, shall conduct the arbitration in English language.

The Arbitrator shall pass a reasoned award and the award of the Arbitration shall be final and binding upon the Parties.

Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be Bangalore.

The cost of arbitration shall be borne as decided by the Arbitrator upon him entering the reference.

Subject to the Arbitration Clause as above, the Courts at Bangalore alone shall have exclusive jurisdiction over any matter arising out of or in connection with this Contract.

Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the parties shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and efficiency in a professional manner except where the Contract has been terminated by either Party in terms of this Contract.

Arbitration Clause in case of Contract with a Public Sector Enterprise (PSE) or a Government Department:

In the event of any dispute or difference relating to the interpretation and application of the provisions of the Contract, such dispute or difference shall be referred by either party for Arbitration to the Sole Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any Party aggrieved by such Award may make further reference for setting aside or revision of the Award to the Law Secretary, Department of Legal Affairs, Ministry of Law and Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary or Additional Secretary when so authorized by the Law Secretary, whose decision shall bind the Parties hereto finally and conclusively. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.'



32. Applicable Laws and Jurisdiction of Courts: Prevailing Indian laws both substantive and procedural, including modifications thereto, shall govern the Contract. Subject to the conditions as aforesaid, the competent courts in Bangalore alone shall have jurisdiction to consider over any matters touching upon this contract.
33. General Terms: That any non-exercise, forbearance or omission of any of the powers conferred on BHEL and /or any of its authorities will not in any manner constitute waiver of the conditions hereto contained in these presents.

That the headings used in this agreement are for convenience of reference only.

That all notices etc., to be given under the Purchase order shall be in writing, type script or printed and if sent by registered post or by courier service to the address given in this document shall be deemed to have been served on the date when in the ordinary course, they would have been delivered to the addressee.

A handwritten signature in black ink, appearing to read "J.ounish". The signature is fluid and cursive, with a large initial 'J' and a stylized 'ounish'.