



BHARAT HEAVY ELECTRICALS LIMITED PHONES: 23774494 (EXCHANGE)

CORPORATE RESEARCH & DEVELOPMENT DIVISION
VIKASNAGAR, HYDERABAD - 500 093, INDIA

FAX : 91 40 23770698

RD:DP:MPX:F-04

ENQUIRY

To	-	Enquiry No:	Enq Date:	Due Date:	Delivery By:
		591104641	16-SEP-11	18-OCT-11	31-DEC-11

Pin

Email :

Attn. .

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,
ADDRESSED TO AGM(MM). THE TENDERS WILL BE
OPENED AT 2 PM ON THE SAME DAY. THE TENDERS MAY
BE DROPPED IN THE TENDER BOX KEPT AT THE SECURITY
GATE.

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
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1	GUI BASED SIMULATION SOFTWARE TOOLKIT (AS PER THE SPECIFICATIONS ENCLOSED)	NO	1
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THE VENDOR SHALL GIVE SOFTWARE SUPPORT FOR
A PERIOD OF ATLEAST 2 YEARS FROM THE DATE OF DELVERY OF THE SOFTWARE.

REVERSE AUCTION:
BHEL RESERVES THE RIGHT TO PROCURE ABOVE ITEMS THROUGH REVERSE AUCTION
AMONG QUALIFIED BIDDERS.

Note:

Please submit your offer in Two parts as per enclosed "General Terms and Conditions of enquiry, Loading Factors & 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 D) BIDS WITHOUT THESE ENCLOSURES SHALL NOT BE CONSIDERED.

2) WHEREVER VENDOR REGISTRATION FORM AND EFT DETAILS HAVE BEEN SUBMITTED EARLIER, THE SAME NEED NOT BE SUBMITTED AGAIN UNLESS THERE IS A CHANGE.

3) WHEREVER INDIAN AGENTS ARE REPRESENTING ON BEHALF OF THEIR PRINCIPLES, THE RELEVANT AUTHORISATION LETTER & AGREEMENT COPY TO BE ENCLOSED ALONG WITH TECHNICAL BID TO CONSIDER THE OFFER.

4) 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.

5) Unsigned offers are liable for rejection.

Note:

1)ALL OFFERS MUST INCLUDE NAME OF CONTACT PERSON, PHONE NO, FAX NO, EMAIL ID. UNSIGNED/INCOMPLETE 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.

5) "BEING A RESEARCH INSTITUTION BHEL R&D CAN AVAIL CUSTOM DUTY EXEMPTION IN TERMS OF GOVT NOTIFICATION NO 24/2007 - CUSTOMS DATED 1.3.2007 AND CENTRAL EXCISE DUTY EXEMPTION IN TERMS OF GOVT NOTIFICATION 16/2007 - CENTRAL EXCISE DATED 1.3.2007. HENCE SUPPLIERS ARE REQUESTED TO SUBMIT THEIR BIDS WITH OUT EXCISE DUTY".

PLEASE FILL UP THE ENCLOSED VENDOR REGISTRATION FORM AND
SEND IT ALONG WITH YOUR QUOTATION. OTHERWISE YOUR
QUOTATION MAY NOT BE CONSIDERED.

Yours faithfully

for BHARAT HEAVY ELECTRICALS LTD

NALINI THILAK

Dy Gen Manager

Email: nalini@bhelrnd.co.in



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ENQUIRY

Direct Phone : 91-40-23882454

Mobile : 91-9849076669

GUI BASED SIMULATION SOFTWARE TOOLKIT

BHEL R&D requires an object oriented and user friendly graphical tool kit to develop Simulation software packages for Thermal (**Sub-Critical and Super-Critical**) **Hydel, Combined cycle, CFBC and coal gasification** plants to be useful for

1. Operator training / Design Simulators
2. Dynamic analysis

I. For the operator training / Design simulator this package should consists of the following features:

- a. Modelling of all the components and realizing all types of control logics & interlocks of the power plant
- b. Developing all the features of HMI i.e. display pages, trends and alarms etc for any reference plant
- c. Establishing bi-directional communication with third party DCS including virtual C&I and HMI.
- d. Communicating with external world which can be either a hardwired panel or any software module
- e. all the instructor station features such as Run / Freeze, Snapshot, Malfunctions, External parameters and remote operations etc.
- f. Evaluating the performance of the trainee (Operator evaluation)

II. For developing a Dynamic analysis package, the package should have provision to

- a. build a steady state model for the reference plant by configuring the components available in the library and inputting the geometrical and operating data
- b. give disturbance and study the behaviour of the plant parameters in the form of trend plots and excel format for the purpose of analysis, various design alternatives and steady state scenario analysis of the process systems involved etc.
- c. connect to third party DCS including actua/virtual C&I and HMI

SPECIFICATIONS FOR Simulation software Tool

III. 1 Modeling Capabilities

- a. The user should be able to define the process interactively by selecting the desired components from the library provided by the vendor using Graphical User Interface (GUI), configure these components as per the reference plant and enter input data. The software tool should be able to generate model for the configured process for delivering an Operator Training/ Design Simulator.
- b. The system shall readily provide modeling components listed in **Annexure – 1** to enable the user to construct a model in part or full, for **Hydel and Thermal power plants including Super critical, Combined cycle, CFBC and Gasification plants** from the library of these component model for steady state and dynamic process. **In addition to the above listed**

components, any additional components which are required to complete a typical power plant model will also be provided.

- c. The system should have provision for the users to develop an object with GUI representing the physical entity of plant such as Valve, Pipe, Motor, etc, in respect of its functionality required for a plant simulation. The GUI will provide all the necessary user interfaces to completely model a component.
- d. The system should allow user to enhance an existing component available in the library to a new component by specifying additional specific functionality to the component.
- e. The system should allow building a compound component to be developed from a set of individual components, which shall have all the characteristics of individual component.
- f. Provision should be made available for interfacing the package with any other software modules which may be available in the form of static / dynamic link libraries (function calls) generated in different environments such as Visual Fortran, Visual C++, VB and .Net)
- g. The system should generate the models from the first principles by using appropriate Mass, Energy, Momentum balance, etc in addition to having a facility to build empirical models. It should also be possible to integrate models which utilize techniques such as neural networks developed under different packages such as Neurosolutions etc. Vendor to specify the details of the nature of such support in their system.
- h. The models will be able to be developed under different Unit systems (FPS, MKS, SI systems) and system should allow the user to convert from one unit system to the other.
- i. During the operation of the Simulator the user shall have the facility to Run or Freeze the model or Single Step of simulation.
- j. The minimum possible cycle time of the simulation cycle will be such that the real-time characteristics of the system will be able to be established by the simulation. Vendor to specify the minimum possible cycle time and corresponding hardware requirements, etc.
- k. The system shall allow the user to modify the geometrical data of a component and will also provide a facility to summarize all the geometrical data of the components involved in one place, such as export/import options, to enable BHEL to customise the data from one project to another.
- l. The system shall allow the user to specify convergence criteria to the underlying solver which is required to handle gracefully for any instable conditions, etc.
- m. The system shall have the capability to port the logic from the actual/virtual control system to the simulator directly or through suitable converter software.

- Vendor to specify, with a detailed write-up, on already available translator/converter software and to include it in the scope of supply.
- n. Provide the software interface details along with necessary documentation to integrate to Third Party DCS systems. **(to be submitted with technical bid)**
 - o. Vendor to confirm or outline the limitations, etc in integrating to third party virtual/actual DCS systems in terms of achieving real-time simulation, snapshots, etc., if any.

III. 2 HMI Features

- a. The system shall have the facility to configure all the features, of typical HMI system, such as Plant Schematics, Trends, Plots, Historical data, etc and also to have the ability to integrate with any third party DCS/HMI.
- b. The system **shall** have the capability to port all the pictures of a third party HMI along with necessary IO Tags to the simulator directly or through suitable converter software. Vendor to specify on already available translator/converter software and to include it in the scope of supply.
- c. Provide the software interface details along with necessary documentation to integrate to Third Party HMI systems.
- d. Vendor to confirm or outline about the limitations, etc in integrating to third party HMI systems in terms of achieving real-time simulation, snapshots, etc., if any
- e. OPC Connectivity

III. 3 Instructor Station Capabilities

- a. Run/Freeze/Single Step, Rate of Simulation, Store and Restore Snapshots, Record and Replay, Backtrack, Malfunctions, External Parameters, Remote Operations
- b. Snapshot Management and concurrent development
- c. Integration to third party Instructor Station

III. 4 Operator Evaluation

- The system shall have the facility
 - a. to configure different parameters which shall be monitored during any training session for evaluating the performance of operators.
 - b. to record and replay the operator actions in all the OWS for purpose of evaluation
 - c. to configure the start-up curve (behaviour of important plant parameters with reference to time) which will be referred for evaluation of the performance of the operator.

III. 5 License

The vendor should provide at least three licenses for the simulation software tool for development of simulators concurrently by three developers along with at least one Instructor station license and at least four HMI station licenses. The development license should also allow the developer to use the tool for Dynamic analysis of any power plant application. All the licenses should be of perpetual in nature. There should not be any restriction for BHEL to use this package for development of any number and any type of simulators. BHEL wishes to utilize the simulator packages developed using this tool for their internal reference and study.

III. 6 Hardware and Software support

- The software package shall be computer independent. It should be possible to run it on different selected hardware and selected operating systems - **Windows XP 32 bit , Windows 2003 Server, Windows 2008 Server 64 bit, Windows7 64 bit**
- User Account Control support on Wk2k8 Server and Win7

III. 7 Validation

The performance of the simulator model should have been validated extensively by modelling different test facilities and comparing calculation results to a large set of selected transients. The validation cases shall be furnished under the following heads:

- (i) Separate Effects Test – Validation of steam quality, pressure drop, slip in two-phase for etc.
- (ii) Integral Test – Validation of important parameters like temperature, pressure etc. of a typical plant.

III.8 Training

The vendor should have the capability/Facility to provide a structured training at his works in the following areas:

Comprehensive training on familiarization and usage of

- the simulation software tool with reference to development of training simulators and dynamic analysis
- connectivity of simulator with third party actual/virtual DCS
- Instructor station features
- Operator evaluation package
- available translator/convertor software for DCS/HMI

III.9 Vendor competence requirements

1. The tool which is being offered should have all the features mentioned in the specifications.
(Vendor to provide compliance matrix for all the features mentioned in the specifications clearly indicating compliance, present status, constraints if any, licensing policy, futures plans and additional price for incorporating a specific feature, if any etc)
2. The vendor should provide a reference list of customers who have developed full scope replica simulators for thermal power plants using this simulation software tool. (Vendor to provide detailed configuration of the reference plant being simulated along with PO copy or completion certificate from the customer wherever possible)
3. The reference list should contain at least one party who has developed or who is in the process of developing full scope replica simulators for Super Critical thermal power plants.
4. Failure to comply with any of the above three, the offer may be rejected.

III. 10 Deliverables:

1. GUI based simulation software tool with licenses mentioned in III. 5 and comprehensive training as mentioned in III.8 of the technical specifications.
2. Full scope power plant simulation packages developed using this simulation software tool for the following configurations. (Vendor can deliver the simulation packages within three months from the date of supply of simulation software tool, if it is not immediately available)

- Supercritical thermal plant
- Combined cycle plant
- CFBC plant

The user should be able to customise these models to develop full scope simulators for the reference plant.

III. 11 Price:

Vendor should provide break up of the price for each item mentioned in III. 10

III.12 Warranty: Vendor to provide warranty for a period of two years from the date of installation

Annexure – 1

Thermal

Heat exchangers	Steam-Steam, steam-water, steam-Air, Gas-Steam, Air-Air, Gas-Gas, Gas-Water, Water-Water, Steam coil air heater, Gas-Air (Tri-sector and Bi-sector Air heaters), Attemperator, Radiative heat – transfer heat exchangers
Steam Turbines and Auxiliaries	High Pressure, Intermittent Pressure, Low Pressure for Sub-Critical and Super-Critical boiler Main steam parameters, Drive turbine for Feed pumps
Fans	Axial, centrifugal with constant speed and variable speed
Bearings	Water cooled, Oil cooled
Furnace	Boiler Furnace, Stoker Furnace, Cyclone Furnace, Oil fired, coal fired, Dual sided once through, once through single furnace, Tangentially fired and Front wall fired furnace
Condenser	Air cooled, Water cooled
Motors	single phase and three phase induction motors with constant speed and variable speed drive
Pumps	Centrifugal, positive displacement, Oil and Vacuum pumps
Valves with or without actuators	Gate, regulating , diverter, air, gas, steam, water, two phase
Electrical	Circuit breakers, Transformers, isolators, Generator, Exciter
Transmitter	Flow, Pressure, Pressure difference, Temperature
Controls	PID, State variable control, And, Or, Not etc
Boiler Drum and Deaerator	
Pulversiers	Ball, Tube and Bowl type
Circulating Systems	Natural circulation, Forced Circulation and Once through
Combustor model	
Miscellaneous	ESP, Coal nozzles, Oil burners, Bunkers, Gravimetric feeders, Ducts, Headers, Junctions

Hydel

Keplan, Pelton and Francis Turbines, Reservoir, Penstock, Surge Tank , Governor valves
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Combined cycle

Gas Turbine, Evaporator, all heat exchangers with convection heat transfer
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CFBC

Cyclone, Seal pot, Circulating fluidised bed combustor and Heat exchangers
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IGCC

Gassifier, Gas clean up system, Coal handling system, Ash handling system and Heat exchangers



**Materials Management Department
Bharat Heavy Electricals Ltd.**

Corporate R&D Division

Vikasnagar, Hyderabad - 500 093 (India)

e-mail: mpx@bhelrnd.co.in

Ph: 040 - 23778474, Fax: 040-23770698

**GUIDE LINES REGARDING DEALINGS WITH INDIAN AGENTS OF
FOREIGN SUPPLIERS**


1. 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.
2. 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.
3. 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.
4. Any agency commission to be paid by BHEL to the Indian agent shall be in Indian currency only.
5. Whenever Indian agents are representing on behalf of their principals the relevant authorisation letter and agreement copy to be enclosed along with Technical bid to consider the offer.



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), Bharat Heavy Electricals Limited, Corporate Research & Development Division, Vikasnagar, Hyderabad, Andhra Pradesh, India – PIN-500 093, India** to be deposited in Tender Box located at Security gate for hand deliveries.
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.** The rate shall be quoted in both figures and in words.
3. Any Supplier (Agents/distributors/ representatives)desirous of quoting imported goods/ services, they should submit the quote in foreign currency along with agency agreement copy, failing which their offer is liable for rejection. In case of non-submission of agreement copy, the principal should submit quotation to BHEL directly. Foreign suppliers will also indicate in their offer Indian agent's name, if any, 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
4. **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.
5. **Late Tender:** Tenders received after tender due date/ time (12:00 hrs) shall be treated as late tenders and will not be considered..
6. The Quotation should be free from overwriting and erasures. Corrections and additions, if any, must be attested. Incase of difference in unit price and corresponding total value or figures or words/text, the buyer (BHEL) reserves the right to select the figures or words/text leading to lowest cost to buyer.
7. Supplier should indicate in the quotation dimensions (Size), weight, rate etc., in the metric system unless the enquiry calls for different unit.
8. **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.
9. 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.
10. **Price Impact:** In the event of any bidder, after finalizing the technical specifications and scope of supply, opting to revise their original bid, they have to submit the Price-Impact only. The Original price bid along with Price-Impact bid shall be opened during pricebid opening. Unsolicited bids will not be considered.
11. **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.
12. **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.
13. **Terms of Delivery:** All Suppliers shall quote the lowest prices on EXW/ FOB/ FCA basis in case of foreign suppliers and on ex-works /Free-on-Rail/Road /F.O.R-destination basis in case of Indian/ indigenous Supplies, indicating packing & forwarding charges if any, separately.
14. **Taxes and Duties:** Unless specified otherwise in the enquiry, BHEL do not provide "C" 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. The vendors should mention applicable Registration Number(s) specifically in their quotation. Being a research institution, BHEL R&D is exempt from Customs duty against direct imports from foreign suppliers and exempt from Central excise duty against indigenous suppliers as per Govt. of India. Hence, suppliers are requested to submit their bids clearly stating applicable taxes/ duties. The quoted taxes/ duties 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.
15. **Insurance:** Insurance will be arranged by BHEL in case of Ex-Works as well as FCA / FOB basis supplies.
16. **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, if any, to the supplier's account. For foreign suppliers, the preferred payment term will be on wire transfer basis and bank charges inside India will be to BHEL account and outside India will be to supplier's account.
17. **Pricebid evaluation:** All offers shall be evaluated based on unit price, P&F, taxes/duties, freight charges if any, loading due to non-acceptance of our standard terms. All foreign offers shall be evaluated based on monthly exchange rates announced by Customs dept., Govt. of India as applicable at technical bid opening date. 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 terms , their offers will be evaluated as per Loading factors form sent along with enquiry.
18. **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.
19. **Part/ Split Ordering:** BHEL reserves right to Order part of the item/ quantity of the enquiry and/or split the order among qualified vendors.
20. 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.
21. **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.
22. **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.
23. **Withdrawal from the Contract:** In case the supplier withdraws their offer before placement of order, BHEL reserves the right not to send next enquiry(ies). 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.
24. **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.
25. **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.
26. **Arbitration & Forum for Legal Proceedings:** All disputes arising in connection with indigenous/ foreign supplies shall be settled through arbitration held at Hyderabad, AP, India and arbitrator shall be appointed by BHEL from the enlisted panel. 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.

BHEL R&D RD:DP:MPX:F-22			LOADING FACTORS		
NOTE : IN CASE OF DEVIATION TO BHEL TENDER SPECIFIED TERMS, LOADING FACTOR INDICATED IN FOLLOWING TABLE WILL BE APPLIED TO QUOTED PRICE WHILE EVALUATING THE LOWEST QUOTE ()					
A. FOR INDIGENOUS PURCHASES					
SLNO	SCOPE	COMMERCIAL TERMS	BHEL STANDARD TERM	AS OFFERED	LOADING FACTOR FOR NON COMPLIANCE TO BHEL STANDARD TERMS
A.1	SUPPLY OF EQUIPMENT	PAYMENT TERMS	100% PAYMENT, WITH IN 30 DAYS FROM THE DATE OF RECEIPT AND ACCEPTANCE OF MATERIAL	SAME	NIL
PAYMENT AGAINST PROFORMA INVOICE / DESPATCH DOCUMENT OR CASH ON DELIVERY (COD) / CASH AGAINST PROOF OF DESPATCH				11% PER ANNUM INTEREST ON THE TOTAL PO VALUE FOR ONE MONTH	
ADVANCE PAYMENT WITH BANK GUARANTEE				11% PER ANNUM INTEREST ON THE TOTAL VALUE FOR OFFERED DELIVERY PERIOD (Rounded off to nearest month) + 1 MONTH	
PART ADVANCE PAYMENT WITH SUPPORTING BANK GUARANTEE AND BALANCE WITH IN 30 DAYS				11% PER ANNUM INTEREST ON ADVANCE FOR OFFERED DELIVERY PERIOD (Rounded off to nearest month) + 1 MONTH	
PART ADVANCE PAYMENT WITH SUPPORTING BANK GUARANTEE AND BALANCE ON RECEIPT OF MATERIAL				11% PER ANNUM INTEREST ON ADVANCE FOR OFFERED DELIVERY PERIOD (Rounded off to nearest month) + 1 MONTH AND 11% PER ANNUM INTEREST ON BALANCE AMOUNT FOR ONE MONTH	
A.2	SUPPLY OF EQUIPMENT INCLUDING E&C	PAYMENT TERMS (THE SUPPLIER MUST SUBMITT A PERFORMANCE BANK GUARANTEE (PBG) FOR 10% OF THE BASIC VALUE OF THE ORDER VALID FOR WARRANTY PERIOD.)	90% PAYMENT, WITH IN 30 DAYS FROM THE DATE OF RECEIPTAND ACCEPTANCE OF MATERIAL . BALANCE 10% WITH IN 30 DAYS OF COMPLETION OF E&C AND ON SUBMISSION OF PERFORMANCE BANK GUARANTEE (PBG) FOR 10% OF BASIC PO VALUE.	SAME	NIL
100% PAYMENT WITH IN 30DAYS AFTER COMPLETION OF SUPPLIES AND ERECTION AND COMMISIONING				NIL (PBG WILL NOT BE INSISTED FROM THE SUPPLIER)	
90% PAYMENT AGAINST PROFORMA INVOICE/ DESPATCH DOCUMENT OR CASH ON DELIVERY (COD) / CASH AGAINST DESPATCH AND BALANCE 10% WITH IN 30 DAYS OF E&C				11% PER ANNUM INTEREST ON 90% OF THE VALUE OF PO FOR ONE MONTH	
90% PAYMENT AGAINST PROFORMA / DESPATCH DOCUMENT OR CASH ON DESPATCH (COD) / CASH AGAINST DESPATCH AND BALANCE 10% AFTER COMPLETION OF E&C				11% PER ANNUM INTEREST ON TOTAL PO VALUE FOR ONE MONTH	
90% ADVANCE PAYMENT WITH BANK GUARANTEE AND BALANCE 10% WITH IN 30 DAYS OF E&C				11% PER ANNUM INTEREST ON 90% OF THE TOTAL VALUE FOR DELIVERY PERIOD(ROUNDED OF TO THE NEAREST MONTH) + 1 MONTH	
PART ADVANCE (x%) PAYMENT WITH SUPPORTING BANK GUARANTEE AND (90 - x) % PAYMENT ON RECEIPT OF MATERIAL AND 10% PAYMENT WITH IN 30 DAYS AFTER E&C				11% PER ANNUM INTEREST ON THE ADVANCE AMOUNT FOR THE DELIVERY PERIOD/ROUNDED OF TO THE NEAREST MONTH)+ 1 MONTH AND 11% PER ANNUM INTEREST ON (90-X)% PAYMENT FOR ONE MONTH	
PART ADVANCE (x%) PAYMENT WITH BANK GUARANTEE AND (90 - x) % PAYMENT ON RECEIPT OF MATERIAL AND 10% PAYMENT AFTER E&C				11% PER ANNUM INTEREST ON THE ADVANCE AMOUNT FOR THE DELIVERY PERIOD/ROUNDED OF TO THE NEAREST MONTH)+ 1 MONTH AND 11% PER ANNUM INTEREST ON BALANCE AMOUNT	

SLNO	SCOPE	COMMERCIAL TERMS	BHEL STANDARD TERM	AS OFFERED	LOADING FACTOR FOR NON COMPLIANCE TO BHEL STANDARD TERMS
B. FOR FOREIGN PURCHASES (IMPORTED)					
B.1	SUPPLY OF EQUIPMENT	PAYMENT TERMS.	AGAINST SIGHT DRAFT ON PRESENTATION OF DESPATCH DOCUMENTS VIZ INVOICE, AWB ETC TO OUR BANKERS (ALL BANK CHARGES INSIDE INDIA TO BHEL ACCOUNT AND OUTSIDE INDIA WILL BE TO THE SUPPLIER'S ACCOUNT)	SAME	NIL
				100% PAYMENT AFTER RECEIPT AND ACCEPTANCE OF MATERIAL AT BHEL R&D BY WIRE TRANSFER. (DESPATCH DOCUMENTS WILL BE SENT TO BHEL R&D DIRECTLY ALONG WITH BANK DETAILS)	NIL
				LC PAYMENT	11% PER ANNUM INTEREST ON THE BASIC VALUE FOR ONE MONTH
				ADVANCE BY WIRE TRANSFER WITH BANK GUARANTEE	11% PER ANNUM INTEREST ON THE BASIC VALUE FOR DELIVERY PERIOD + 1 MONTH
				PART ADVANCE (x%) PAYMENT WITH SUPPORTING BANK GUARANTEE AND BALANCE PAYMENT AFTER RECEIPT OF MATL	11% PER ANNUM INTEREST ON THE ADVANCE AMOUNT FOR THE DELIVERY PERIOD+ 1 MONTH AND 11% PER ANNUM INTEREST ON BALANCE AMOUNT FOR ONE MONTH
B.2	SUPPLY OF EQUIPMENT INCLUDING E&C	PAYMENT TERMS (THE SUPPLIER MUST SUBMITT A PERFORMANCE BANK GUARANTEE (PBG) FOR 10% OF THE BASIC VALUE OF THE ORDER VALID FOR WARRANTY PERIOD.)	90% PAYMENT WILL BE MADE WITH IN 30 DAYS FROM THE DATE OF RECEIPT OF MATERIAL ON ACCEPTANCE. AND BALANCE 10% WITH IN 30 DAYS OF COMPLETION OF E&C AND ON SUBMISSIONOF PERFORMANCE BANK GUARANTEE FOR 10% OF BASIC VALUE	SAME	NIL
				LC PAYMENT FOR 90% OF THE ORDER VALUE + 10% AFTER E&C WITH IN 30 DAYS	11% PER ANNUM INTEREST ON 90% OF BASIC VALUE FOR ONE MONTH
				90% OF BASIC VALUE AS ADVANCE BY WIRE TRANSFER WITH BANK GUARANTEE AND BALANCE 10% AFTER E&C BY WIRE TRANSFER WITH IN 30 DAYS	11% PER ANNUM INTEREST ON 90% OF THE BASIC VALUE FOR DELIVERY PERIOD + 1 MONTH
				x% OF TOTAL VALUE AS ADVANCE PAYMENT WITH BANK GUARANTEE AND BALANCE (I.E. 90-X)AFTER RECEIPT OF MATL BY WIRE TRANSFER AND 10% AFTER COMPLETION OF E&C	11% PER ANNUM INTEREST ON THE ADVANCE AMOUNT FOR THE DELIVERY PERIOD+ 1 MONTH AND 11% PER ANNUM INTEREST ON BALANCE AMOUNT OF 90% OF ORDER VALUE (I.E. 90-X%)
C. PERFORMANCE BANK GUARANTEE, PBG (COMMON FOR INDIGENOUS AND IMPORTS)					
C.1		PERFORMANCE BANK GUARANTEE	PBG FOR 10% OF THE BASIC PO VALUE SHALL BE FURNISHED IN BHEL PRESCRIBED FORMAT.	IF NOT AGREED	10% OF THE BASIC MATERIAL COST
D. PENALTY (COMMON FOR INDEGENOUS & IMPORTS)					
D.1		LD CLAUSE	IN THE EVENT OF DELAY IN AGREED CONTRACTUAL DELIVERY, PENALTY OF 0.5% (HALF PERCENT) PER WEEK BUT LIMITED TO A MAX OF 10% VALUE OF UNDELIVERED PORTION OF BASIC MATERIAL COST WILL BE APPLICABLE	AGREED	NIL
				IF NOT AGREED	10% OF THE BASIC MATL COST
				IF AGREED FOR 5%	5% OF THE BASIC MATERIAL COST
				OTHER THAN THE ABOVE	10% MINUS THE AGREED MAX PERCENTAGE OF THE BASIC MATERIAL COST WILL BE LOADED.



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)

	BHEL R& D's terms & Conditions	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)	F.O.R Delivery: within ____ weeks from PO date
3a) 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	
3b) Manufacturer's Test report	Manufacturer's Test Report / Manufacturer's Test Certificate to be provided with Goods	
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' form. Supplier to specify rates of taxes/ duties element wise on the price quoted and related percentages. Please mention "NIL" if exempted and N.A if not applicable.	ED+ Cess : % Extra/ inclusive/ Nil/ NA VAT/ CST: : % Extra/ inclusive/ Nil/ NA Service Tax: : % Extra/ inclusive/ Nil/ NA
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 Terms & 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-13

BHARAT HEAVY ELECTRICALS LTD.

Corp. R&D DIVISION

VIKAS NAGAR,

HYDERABAD- 500 093 (INDIA)

Ph: 040 – 23772704, Fax: 040 – 23770698, email: mpx@bhelrnd.co.in

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, Rs.
1	Current Year(budgeted)	
2	Previous year (200 - 0)	
3	Prior Year (200 - 0)	

4.0 NAME AND ADDRESS OF THE BANKER:

- 4.1 Bank Name
 4.2 Branch name
 4.3 Account number
 4.4 Account Type
 4.5 MICR Code:
 4.6 IFSC Code(RTGS/NEFT):
 4.7 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 LIST OF PRODUCTS/ SERVICES OFFERED

#	Products/ Services	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:

Note:

1. Registered bidders, having BHEL (R&D) registration no. or have submitted this format for registration, need not furnish this information again.
 2. The competent authority reserves the right to accept or reject the registration.
 3. Vendors approved for registration will be informed by mail / email, as convenient. A separate communication will be sent in case of non-registration also, citing reasons thereof.
 4. BHEL reserves the right to take penal action as deemed fit if any of the information provided by the vendor(s) is found to be incorrect.
 5. AGM, Head (MM) may be contacted for clarification/ additional information on registration.
-

Instructions

1. Fill all items. Please mention "N.A." for items/ clauses not applicable.
2. Use A4 sheets for this document and the enclosures. Use of additional sheets is permitted if space provided is not adequate.
3. Attach copies of latest documents in respect of items 5.0 (Registration no.s)
4. Photographs of registered office and the chief executive/proprietor shall be furnished.

AUTHORISATION LETTER FOR E-PAYMENT/ NEFT / RTGS

(PLEASE FILL UP THE FORM COMPLETELY IN CAPITAL LETTERS ON YOUR COMPANY LETTERHEAD ONLY)

Type of Request (Tick one)	NEW	CHANGE
----------------------------	-----	--------

BHEL Vendor Code (to be filled by BHEL)	
---	--

1	Company Name	
2	Address	
3	City with PIN Code	
4	State	
5	PAN Number	
6	Name of Contact Person	
7	Phone no. with STD Code	
8	Fax No. with STD Code	
9	Email ID	
10	Website (URL)	

BANK DETAILS FOR EFT / RTGS

1	Bank Name	
2	Branch	
3	Branch Code	
4	Branch Address	
5	Branch Phone No.	
6	Account No.	
7	Account Type: SB/ Current/ other (Specify)	
8	MICR Code	
9	IFSC Code	

I, as an authorized representative / owner of the above named company, hereby state as under:

1. Enclosed here with a cancelled cheque in support of our company's bank details.
2. Authorize BHEL R&D Hyderabad, to electronically make payments to the designated bank account with bank charges, if any, to our account.
3. 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.
4. I hereby certify that the particulars given above are true, complete and correct.
5. This authority remains in full force until BHEL receives and acknowledge written notification requesting change or cancellation.

Date:

Authorised Signatory
Designation :

COMPANY SEAL



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)	F.C.A International Airport. Delivery: within __ weeks from PO date
3a) 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	
3b) Manufacturer's Test Report	Manufacturer's Test Report / Manufacturer's Test Certificate to be provided with Goods	
4. Terms of payment	Wire Transfer within 30 days of receipt of Material. All bank charges inside India will be to BHEL R&D account and outside India will be to the supplier's account.	
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: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 catalogues)

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 AUTHORIZATION 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: 1. BHEL Reserves the right to take penal action as deemed fit if any of the information provided by the vendor is found to be incorrect.
2. Please attach separate sheets, if space found is inadequate