

**BHARAT HEAVY ELECTRICALS LIMITED**

CORPORATE RESEARCH & DEVELOPMENT DIVISION

VIKASNAGAR, HYDERABAD - 500 093, INDIA

PHONES: 23774494 (EXCHANGE)

DIRECT: 23882104/23882204/

23778474/23776772

FAX : 91 40 23770698

RD:DP:MPX:F-04

ENQUIRY

To - Enquiry No: Enq Date: Due Date: Delivery By:
620807331 28-MAR-09 09-MAY-09

- PLEASE SUBMIT YOUR QUOTATION IN
SEALED COVER SUPERSCRIBED WITH
ENQUIRY NO, ENQUIRY DATE AND DUE DATE
SUBJECT TO OUR TERMS AND CONDITIONS
ENCLOSED, FOR THE FOLLOWING MATERIALS
SO AS TO REACH US ON OR BEFORE THE DUE
DATE BY 12 NOON. THE TENDERS WILL BE
OPENED AT 2 PM ON THE SAME DAY

Pin -

Email :

Attn. .

PLEASE GIVE REFERENCE OF ENQ NUMBER , ENQ .DATE AND DUE DATE IN ALL YOUR
CORRESPONDENCE FOR PROMPT ACTION. IN CASE IF YOU ARE NOT MAKING THE OFFER
PLEASE POST A REGRET LETTER AND RETURN THE DOCUMENTS.

SL NO	DESCRIPTION / SPECIFICATION	UNIT	QTY
1	FUEL CELL TEST STATION FOR TESTING & EVALUATING THE PERFORMANCE OF LOW TEMPERATURE FUEL CELLS (VIZ., PEMFCs) OF RATING UPTO 1 kW, AS PER CLAUSES 1, 2, 3, 4, 5, 6, 7, 8, 9, 11 & 13 OF DETAILED SPECS GIVEN IN ANNEXURE - 1. ONLY THOSE OFFERS WHICH SATISFY THE PRE-QUALIFICATION CONDITION WOULD BE CONSIDERED FOR FURTHER SCRUTINY. (PL. SEE SUB-CLAUSES 14a TO 14e UNDER CLAUSE 14 OF TECHNICAL SPECIFICATONS GIVEN IN ANNEXURE - 1.) VENDORS MAY PLEASE NOTE THAT BHEL's REQUIREMENTS ARE DESCRIBED UNDER COLUMNS 2 & 3 IN THE TECHNICAL SPECIFICATIONS (ANNEXURE - 1). THE VENDOR/S MUST INDICATE THEIR COMPLIANCE AGAINST EACH SPECIFICATIONS IN COLUMNS #4 OR 5. VENDORS MAY USE COLUMN #6 TO PROVIDE ANY ADDITIONAL INFORMATION. BROCHURES/LITERATURE MAY ALSO BE ATTACHED, WHEREVER NEEDED.	NO	1
2	ACCESSORIES & SPARES, REQUIRED FOR A TROUBLE FREE OPERATION OF THE FCTS FOR A PERIOD OF 2 YEARS, MUST BE QUOTED SEPERATELY (AS PER CLAUSES 10a & 10b OF TECH SPECS)	LOT	1
3	PLEASE QUOTE SEPERATELY FOR UNDERTAKING ERECTION, COMMISSIONING & PERFORMANCE TESTS ON FCTS (PL SEE CLAUSES 9a TO 9e)	LOT	1
4	'COST OF TRAINING' MAY BE QUOTED SEPERATELY (CLAUSES 12a TO 12c)	LOT	1
5	IN ADDITION TO THE ABOVE, VENDORS MAY SEPERATELY OFFER	LOT	1



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CHARGES FOR 'ANNUAL MAINTENANCE CONTRACT' FOR A PERIOD
OF 2 YEARS, WHICH WOULD START IMMEDIATELY AFTER THE END
OF THE WARRANTY PERIOD.

Please submit your offer in Two parts as per enclosed "General Terms and Conditions of enquiry & Contract for the purchase of Goods/ Services" in separate sealed covers as detailed below:

1) First cover shall contain a) Technical & Commercial bid, b) Compliance Statement, c) Un-priced Price bid, i.e. a copy of the Price bid with the price(s) columns left blank.

2) Second Cover containing Price bid.

If the Price bid is found to be different from the un-Priced Price bid in any way, the offer will be rejected.

3) GUARANTEE CERTIFICATE: REQUIRED

4) MANUFACTURER'S TEST CERTIFICATE: REQUIRED

5) ERECTION & COMMISSIONING: REQUIRED

6) BHEL RESERVES THE RIGHT TO PROCURE THE ABOVE ITEMS THROUGH REVERSE AUCTION

Note:

1) Unsigned offer(s) are liable for rejection.

2) Taxes & Duties quoted will be taken for cost evaluation & order placement and no change will be entertained later except in the case of changes made by the Government.

3) Changes in Taxes and Duties because of the changes in Turnover etc. will be to the supplier's account.

4) In case any Taxes/duties exempted, a self declaration for the same may be attached to the offer.

AS WE ARE ENGAGED IN R&D ACTIVITY "C" FORM
WILL NOT BE ISSUED

Yours faithfully
for

PLEASE FILL UP THE ENCLOSED VENDOR
REGISTRATION FORM AND SEND IT ALONG WITH
YOUR QUOTATION. OTHERWISE YOUR QUOTATION
WILL NOT BE CONSIDERED. (IGNORE THIS IF YOU
HAVE ALREADY SUBMITTED THIS FORM)

BHARAT HEAVY ELECTRICALS LTD

RAMESH G
Sr Manager

Email: gramesh@bhelrnd.co.in

**BHARAT HEAVY ELECTRICAL LIMITED**

ADDRESS

BHEL, Corporate R&D Division,
Vikasnagar, Hyderabad 500093

Enquiry No. : _____

Due Date : _____

PHONE NOS. (10 Lines)

91 40 2377 4494

Supplier Qtn. No.: _____

NAME, DESIGNATION & E-MAIL of contact persons from Materials
Management departmentH Krishnan, AGM
hkrishnan@bhelrnd.co.in

Date : _____

FAX NO.

91 40 2377 6320

TECHNICAL SPECIFICATIONS CUM COMPLIANCE CERTIFICATION FOR
Fuel Cell Test Station (FCTS)

NOTE: Vendors are requested to carefully read the following 3 instructions. Offers which do not comply with these instructions are likely to be rejected.

1 Only those vendors, who have supplied at least one number of 1 kW (or higher) rated FCTS during the past five years (from the date of opening of Tender), are eligible to quote. Vendor must, therefore, necessarily provide the information sought under Clause 14 (Pre Qualification Condition).

2 The specifications required by BHEL are listed in Column 3. In case of compliance, the Vendor need to put only a 'tick' mark or say 'yes' under Column 4. In case the vendor wishes to offer an alternative specification, Column 5 may be used. Additional information, if any, may be provided under Column 6. **Incomplete or ambiguous information against any of the below mentioned requirement or specification shall be treated as non-compliance, which may result in rejection of the offer. Vendors are, therefore, advised to provide information against each of the clauses. In addition, the vendors may attach their product Brochures or printed specification sheets, if they so desire.**

3 The offer and all other attached documents must be in English language only.

Details of Manufacturer / Supplier of FCTS**Details of Indian Agent, if any**

COMPLETE POSTAL ADDRESS:

COMPLETE POSTAL ADDRESS

TELEPHONE / FAX Nos:

TELEPHONE / FAX Nos:

E-MAIL ADDRESS :

E-MAIL ADDRESS :

SCOPE: SUPPLY, ERECTION & COMMISSIONING OF Fuel Cells Test Station (FCTS) COMPLYING WITH THE FOLLOWING SPECIFICATIONS

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Clause #	DESCRIPTION OF BHEL REQUIREMENT	Specification required by BHEL	Vendor's Compliance (please tick or write 'yes' if 'offered' specification is same as in Column # 3)	Specification offered by Vendor (to be used only if 'offered' specification is different compared to the one given in Col 3)	Additional Information (Vendors may use this column for providing additional information, if any)
DETAILED SPECIFICATIONS					
1	Rating of Fuel Cell Stack to be tested				
1a	DC Power rating (Please see clause 4c, vendor to ensure compatibility with electronic load)	1 kW (or more)			
1b	DC Current rating (Please see clause 4a, vendor to ensure compatibility with electronic load)	0 to 60 Amps (or more)			
1c	DC Voltage rating (Please see clause 4b, vendor to ensure compatibility with electronic load)	~ 1V to ~ 60 Volts			
2	Flow requirements for Anode & Cathode Reactants' (Gases)				
2a	Hydrogen Mass Flow Controller (MFC) - flow range & accuracy of measurement (Please see clause 3f, vendor to ensure compatibility with humidifier)	Up to 15 SLPM \pm 1% (or better) accuracy			

2b	Oxygen MFC - flow range (Please see clause 3g, vendor to ensure compatibility with humidifier)	Up to 7.5 SLPM ± 1% (or better) accuracy			
2c	Vendor may note that the PEMFC stacks which we desire to test using the FCTS, operate quite close to the ambient pressure, say at 100 mm (~ 0.15 psi) to 2000 mm of Water Column (~ 3 psi). Provision for upto 10,000 mm of Water column is, however, desired. Vendor must ensure compatibility of MFC's (and/or the humidifiers) outlet pressure with the PEMFC stacks' inlet pressure & back pressure requirements (pl see clause				
3 Humidification System for Anode & Cathode Reactants					
3a	Type of Humidifier	Vendor to specify			
3b	Maximum Dew Point Temperature & accuracy	≥ 85 ± 2 degrees Celcius			
3c	Dry Gas By-pass	Required			
3d	Humidity range (Relative Humidity)	Dry to 90%			
3e	Humidified Hydrogen & Oxygen, coming out of the respective Humidifiers, should be maintained at ~ 5 deg C more than the dew point to avoid condensation of water vapour in the connecting pipeline. For this, an electrically heated & thermally insulated flexible tube must be supplied / included with each humidifier.				
3f	Anode gas humidifier flow rate (Please see clause 2a & 2c, vendor to ensure compatibility with Hydrogen MFC and inlet pressure requirements of PEMFC stacks)	Up to 15 SLPM Hydrogen.			
3g	Cathode gas humidifier flow rate (Please see clauses 2b & 2c, vendor to ensure compatibility with Oxygen MFC & inlet pressure requirements of PEMFC stack).	Up to 7.5 SLPM Oxygen.			
3h	Fuel Cell stack back pressure control (Please note that as described in clause 2c, the back pressure would generally be in the range of 100 mm to 2000 mm of water column i.e. of the order of 0.15 to 3 psi, with provision for upto 10,000 mm of water column, ie. 15 psi)	Automatic (Programmable) or manually settable			
3i	For both the humidifiers, the vendor should ensure compatibility with the inlet/outlet pressure requirements of the respective MFCs as also the inlet & back pressure range desired for the PEMFC stacks (please refer to clauses 2a to 2c)	Vendor to specify			
3j	Auto water refill and temperature control	Required, Vendor to specify			
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
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4 Electronic Load					
4a	DC Current range (please see clause 1b also)	Near zero to 60 Amps (or more)			
4b	DC Voltage range (please see clause 1c also)	~ 1 Volt to 60 Volts (stack OCV)			
4c	Maximum DC power from stack (please see clause 1a also)	Up to 1 kW (or more)			
4d	Electronic Load modes (user selectable)	Constant Current & Constant Voltage (preferably with Constant Power & Constant resistance modes also)			
5 Exhaust Gas Handling System					
5a	Automatic (or manually settable) back pressure control (please see clauses 2c)	~ 50 to ~10, 000 mm of Water Column (Wc).			
5c	Draining of water (due to excess humidification or product water) from Anode & Cathode exhausts	Mechanical liquid drainer or any other suitable drainer - vendor to specify			
6 Safety Features (Software Controlled / Operator Settable)					

6a	The FCTS must be capable of unattended operation and must have safety features & interlocks {viz., whenever stack Voltage (or any individual cells' V) falls below a pre-set value, either the electronic load should be reduced in pre-set steps or an emergency shut-down should be effected, wherein, electronic load removal, stoppage of H2 & N2 purge should be effected in a pre-set sequence. Vendor must ensure that Nitrogen purge takes place each time the PEMFC is shut down, in normal cases as well as when the emergency shut down switch is activated. The following other safety related features may also be provided in the FCTS.				
6b	Manual Emergency Shut Down switch	Required			
6c	Hydrogen LEL detector / sensor & audio / visual alarm.	Required, Vendor to specify			
6d	Over temperature, over current, over power protection	Required			
6e	Audio / visual alarms whenever reactant gases / cooling water pressure falls below the set limit/s.	Required, vendor to specify			
6f	All the pipes, cables etc. used in the FCTS should be well supported and protected. They should not create any hinderance to operator's movement. All the rotating parts should have protective covers to avoid injury to operators & should be dynamically balanced to avoid undue vibrations .				
6g	The FCTS software should preferably include auto fault diagnostics to suggest likely causes & solutions to help operator take necessary corrective actions.				
7 FCTS - PEMFC Stack Integration					
7a	With a view to avoid interface problems during connecting the FCTS to a typical 1 kW PEMFC stack, the Vendor may provide 1/2 inch BSP/NPT type male connectors for reactant supply hoses (for H2 & O2) or wherever else such an interface exists. Veddor may inform the exact nature of the connectors to BHEL so that suitable female adaptors may be provided by BHEL for the respective ports on its fuel cell stack.	Vendor to ensure trouble free integration of FCTS with BHEL's typical 1kW PEMFC module as alsoother stacks of smaller ratings.			
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
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8 Data logging, storage & analysis system - (H/W & S/W)					
8a	Pentium class IV PC (≥ 2.8 GHz processor, 512 MB RAM or better, ≥ 17" LCD monitor, Windows XP OS (or later version) ≥ 80 GB HDD, DVD RW ROM etc), with a gigabit Ethernet Network card.				
8b	Suitable soft ware for viewing, printing, storing & exporting data into MS excel format preferably also capable of displaying graphs or plots (Time vs Stack V, Time vs Power, Time vs Current, any selected cell V vs time and Stack V vs Stack I etc)				
8c	The data logging system should be capable of monitoring a minimum of 60 ± 2 channels (preferably 100) continuously. The details of channels are : 1 channel for stack voltage (0-60 Vdc); 1 channel for stack current (0-60 Adc); 50 channels to monitor individual cell voltages (0-2VDC); rest of the channels should be able to receive 4-20 mA control signals or outputs from thermocouples, RTD etc. It would, however, be preffered, if all the channels of data logger can accept universal inputs (like individual cell voltages, TC/RTD etc)				
9 Erection & Commissioning (E&C) of FCTS - requirement of utilities, tools & tackles. (Vendor is advised to take note & Comply)					
9a	All electrical & electronic equipment & control panels used should conform to the relevant Indian / International Standards, and should be compatible with 165 - 240 V single phase 50 Hz grid power. Vendor must specify the electric power requirement in the offer itself so that necessary power lines may be laid by BHEL, before the FCTS is received at site. Requirement of grounding / earthing with required material details should be informed by vendor well in advance so that the same could also be incorporated. Either the FCTS must contain a suitable UPS to ensure safe shut down and data saving in case of grid failure etc or the Vendor must provide complete specification of a suitable UPS so that it may be procured by BHEL.				
9b	Compressed gas cylinders (Hydrogen, Oxygen & Nitrogen) and milipore grade high purity water (conductivity ~10 microsiemens-cm) would be made available by BHEL. Vendor must specify if any other utilities are required during erection, commisioning and/or operation of the FCTS.				

9c	Vendor may note that the entrance to the Laboratory (where the FCTS is to be used) is approachable through a 170 cm wide corridor. Lab door is ~ 200 cm wide x 205 cm high. Pallet trucks of 2000 kgs capacity are available. Vendor is advised to mention the physical dimensions & weight of the FCTS in their offer. Please inform if any foundation / grouting etc is required.				
9d	It may be noted that the full responsibility of commissioning, start up & testing of the FCTS at BHEL site would be of the Vendor. It is therefore necessary that the Vendor must specify, well in advance, all the above requirements so that BHEL may keep them ready at the time of the E&C. In addition to complying with all the specifications, the following two conditions would constitute the acceptance criterion for the FCTS. 1) The main acceptance criteria would be testing of FCTS at > 1 kW load. 2) demonstration of operation of the FCTS for a continuous period exceeding 24 hours. Commissioning spares, if any, shall be brought by the supplier at the time of commissioning of FCTS. Expenses to cover air-fare, boarding, lodging, local conveyance etc for suppliers' service engineers should be included in the offer <u>under a separate head</u> .				
9e	All special tools & tackles needed for erection & commissioning of the FCTS must be brought by the Vendor / Agent. Only standard hand tools, instruments may be provided by BHEL, but the Vendor must confirm their availability with BHEL, well in advance. Vendor should specify if any lifting facility (tripod, chain pulley etc) is needed.				
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Clause #	DESCRIPTION OF BHEL REQUIREMENT	Specification required by BHEL	Vendor's Compliance (please tick or write 'yes' if 'offered' specification is same as in Column # 3)	Specification offered by Vendor (to be used only if ' offered ' specification is different compared to the one given in Col 3)	Additional Information (Vendors may use this column for providing additional information, if any)
10	Spares & Accessories				
10a	The Offer should include sufficient Spares for all the mechanical (pumps, valves, seals, O rings etc), electrical (relays, contactors, switches, indicating lamps, fuses etc), electronic (I/O Cards, Control Cards etc) instruments & sub-systems used in the FCTS to ensure trouble free operation of the FCTS for at least 2 years. The spares should be able to take care of the FCTS due to normal wear & tear and should also include any consumable items. In case any of the FCTS parts are likely to become obsolete during the first 2 years or immediately thereafter, the vendor should inform BHEL, sufficiently in advance and provide drawings / details of such parts / spares including suppliers' address to enable BHEL to procure them, if needed.	Vendor to specify			
10b	Vendor must supply a comprehensive list of spares for FCTS and accessories, along with their type / specification / part number and name & address of the supplier for the spares.	Vendor to take note & comply			
11	Documents Required				
11a	At least 1 (one) set of following documents (Hard copies) in English language should be supplied along with the FCTS	Vendor to take note & comply			
11b	Operating manuals / Quick operating guide, including programming manual, if any.	Vendor to take note & comply			
11c	Detailed Maintenance manual / trouble shooting guide with required drawings for assemblies / sub-assemblies / parts, with relevant part numbers & parts list.	Vendor to take note & comply			
11d	Catalogues, O&M Manuals for bought out items used in the FCTS, including drawings, circuit diagrams etc, wherever applicable.	Vendor to take note & comply			
11e	PLC program print-outs with comments in English, if required.	Vendor to take note & comply			
11f	A Master List of major parts used in the FCTS shall be submitted by the vendor.	Vendor to take note & comply			

11g	One additional set of all the above documents, wherever possible, on CD ROM. If any proprietary Software programs have been loaded on the data logging / analysis system (please see clause 8) a licensed copy of the same (CD / DVD etc) should also be provided.	Vendor to take note & comply			
12 Training of BHEL Personnel in the operation, maintenance & trouble shooting of FCTS					
12a	Vendor should train 2 BHEL engineers, in all aspects of Operation & Maintenance (O&M) of the FCTS, including trouble shooting. Competent, English speaking experts shall be deputed by the vendor for satisfactory & effective training of BHEL personnel. Vendor should specify the duration for which BHEL engineers must undergo the training to make them fully conversant with (a) use of all Measuring Systems & accessories supplied with the FCTS (b) O&M of all the critical Electrical, Electronic, Mechanical components used in the FCTS, including bought out items & equipment (c) O&M of the FCTS, including storage, retrieval, presentation & interpretation of performance data.	Vendor to take note & comply			
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Clause #	DESCRIPTION OF BHEL REQUIREMENT	Specification required by BHEL	Vendor's Compliance (please tick or write 'yes' if 'offered' specification is same as in Column # 3)	Specification offered by Vendor (to be used only if 'offered' specification is different compared to the one given in Col 3)	Additional Information (Vendors may use this column for providing additional information, if any)
12b	BHEL would bear the expenses for it's engineers to cover travel, boarding, lodging etc for the entire period of the training, if it is not feasible to conduct the training at BHEL R&D. The vendor must separately quote if any charges are payable by BHEL for the said training.	Vendor to take note & comply			
12c	The above training should be fixed in such a manner that BHEL engineers would also be able to inspect & conduct the performance guarantee-cum-acceptance tests on the FCTS. If possible, the vendor may conduct the training at BHEL R&D itself, preferably when the erection & commissioning of the FCTS is going on.	Vendor to take note & comply			
13 Tropicalization - Ambient Climatic Conditions					
13a	Vendor may note that the FCTS would have to perform under tropical weather conditions. The ambient indoor temperatures in Hyderabad may vary between 15 to 35 deg C during the year. The FCTS shall be kept in the normal shop floor condition, where a certain amount of dust may be present during certain parts of the year. Ambient Humidity during monsoon season could be close to 100% RH. All the electrical / electronic equipment used in the FCTS shall be tropicalized.	Vendor to take note & comply. If the FCTS needs to be kept within certain specified ranges of temperature, humidity or dust conditions, vendor must specify the min & max tolerable limits, so that appropriate arrangements can be made.			
13b	The FCTS, including attachments and accessories, should be suitable for continuous operation at it's rated capacity.	Vendor to take note & comply			
14 Reference List (Pre Qualification Condition)					
14a	The vendor must necessarily provide the following information. BHEL reserves the right to contact any or all of the parties to confirm the information provided by the vendor	Vendor to take note & comply			
14b	Customer's / Company's name alongwith complete postal address, where a similar (or higher rated) FCTS was installed by the supplier.	Vendor to comply			
14c	Month & Year of commissioning of the FCTS.	Vendor to comply			
14d	Name and designation of the contact person of the customer along with Phone #, Fax #, e-mail etc.	Vendor to comply			

14e	Performance certificate/s, if provided by the customer/s, regarding satisfactory performance of FCTS at customer's site, may be provided.	Vendor to comply			
15	Stack Heating / Cooling Module (Optional)				
15a	The vendor may offer a stack heating cum cooling system to maintain the PEMFC stack at any desired temperature in the range of Room temperature to 85 deg C (Please see Clause 15b for details).	Vendor to specify.			
15b	NOTE: BHEL stacks have a provision to allow passage of water through the bi-polar plates at pressures upto 3 bar. A typical 1 kW stack consists of 50 cells and has a gross weight of about 50 kgs, the active mass (cells & bipolar plates etc) which needs to be heated / cooled is made up mainly of Carbon or Graphite based materials & weighs about 25 kgs. Milipore grade water with conductivity of < 10 micro siemens cm can be provided by BHEL. The heating / cooling system should be able to maintain the stack within ± 2 deg C of set temperature. The initial stack heating (room temp to set temp) may preferably take 30 minutes)				

AUTHORISATION LETTER FOR E-PAYMENT/ NEFT / RTGS

(PLEASE FILL UP THE FORM COMPLETELY IN CAPITAL LETTERS ONLY)

1	Type of Request (Tick One)	NEW / CHANGE
2	BHEL Vendor Code	
3	Company's Name	
4	Address	
5	City with Pin Code	
6	State	
7	PAN NUMBER	
8	Name of Contact Person	
9	Phone No with STD Code	
10	Fax No with STD Code	
11	Email Id	
12	Web Site (URL)	

BANK DETAILS FOR EFT / RTGS

1	Bank Name	
2	Branch	
3	Branch Code	
4	Address	
5	PHONE No.	
6	Account No.	
7	MICR/ IFSC Code	
8	Bank Swift Code	
8	NEFT/ RTGS enabled	Yes / No
10	Cancelled Cheque	Enclosed / Not Enclosed

1. I, as representative / owner of the above named company, hereby authorise BHEL R&D Hyderabad, to electronically make payments to the designated bank account. I hereby certify that the particulars given above are true, complete and correct.
2. 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.
3. This authority remains in full force until BHEL receives and acknowledge written notification requesting a change or cancellation.

Date:

Authorised Signatory
Designation :

COMPANY SEAL



BHARAT HEAVY ELECTRICALS LIMITED
CORPORATE R&D DIVISION, VIKAS NAGAR, HYDERABAD – 500 093, AP, India
Ph: 0091-40 – 23778474, FAX: 0091-40 – 23770698

RD:MPX:F-20

General Terms and Conditions of Enquiry & Contract for the Purchase of Goods/ Services

1. The quotation and any order resulting from this enquiry shall be governed by these General Terms and Conditions of enquiry and contract for the supply of goods and the supplier quoting against this enquiry shall, unless specifically stipulates any different terms or conditions, be deemed to have read and agreed to the same.
2. Sealed quotations in double cover with tenderer's distinctive seal, superscribing enquiry number, date and due date are to be submitted so as to reach on or before due date & time, addressed to **Additional General Manager(MM) and Head, Bharat Heavy Electricals Limited, Corporate Research & Development Division, Vikasnagar, Hyderabad, Andhra Pradesh, India – PIN-500 093, India.**
In the case of **Two-part bid**, each inner cover shall clearly be labeled as a) **Technical & Commercial Bid** containing technical data/ drawings/ catalogues/ quality plans along with commercial terms and conditions & copy of the price bid with the price columns left blank (unpriced price bid), b) **Price bid** containing prices quotes. Installation and/or Commissioning charges shall be spelt out in absolutely lucid terms, taking into account total charges, rather than quoting vaguely, such as charges per man-day or charges per engineer per day etc. **If the price bid was found later to be different from the unpriced price bid in any way, the offer will be rejected summarily.**
3. **Tender/ Technical bid Opening:** Unless specified otherwise, tenders/ technical bids will be opened on appointed date and time as mentioned in the enquiry or as communicated changed date/time, if any, in the presence of such of those tenderers who may be present.
4. **Delayed/ Late Tender:** Tenders, which have been posted by registered post through the postal department in time before opening date but received after tender opening, shall be treated as regular tenders. Other tenders received after tender opening time shall be treated as late tenders and normally they may be rejected.
5. The Quotation should be free from overwriting and erasures. Corrections and additions, if any, must be attested. Supplier should indicate in the quotation dimensions (Size), weight, rate etc., in the metric system unless the enquiry calls for different unit.
6. **Validity of Quotation:** All quotations shall be kept open for acceptance for a period of ninety days from the date of opening of Tenders/ Technical bid and this shall be deemed to be an express condition of all quotations. The rate shall be quoted in both figures and in words.
7. In the case of Two-part bid, the vendor should furnish technical clarifications, if any, within stipulated time mentioned, failing which, it will be construed that the vendor is not interested in the tender and BHEL shall not consider the offer for further evaluation.
8. **Revision of Pricebid:** In the event of any bidder, after finalizing the technical specifications and scope of supply, opting to revise and submit their latest price bid, then BHEL reserves the right to open their original / previous price bid also while evaluating revised bid.
9. **Pricebid Opening:** Unless specified otherwise in the enquiry, the Price bids of technically qualified vendors shall be opened with prior intimation in the presence of such of those tenderers who may be present.
10. **Conformity to Specifications:** The material should be of the best quality and shall be conforming to our specification given in our enquiry. Unless otherwise agreed upon by BHEL, no payment shall be due by BHEL in respect of any sample. Offers without details of specifications/ applicable catalogues will not be considered and are liable to be rejected.
11. **Terms of Delivery:** All suppliers shall quote the lowest prices on ex-works and FOB/FCA basis. Foreign suppliers will also indicate their Indian agent's name and address with percentage of agency commission out of the quoted price, if any. Name and Address of the supplier's Bankers address should also be given. Indian suppliers for the indigenously manufactured/ imported stock shall quote on Ex-works /Free-on-Rail/Road /FOR-destination basis, indicating packing & forwarding charges, if any, separately.
12. **Taxes and Duties:** Unless specified otherwise in the enquiry, BHEL do not provide "C" or "D" Form as it is engaged in R&D. All Indian suppliers shall clearly mention current Sales Tax/ VAT, Excise Duty, and Service Tax etc, if any, payable in addition to the quoted price and indicate applicable rates/ percentage, item-wise clearly. It will be paid only if Registration Number under State(TIN)/ Central Sales Tax or Service Tax is specifically mentioned in the Bill/Invoice. Vendors without a Sales Tax/VAT registration and applicable Service Tax registration will not be considered.
13. **Insurance:** Insurance will be arranged by BHEL in case of Ex-Works as well as FOB basis supplies.
14. **Terms of Payment:** Full payment will be made within 30 days after receipt, inspection and acceptance of the material (and where involved, Erection and commissioning of the material/ equipment at BHEL/Destination) though Electronic Fund transfer (RTGS/NEFT/SEFT) with bank charges to the supplier's account. For foreign suppliers, the preferred payment term will be on Sight Draft basis and bank charges inside India will be to BHEL account and outside India will be to supplier's account.
15. Suppliers shall quote competitive price and best delivery for all the items mentioned in the enquiry. BHEL reserves the right to reject partial quotations and to place order on overall landed cost basis. Correct date of effecting supplies in the event of an order should be indicated in the offer. If the supplier's quoted terms are different from BHEL standard payment terms (Refer #14 above), interest @11% per annum (or as indicated in the enquiry) will be loaded to the quoted prices for difference of payment period.
16. **Packing:** The supplier shall be responsible for the goods being properly and adequately packed so as to prevent any loss, damage or deterioration during transit and indicate packing charges, if any, separately.
17. **Part/ Split Ordering:** BHEL reserves right to Order part of the item/ quantity of the enquiry and split the order among qualified vendors.
18. In case the goods enquired are on Rate Contract basis with any other unit of BHEL, such fact should be clearly indicated in the quotation giving full particulars of Rate Contract number, validity and price and also your willingness to comply with order if placed against such Rate Contract. A true copy of Rate contract signed by the supplier should be sent with the quotation.
19. **Inspection:** On receipt, the goods shall be subjected to inspection and also test, if necessary, and our decision regarding the acceptability of the goods shall be final and binding on the suppliers.
20. **Penalty for late delivery:** The time stipulated for delivery of goods shall be deemed to be the essence of the contract and delivery must be completed within the stipulated date/s. In the event of supplier's failure to supply the goods by the stipulated date/s, a penalty of ½% per week for the delayed no of weeks or part thereof for the undelivered portion of PO subject to a maximum of 10% of total order value shall be levied at the discretion of BHEL.
21. **Withdrawal from the Contract:** In case the supplier withdraws the quotation after its acceptance by BHEL or fails to supply the goods as per the terms and conditions of contract, or at any time repudiated the contract wholly or in part, BHEL shall be at liberty to cancel the Purchase Order and to recover from the supplier the extra cost and other loss, incidentals due to the breach of contract on the part of the supplier through risk purchase.
22. **Guarantee/ Warranty certificate and Manufacturer's Test report:** Invariably in all cases where it is so stipulated, the supplier should furnish Guarantee/ Warranty certificate valid for a period of 18 months from date of supply or 1 year from the date of receipt, acceptance and commissioning(or more, if provide by oem) whichever earlier and manufacturer's Test report along with the goods, failing which, BHEL shall have the right to reject the goods.
23. All ferrous/ non-ferrous items shall be colour coded as per bureau of Indian standards/ or IS standards/ BHEL Standards.
24. **Recovery of Dues:** BHEL shall recover any amount due from the supplier or any amount outstanding to the credit of the supplier with BHEL R&D unit or any other BHEL unit(s) and/or by legal action.
25. **Arbitration & Forum for Legal Proceedings:** All disputes arising in connection with indigenously/ foreign supplies shall be settled through arbitration held at Hyderabad, AP, India and arbitration shall be appointed by Arbitration Tribunal of the Federation of Andhra Pradesh Chambers of Commerce and Industry, Hyderabad, AP, India. The Courts at Secunderabad/ Hyderabad, AP, India shall have jurisdiction in respect of any suit or other legal proceeding arising from or relating to this contract

The rights and remedies of BHEL stated in these General terms and conditions shall be in addition and supplemental to its rights and remedies under law and custom or usage of trade or business and shall in no way be deemed to limit, curtail, supercede or derogate from its said rights and remedies.



RD:MPX:F-18

BHARAT HEAVY ELECTRICALS LIMITED
CORPORATE R&D Division
Vikasnagar, Hyderabad, Andhra Pradesh, India – 500093.,

IMPORTED

Suppliers' compliance statement to basic conditions of enquiry (to be submitted along with Technical & Commercial bid)
Enquiry number: **Enquiry dt:**

(In case Order to be placed on the Principal and foreign currency)

Condition	BHEL R & D's terms	Supplier's compliance (indicate Yes/No. if 'No', state terms desired)
1. Validity of offer	90 days from the tender opening date (or as per enquiry)	
2. Delivery requirements	FCA – Nearest International Airport (or as indicated in the enquiry)	
3. Warranty	Unless specifically mentioned in the enquiry, all supplied items to be provided with warrantee for one year (or more, if provided by the OEM) from the date of acceptance/ commissioning. In case of equipment involving erection and commissioning, warrantee shall be for 18 months from the date of dispatch or 12 months from the date of commissioning, whichever is earlier	
4. Terms of payment	Sight draft. All bank charges inside India will be to BHEL R&D account and outside India will be to the supplier's account. Documents through State Bank of India, Trade Finance Central processing Cell (TFCPC), Opp. Anand Theatre, Secunderabad, Andhra Pradesh, India-500003. SWIFT Code: SBININBB602, Phone: 91-40-27816795, FAX: 91-40-27720459	
5. Agency commission	Pl specify Indian agency commission charges, if any, in percentage of quotation. The same shall be paid to the agency in Indian Currency only.	
6. Erection/ Commission	As per enquiry	
7. Documentation	As per enquiry	
8. Insurance	BHEL will arrange Insurance based on intimation to our Insurance agency. Address of the agency will be mentioned in the Purchase Order.	
9. Penalty for late delivery	0.5% per week beyond the delivery date on undelivered portion subject to a maximum of 10% of the total order value.	

* BHEL R&D reserves the right to reject any offer due to non-compliance with the above conditions and/or non-receipt of this form in duly filled condition

* Any other elements of cost in addition to the above may please be specified in detail

(Signature and Stamp/ Seal of Vendor)



RD:MPX:F-17

BHARAT HEAVY ELECTRICALS LIMITED
CORPORATE R&D Division
Vikasnagar, Hyderabad – 500093, India.

Suppliers' compliance statement to basic conditions of enquiry (to be submitted along with Technical & Commercial bid)
Enquiry number:: **Enquiry date::**

(In case Order to be placed on Indian supplier in Indian currency)

Condition	BHEL R& D's terms	Supplier's compliance (indicate Yes/No. if 'No', state terms desired)
1) Validity of offer	Unless specifically mentioned in the enquiry, 90 days from the tender opening date	
2) Delivery requirements	Free delivery at our stores or FOR destination (or as indicated in the enquiry)	
3) Warranty	Unless specifically mentioned in the enquiry, all supplied items to be provided with warrantee for one year (or more, if provided by the OEM) from the date of acceptance/commissioning. In case of equipment involving erection and commissioning, warrantee shall be for 18 months from the date of despatch or 12 months from the date of commissioning, whichever is earlier	
4) Terms of payment	Unless specifically mentioned, full payment will be made within thirty days after receipt, inspection and acceptance of the material at BHEL R&D (and where involved, erection and commissioning of the material/equipment at BHEL/destination), by EFT/RTGS with bank charges, if any, to supplier's account.	
5) Taxes & Duties	Unless specifically mentioned in the enquiry, we do not provide 'C' or 'D' form. Supplier to specify rates of taxes and duties element wise and related percentages. Terms like "inclusive" or "extra" are not acceptable. Please mention "NIL" if taxes/ duties are exempted/ not applicable.	
6) Penalty for late delivery	0.5% per week beyond the delivery date on undelivered portion subject to a maximum of 10% of the total order value	

* BHEL R&D reserves the right to reject any offer due to non-compliance with the above conditions and/or non-receipt of this form in duly filled condition

* Any other elements of cost in addition to the above may please be specified in detail

(Signature and Stamp/Seal of Vendor)



RD:DP:MPX:F-14

BHARAT HEAVY ELECTRICALS LTD.
Corp. R&D DIVISION
VIKAS NAGAR,
HYDERABAD- 500 093 (INDIA)

SUPPLIER REGISTRATION FORM

(FOREIGN SUPPLIER)

ALL COLUMNS SHOULD BE PROPERLY FILLED IN THE SPACE PROVIDED FOR.
WHEREVER IT IS NOT APPLICABLE PLEASE WRITE "NOT APPLICABLE".
INCOMPLETE OR INCORRECT FORMS MAY NOT BE CONSIDERED.

1.0 GENERAL INFORMATION:

1.1NAME OF COMPANY

1.2DETAILS OF HEAD OFFICE:

ADDRESS :
TELEPHONE :
FAX :
.EMAIL :
.WEB SITE :

1.3DETAILS OF FACTORY/WORKS:

ADDRESS :
TELEPHONE :
FAX :
.EMAIL :
.WEB SITE :

1.4DETAILS OF MARKETING AGENT

ADDRESS :
TELEPHONE :
.FAX :
.EMAIL :
.WEB SITE :

1.5 CHIEF EXECUTIVE

1.6 CONTACT PERSON(S)
FOR PRODUCT OFFERED
NAME(S)
OFFICIAL CPACITY
ADDRESS:
TELEPHONE
FAX
E-MAIL

1.7 YEAR OF ESTABLISHMENT

1.8 PRODUCTION CAPACITY PER ANNUM

1.9 PARTICULARS OF PRODUCT INCLUDING
SPECIFICATION AND RANGE OFFERED
FOR REGISTRTION
(ATTACH BROUCHERS AND CATALOGUE)

1.10 NAME(S) OF BANKERS

1.11 BANKER'S CERTIFICATE

1.12 PORT OF LOADING

1.13 NEAREST AIRPORT

1.14 NAME OF THE INDIAN AGENT, IF ANY
WITH AUTHORISATION LETTER

2.0 FINANCIAL INFORMATION

2.1 ...TOTAL CAPACITY

2.2 ...ANNUAL TURN OVER FOR LAST 3 YEARS

2.3 ...WHEHER CREDIT LICENSE ACCEPTABLE YES/NO

3.0 QUALITY MANAGEMENT SYSTEMS
ENCLOSED FORMAT PART-B

3.1 EXPERIENCE LIST FOR SAME/SIMILAR ITEMS
TO BE ENCLOSED

4.0FUTURE EXPANSION PLANS:
(GIVE DETAILS)

5.0 LIST OF ENCLOSURES:
INCLUDING BROUCHERS, CATALOGUES, TECHNICAL
LITERATURE ETC.

6.0 ANY OTHER INFORMATION

SIGNATURE OF SUPPLIER (AUTHORIZED SIGNATORY)

NAME

DESIGNATION

DATE

.....OFFICIAL SEAL

Note: Please attach separate sheets, if space found is inadequate



BHARAT HEAVY ELECTRICALS LTD.

Corp. R&D DIVISION

VIKAS NAGAR,

HYDERABAD- 500 093 (INDIA)

Ph: 040 – 23778474, Fax: 040 – 23770698, email: mpx@bhelrnd.co.in

RD:DP:MPX:F-13

VENDOR REGISTRATION FORM

(Indigenous supplier)

[FORM TO BE SUBMITTED* BY THE BIDDER ALONG WITH TECHNICAL-BID]

Before filling, please refer to instructions on page-4

1.0 VENDOR PROFILE:

1.1 Name and address of the vendor:

Phone Nos.:

Fax No.:

Email: 1.

2.

1.2 Local representative name & address in Hyderabad/ Secunderabad:

Phone Nos.:

Fax No.:

Email:

Contact person:

Mobile No.:

2.0. TYPE OF ORGANIZATION:

PROPRIETORSHIP	COMPANY	SISTER CONCERN (mention vendor registration number of main organization)	
PARTNERSHIP	CORPORATION	Small Scale Industry	ANY OTHER (Please specify)

In case of SSI unit, copy of registration to be enclosed.

3.0 ANNUAL TURN OVER:

#	Year	Turn-Over
1	Current Year(budgeted)	
2	Previous year (200 - 0)	
3	Prior Year (200 - 0)	

4.0 NAME AND ADDRESS OF THE BANKER:

1. Bank Name
2. Branch name
3. Account number
4. Account Type
5. MICR Code:
6. IFSC Code(RTGS/NEFT):
7. Bank Phone number(s),

Blank cheque, duly cancelled, to be enclosed.

Please note that all payments shall be made through Electronic clearance services to your above account against the orders executed, if any.

5.0 REGISTRATION PARTICULARS (relevant copies to be enclosed)

- 5.1 IT Permanent Account No.(PAN):
- 5.2 State sales tax/VAT Registration No.:
- 5.3 Central Sales Tax Registration No.
- 5.4 ED Registration No.
- 5.5 Service Tax Registration No.:
- 5.6 PF Account No.:
- 5.7 Labour Licence No.:
- 5.8 ESI Account No.:

6.0 CONTACT PERSON: S/Sri

Designation:::

Phone/ Mobile No. :

7.0 TOTAL NUMBER OF EMPLOYEES:

Graduates (Engr./Scientists/ Mgmt/Fin.)	Consultants	Workers		
		Sup./Skilled	Semiskilled	Unskilled

8.0 WISH TO REGISTER FOR SUPPLIES/SERVICES:

#	Service/Supplies	Capacity
1		
2		
3		
4		
5		
6		
7		

9.0 REFERENCE LIST :

(Only recognized public and private sector companies, attach if printed copy available)

#	Customer	Volume / Year
1		
2		
3		
4		
5		
6		
7		

10.0 INFRASTRUCTURE / FACILITIES:

#	Facility (with specifications)	Age/ Year procured
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

11.0 REGISTRATION WITH OTHER BHEL UNIT/UNITS:

#	Unit	Registration No.	Year
1			
2			
3			
4			

12.0 ANY OTHER INFORMATION :

DECLARATION:

The information furnished above is true and authentic.

(CEO / PROPRIETOR)

SEAL:

DATE:

The competent authority reserves the right to accept or reject the registration. Registered vendors will be informed by mail / email, as convenient. Contact AGM (MM) for clarification/ additional information on registration.

A separate communication will be sent to you in case of non-registration, citing reasons thereof.

Instructions

1. Answer all items; use NA for items not applicable.
2. BHEL units do not require this registration.
3. Use additional sheets for want of space if required.
4. Attach copies of latest documents in respect of items 5.0 (Registration no.s)
5. Photographs of registered office and the chief executive/proprietor shall be furnished.
6. Use A4 sheets for this document and the enclosures.

* REGISTERED BIDDERS, HAVING BHEL (R&D) REGISTRATION NO. OR HAVE SUBMITTED THIS FORMAT FOR REGISTRATION, NEED NOT FURNISH THIS INFORMATION AGAIN