


BHARAT HEAVY ELECTRICALS LIMITED

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

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ENQUIRY

Ref: 261390061

Date 14-06-2013

Enquiry for Dielectric Spectroscopy

Enquiry No:261390061 Enquiry Date : 14-06-2013 Due Date: 13-07-2013 Indicative Delivery Date : 30-11-2013

Sl.No	Item Description	Unit	Qty
1	Supply of Dielectric Spectroscopy	NO	1
2	Commisioning of Dielectric Spectroscopy	LOT	1

Please submit your quotation for the above material in sealed cover superscribed with enquiry no, enquiry date and due date subject to our enclosed terms and conditions. The quotations shall reach us on or before the due date by 12 noon. The tenders can also be dropped in the tender box kept at the security gate,BHEL R&D. In case you are not in position to submit the offer,please send reply suitably specifying the reasons.

Sl.No	Description	Document Ref.
01	Enquiry, General Terms & Conditions, Commercial Terms & Conditions etc.	Volume - 1
02	Technical specifications, Scope of Supply etc.	Volume - 2

MKVH Sarma
 Addl General Manager
 sarma_mkvh@bhelrnd.co.in

	ENQUIRY & QUALIFYING CRITERIA	Volume - 1 Enquiry No 261390061
Dielectric Spectroscopy		

1	Tendor inviting officer / Authority, Designation and Address	Additional General Manager(MM) BHEL R & D, Vikas Nagar (Near Balanagar), Hyderabad -500093
2	Item Description - Qty	1) Supply of Dielectric Spectroscopy - 1 NO 2) Commisioning of Dielectric Spectroscopy - 1 LOT
3	Enquiry Reference no.	261390061
4	Indicative Delivery Date	30-11-2013
5	Due date, Time and place for submission of tender	13-07-2013 upto 12 noon. Sealed Quotations shall be addressed to AGM(MM), BHEL R & D Division, Vikas Nagar (Near Balanagar), Hyderabad AP,India Pin - 500 093 Quotations can also be deposited in the Tender box located at Security Gate of BHEL R & D BHEL shall not be responsible for any postal/courier delay.
6	Place, Date and time of Tech.Bid opening	Tender Opening Cell (Sangam) BHEL R & D Office. 13-07-2013, 2 PM
7	Mode of Submission of Tender	<p>Please submit your offer in one common sealed cover containing two parts in separate sealed covers as detailed below.</p> <ol style="list-style-type: none"> 1. First cover shall contain: <ol style="list-style-type: none"> a. Technical & Commercial bid b. Filled in Commercial Compliance Statement (mandatory) c. Copy of price-bid with price(s) cells blank (un-priced price bid) d. EMD Receipt/ DD 2. Second cover shall contain price bid. Price bid containing price quotes ,installation and /or commissioning charges shall be spelt out clearly taking into account total charges rather than quoting vaguely such as charges per man-day or charges per engineer per day etc. <p>If the price bid was found later to be different from the unpriced price bid format in any way, the offer will be rejected summarily. The rates shall be quoted both in figures and in words.</p> <p>The offers can also be submitted through e-mail and have to be sent in PDF format to e-mail id: 'eoffers@bhelrnd.co.in' only. Copies should not be marked to anyone.</p> <p>The e-mail offers should have two attachments. One attachment shall contain a) Technical & Commercial bid b) Filled in Commercial Compliance Statement (mandatory)</p>

c) Copy of price-bid with price(s) cells blank (un-priced price bid) and

d). Scan copy of EMD receipt/DD. DD to be sent by Speed post/International courier. Furnish docket no. courier details clearly.

The second attachment shall contain price bid.

The subject of the e-mail should contain Enquiry No, Enquiry Date and Due date.



GENERAL TERMS & CONDITIONS (GTC)

Volume - 1
Enquiry No
261390061

Dielectric Spectroscopy

SL.No.	Clause	BHEL REQUIREMENT
1	General	<p>a. All offers must include name of the contact person, phone no/mobile no, Fax no, email-id. Unsigned offers are liable for rejection.</p> <p>b. We, BHEL R&D, is registered with Department of Scientific and Industrial Research (DSIR) for the purpose of availing Customs Duty exemption in terms of Government Notification no.24/2007-Customs dated 01-Mar-2007 & Central Excise Duty Exemption in terms of Government Notification No. 16/2007-Central Excise dated 01-Mar-2007 as amended from time to time. Hence suppliers are requested to submit their bids clearly stating applicable taxes/duties.</p> <p>c. 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. In case any Taxes/ Duties exempted, a self declaration for the same may be attached to the offer. Changes in taxes and duties because of the changes in turn over etc will be to supplier's account.</p> <p>d. Where ever vendor registration form and EFT details have been submitted earlier, the same need not be submitted again unless there is a change.</p> <p>e. BHEL R&D do not issue 'C' form .</p> <p>f. L1 status shall be decided on Cost to BHEL Basis.</p>
2	Foreign Suppliers	<p>BHEL will deal directly with foreign vendors, where ever required, for procurement of goods. However, if the foreign principal desires to avail of services of an Indian agent, then foreign principal should ensure compliance to regulatory guidelines which require mandatory submission of agency agreement containing agency commission.</p> <p>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 agency agreement copy, the principal should submit the quotation to BHEL directly. Foreign supplier will also indicate in their offer Indian agent's name, if any, address and percentage of agency commission out of the quoted price.</p> <p>Fully owned Indian Subsidiaries/distributors of Foreign Companies shall quote in Foreign Currency on FOB basis only.</p>
3	Late Tenders	Tenders received after due date/time(12:00hrs) will not be considered
		(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

4	Discrepancy in words and figures	<p>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.</p> <p>(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</p> <p>(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 of (a) and (b) above.</p> <p>(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.</p>
5	Two Part bid clarifications	<p>In the case of Two-part bid, the vendor should furnish technical and commercial 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.</p>
6	Price Impacts	<p>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 price bid opening. Unsolicited price impacts will not be considered.</p>
7	Price bid evaluation	<p>All offers in price bid opening or reverse auction shall be evaluated in Indian currency based on unit price, packing & forwarding, taxes/duties, freight charges if any, exchange rate. Loading due to non-acceptance of our standard commercial terms. The exchange rate declared by State Bank of India under TT Selling rate on the technical bid open date shall be adopted for evaluating foreign currency bids.</p>
8	Packing	<p>The supplier shall be responsible for the goods being properly and adequately packed so as to prevent any loss, damage or deterioration during transit.</p>
9	Withdrawal	<p>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.</p>
10	Banned List	<p>The offers of the bidders who are in the banned list and the offers of the bidders who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL website www.bhel.com.</p>

11	Reverse Auction	BHEL reserves the right, to procure above items through reverse auction. BHEL reserves the right to reject the offer, in-case of supplier's non-acceptance to reverse auction.
12	Over All L1	Order will be placed on overall L1 basis. Vendors should quote for all items, otherwise the offer will be rejected.
13	Additional Information	Suppliers are requested to visit our web site regularly for any updates and additional information, "All corrigenda, addenda, amendments, time extensions clarifications, etc. to the tender will be hosted on BHEL website only". The corrigendum will not be published in news paper.
14	Destination	Indian Vendors: Destination shall be Stores, BHEL R&D, Hyderabad. Foreign Vendors: BHEL R.O.D Office, Mumbai, India.
15	Arbitration	Subject to the jurisdiction of Hyderabad/Secunderabad, Andhra Pradesh, India in respect of any suit or other legal proceedings relating this contract.
16	Inspection	On receipt, the goods shall be subjected to inspection and our decision regarding the acceptability of the goods shall be final and binding on the suppliers.
17	Micro Small Enterprises (MSEs)	In case the supplier belongs to MSEs (Micro Small Enterprises), Registration copy in this respect shall be submitted along with the offer. Further if MSEs are owned by the Scheduled Caste or the Scheduled Tribe entrepreneurs the same may be intimated. The following are the benefits for the MSEs. 1.MSEs are given tender documents free of cost and are exempted from payment of earnest money (EMD). 2.In tender, participating MSEs quoting price within price band of L1+15% shall also be allowed to supply a portion of requirement by bringing down their price to L1 price in a situation where L1 price is from someone other than a MSE and such MSE shall be allowed to supply up to 20% of total tendered value. In case of more than one such MSE, the supply shall be shared proportionately.
18	EMD - CAPITAL	1.Submission of earnest money deposit (EMD) along with offer is required. EMD is to be deposited in cash(as permissible under Indian income tax act) or pay-order/Demand Draft drawn in favour of BHEL R&D, Vikasnagar, Hyderabad 500093 only. In case of foreign bidders e-payment shall also be accepted as EMD. Our bank details for e-payment by foreign vendors are: State Bank of India, BHEL(R&D)- Vikasnagar Branch, Hyderabad, Andhra Pradesh, India; Pin-500093. Cash Credit A/C No: 10202162640 IFSC Code : SBIN0010622 2.EMD by the Tenderer will be forfeited as per Tender Document if, the successful bidder/vendor refuses to honour the Order after award of the Contract on him and /or withdraws his bid and /or unilaterally changes the offer and changes the offer and /or any of its terms & conditions with in the validity period. 3.EMD given by all unsuccessful Tenderers shall be refunded on

		<p>acceptance of award /LOI/PO by successful Tenderer. The EMD of successful bidder shall be returned after submission of Contract Execution Bank Guarantee (CEBG).</p> <p>4.EMD shall not carry any interest.</p> <p>5.EMD amount is Rs/INR. 1,50,000</p>
19	Contract execution Bank Guarantee (CEBG)-Capital	<p>CEBG shall be required for all POs where value (Supply +E&C) of each P.O. is estimated to be more than Rupees 20,00,000/- (INR).</p> <p>The successful vendor shall have to furnish a Contract Execution Bank Guarantee (CEBG) for 10% of the Total PO value in the prescribed format within 30 days from the date of P.O. but before L/C opening. CEBG shall be from one of the Consortium Banks of BHEL or from a reputed Bank and confirmed by any Consortium Bank of BHEL . All bank charges on account of issuance and conformation of CEBG whether incurred in India or outside India will have to be borne by the vendor.</p> <p>CEBG shall be kept valid unit 30 days after the date of E&C Certificate, which will be issued on completion of Erection & Commissioning of equipment which includes erection, commissioning, job proving, performance test, training to operators etc. as prescribed in PO.</p> <p>If the supplier fails to submit the CEBG even with in 60 days from the date of PO, BHEL reserves the right to cancel PO & forfeit the EMD given by the supplier. In addition, in such case, action will be initiated in line with extant guidelines for Suspension of Business dealings with Suppliers.</p>

Signature of the bidder with Seal & Date


COMMERCIAL TERMS & CONDITIONS (CTC)

 Volume - 1
 Enquiry No
 261390061

Dielectric Spectroscopy

SL.No.	Clause	BHEL REQUIREMENT	SUPPLIERS ACCEPTANCE / REMARKS
1	Validity of Offer	90 days from date of techno-commercial bid opening.	
2	Price basis	<p>The prices shall be firm for entire period of contract.</p> <p>The suppliers shall indicate packing and forwarding charges,if any, separately.</p> <p>All foreign suppliers shall quote the lowest prices on 'FCA-Nearest International Airport' basis. An amount of 3% on basic value towards freight and insurance will be added for cost comparison.</p> <p>All Indian suppliers shall quote the lowest prices on 'free delivery at BHEL R&D Stores or F.O.R destination' basis. In case of Ex-Works, an amount of 3% on basic value towards freight and insurance will be added for cost comparison.</p>	<p>a. For Destination</p> <p>b. Ex-Works</p>
3	Freight & Insurance	<p>Insurance will be arranged by BHEL in case of Ex-Works as well as FCA / FOB basis supplies.In such cases ,an amount of 3% towards freight and insurance will be added for cost comparison.</p>	
		<p>Guidelines regarding dealing with Indian agents of foreign suppliers</p> <p>1. BHEL shall deal directly with foreign vendors, wherever required, for procurement of goods. However, if the foreign principal desires to avail of services of an Indian agent, then the foreign principal should ensure compliance to regulatory guidelines which require mandatory submission of agency agreement.</p> <p>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.</p> <p>3. The agency agreement should</p>	

4	Agency Agreement	<p>specify the precise relationship between the foreign oem and services to be rendered by agent / associate, whether general in nature or in relation to the particular contract, must clearly stated by the foreign supplier / Indian agent. Any payment, which the agent / associate receives in India or abroad from the oem, whether as commission or as a general retainer fee shall be brought out in record in the agreement and be made explicit in order to encurse compliance to the laws of the country.</p> <p>4. Any agency commission to be paid by BHEL to the Indian agent shall be Indian currency.</p> <p>5. When ever Indian agents are representing on behalf of their principals, the relevant authorization letter and agreement copy to be enclosed along with technical bid to consider the offer.</p>	
5	Taxes and duties	<p>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. The suppliers are requested to submit their bids clearly stating applicable taxes and duties. The quoted taxes/duties will be taken for cost evaluation and order placement and no change will be entertained later except in the case of changes made by the government. In case of Service Tax, proof of payment of service tax is required to be submitted for reimbursement of the same.</p>	
		<p>Payment</p> <p>1) Through L/C: Please note Payment through Letter of Credit (L/C) is for foriegn currency payments only.</p> <p>Where the payments are through L/C (L/C opening charges shall be loaded for landed cost evaluation), payment of Supply value shall be 80% on dispatch and 20% on issue</p>	

6

Payment terms -
Capital

of E&C Certificate. Payment of E&C Value shall be made against E&C certificate issued by BHEL. E&C certificate shall be issued on satisfactory completion of erection, commissioning, job proving, performance test, training to operators etc, as envisaged in PO. The L/C shall be opened by BHEL as per following:

(i) Within 30 days of receipt of acceptable CEBG, an irrevocable unconfirmed L/C will be opened for 30% of the payment towards supply, due on shipment i.e. 24% of the Supply value of PO (30% of 80%)

Not earlier than 60 days before the shipment date, the value of this irrevocable unconfirmed L/C would be enhanced from 24% to 80% of the Supply value of PO

The above L/C can be negotiated after the Shipment against submission of B/L or AWB and such other documents as mentioned in the in the PO. The above L/C will be valid for a period extending 21 days beyond the shipment date for negotiation of documents.

(ii) 15 days prior to the scheduled & confirmed arrival of the technicians of supplier with their names, an irrevocable unconfirmed L/C will be opened for a value equal to 20% of the Supply value of PO plus 100% of the E&C value of PO. The validity of L/C would be sufficient to cover the period required for the completion of E&C plus 21 days as negotiation period.

This L/C can be negotiated after:

(a) Completion of E&C of the equipment in BHEL and against E&C certificate issued by BHEL and (b) Submission of Performance Bank Guarantee (PBG) by Supplier in the prescribed Format valid for 30 days beyond the warranty period, from one of the Consortium Banks of BHEL or from a reputed Bank and confirmed by Consortium Bank of BHEL for 10% of total PO Value. The PBG confirmation charges shall be borne by vendor.

	<p>Under all circumstances, CEBG shall be kept valid till be PBG becomes operational.</p> <p>2 Direct Payment: In case of direct payment , 80% payment of Supply value shall be made with in 45 days form the date of receipt of material at BHEL. Balance 20% of supply value plus 100% of the E&C portion of PO Value will be paid against E&C certificate issued by BHEL and submission of Performance Bank Guarantee (PBG) valid for 30 days beyond the warranty period by Supplier form any of the Consortium Banks of BHEL for 10% of total PO Value in the prescribed Format. The PBG confirmation charges shall be borne by vendor.</p> <p>3. Bank Guarantee and Loading against non acceptance of BHEL,s Payment Terms: If payment terms as mentioned by BHEL are not agreed by bidder, such bidder have to submit Bank Guarantee at the time of payment/opening of LC in the prescribed Format of the amount, exceeding 80% of the PO value, valid till issue of E&C Certificate for the equipment. However, in no case, payment against dispatch shall exceed 90% of the PO Value. Additionally, for any deviation sought including as mentioned above, in Payment Terms by bidder w.r.t. tender conditions, following loading shall be followed: (A) Benchmark Prime Lending Rate (BPLR) of State Bank of India as applicable on the scheduled date of tender opening +2%, for the amount & period of relaxation sought by bidder. (B) On account of payment through LC if insisted by bidder , bank charges shall also be loaded for the deviation in (i) opening of LC by BHEL and (ii) period and amount of LC as per prevailing bank rates.</p>	
	<p>1 Bidder should quote time period separately for 'Supply' and 'E&C' of equipment.</p>	

7	Time period for Supply and E&C-Capital	<p>2 The bidders should quote their earliest schedule for supply and E&C against the schedule indicated in the enquiry. BHEL, however, reserves the right to accept an offer not meeting the enquiry schedule.</p>	
8	Penalty for Delay in supply and E&C-Capital	<p>1 For the purpose of penalty for delay in E&C of the equipment the duration will be reckoned from the date of intimation by BHEL to vendor for readiness of site.</p> <p>2 Penalty on delay in 'Supply' and/or 'E&C' will be applicable to the delays attributed to vendor . Penalty will be considered separately for 'Supply' and 'E&C'. The rate of penalty for delayed Supply shall be @ 0.5% per week of delay of total PO value (Supply+E&C). in supply subject to a maximum of 10% of total PO value (Supply+E&C).</p> <p>The rate penalty for delayed E&C shall be @0.5% per week of delay of total PO Value (Supply+E&C) in E&C subject to a maximum of 10% of total PO value (Supply+E&C)</p> <p>Maximum penalty for delay in Supply and E&C together shall be limited to 15% of total PO value (Supply+E&C).</p> <p>In case PO includes more than one machine, the penalty shall be limited to 0.5% per week of delay on total PO Value(Supply+E&C) for the delayed machine.</p> <p>3 Loading on account of non-acceptance of Penalty for delayed Supply and /or E&C shall be as under:</p> <p>In case any bidder is not accepting the above penalty for delayed Supply and/or E&C, the offer of bidder shall be loaded to the extent to which it is not agreed by the bidder.</p> <p>4 Incase, any shortage is noticed viz-a-viz PO requirement in the main equipment/spares, such shortages shall be replenished by supplier on for destination basis without any cost implication to BHEL i.e. Custom Duty and freight charges etc. up to destination for</p>	

		such short supplies shall be borne by the supplier. 5. Supply period indicated by bidder should include reasonable time required for approval of drawings and other inputs from BHEL. In the Techno-Commercial Bid, the bidder shall submit milestones for various activities in co-relation with Supply and E&C period quoted by him.	
9	Weight and Packing Dimensions.	The Supplier shall indicate the shipping weight (Kgs) and dimensions(L x W x H in cms) clearly along with offer.	
<p>Note : All the clauses of the above format should be filled and submitted with the Techno Commercial Bid (Part-1). The filled in BHEL Commercial terms & Conditions format submitted with technical bid, responding to all the clauses duly signed with seal only shall be considered. Any other Commercial terms & conditions of bidders entered else where in their offer shall not be considered and are liable for rejection.</p>			

Signature of the bidder with Seal & Date



ITEM SPECIFICATIONS

Volume - 2
Enquiry NO
261390061

Dielectric Spectroscopy

SL.No.	Item		
1	Supply of Dielectric Spectroscopy		
sl no	Descriptions	BHEL Specifications	Vendor Specifications/ Deviations
1	General	Dielectric/Impedance Spectroscopy	
2	Frequency Range	3μHz-----40MHz	
3	AC Signal Voltage Amplitude	0.3mVrms to 3Vrms	
4	Current	0-60mA	
5	Resolution	20uV-50uV,80nA-60mA	
6	DC voltage bias	Range ±40 V. Accuracy 50 mV	
7	Impedance Range	Measurable Range – 10mΩ----100TΩ. Accuracy 0.1 % of measured value	
8	Capacitance	Measured Range 1fF---- --10F. Accuracy 1 % of measured value	
9	Electric Loss Factor Tanδ	Measurable range 30 μ - --10 k. Accuracy 100 μ	
10	Dielectric Constant	0 – 10 ⁹	
11	Phase Angle	Measurable Range 0---- --360 degrees	
12	Higher Harmonic Measurement	Supported up to maximum frequency of 40MHz	
13	Temperature Range	At the sample cell electrodes within a temperature range from -100 to 250 0C	
14	Sample Cells	Two electrode active cell for temperatures from -100 to 250 0C or better	
15	Sweep Parameters	Voltage AC/DC, Frequency lin / log	

16	Result Parameters	Real / Imaginary / Vector / parts of Z,R,X,Y,G,B,C,L plus Q and D,Tan delta, Voltage – gain and phase differences	
17	Interface	IEEE 488(GPIB) (Compatible with PCI computer Interfacing card & connecting cable)	
18	Power Supply	230V AC +/- 10% / 50-60 Hz	
19	User Calibrations	Automatic Internal Calibration, Load, Open, Short, Internal self Calibration	
20	Sample Holder	Connection head with standard sample cell with low conductivity materials, Complete with gold plated electrodes 30/40mm and Temperature sensor Upto 250 deg C or better	
21	Temperature Control	Standard Digital temperature control having following i. Temperature Range: -100----250 oC or better ii. Temperature Accuracy: 0.1 oC iii. Temperature Stability: 0.01 oC iv. Typical liquid nitrogen consumption: 0.75 - 1litre per hour at temperatures \geq -100 oC v. Principle of Operation: Fully automated liquid nitrogen gas stream temperature control system with sensor channels for sample temperature, dewar temperature, dewar pressure and isolation vacuum and output channels for gas and dewar heaters	

22	Software Features	Control and evaluation software for frequency domain, dielectric, conductivity and impedance measurements having following characteristics	
23	Measurements	Fully automated for impedance, capacitance, and dielectric loss over entire specified frequency and temperature range. Performs automated impedance measurements in dependence of independent variables in multidimensional arrangement, recalculates dependent variables from measured impedance, displays results in numerical and graphical representation	
24	Control/Independent Variables	Frequency, temperature, time, Dc voltage, Ac voltage, higher harmonics, and additional user defined variables	
25	Display	Graphical online display of measured data, temperature curve and system status with facility for multiple data sets in a single graph, Bode and Cole-Cole Plots	
26	Graphics	Two and three dimensional diagrams of all dependent variables in dependence of all combinations of the measured independent variables in various representations; temperature set point and process value over time; graphical system status diagram	

27	Calibration	Automatic calibration of Hardware and Sample cell	
28	Data	Export and imports data in several flexible ASCII formats	
29	Compatibility	All Microsoft Windows versions	
30	Online	Graphic Display & Text complete with explanations	
31	Evaluation and Curve-Fitting software for frequency domain measurements		
32	Basic Function	Should perform extended evaluations and non linear curve fitting on measured impedance spectra, displays results in numerical and graphical representation	
33	Independent Variables	Frequency, temperature	
34	Dependent Variables for each impedance data point	Real Part, imaginary part and absolute value of permittivity, modulus, conductivity, serial and parallel impedance, Serial and parallel admittance, serial and parallel capacity, serial and parallel inductance, measured ac voltage, measured ac current; phase angle and Tan (phase angle), loss angle and Tan (loss angle)	
35	Evaluation functions	Online data correction, removal of points, merging and cutting of data curves, subtraction of conductivity contributions from dielectric spectra; data conversion from frequency into time domain	
		Predefined functions –	

36	Non linear curve fitting function	Havriliak Negami, Dissado Hill, Vogel Fulcher; Predefined impedance components – Resistor, Capacitor, Inductor; User defined – Arbitrary arrangements of impedance components, arbitrary user defined complex mathematical functions	
37	Graphical Representations	Two and three dimensional diagrams of all dependent variables in dependence of frequency and time in various representations; three dimensional curves of one dependent variable in dependence of two independent variables, Arrhenius diagrams	
38	Computer System	Vendor shall provide the minimum configuration of the computer system necessary for the smooth operation of the instrument and confirm the suitability of the specified system. For the porting, additional add-on cards and other requisite peripherals, if needed, should be specified as Mandatory PC Peripherals and quoted separately. Computer system and accessories, if it forms the package quoted, along with genuine Operating System, with the requisite connections and other requirements along with complete specification shall be furnished by the vendor. In such case, the vendor should quote for the computer system separately, preferably sourced from India, de-	

		linking From the quote for the main equipment.BHEL, reserves the right to provide a separate Personal computer system locally to meet the specified requirements and the vendor shall give the consent for integrating the main equipment with the computer for the application.	
39	Upgradability	The offered system, including the application software, should have adequate provision for incorporating additional features as and when required for getting upgraded effortlessly.	
40	Catalogue Details	Detailed catalogue, sketch / photographs of the instrument and accessories / attachments should be submitted with the offer.	
41	Operating and Maintenance manual	Supplier shall provide operation and maintenance manual & other documents along with the Test and guarantee certificates in simple English language	
2	Commissioning of Dielectric Spectroscopy		
sl no	Descriptions	BHEL Specifications	Vendor Specifications/ Deviations
		Charges towards the commissioning and demonstration of the equipment payable to the OEM / authorized Indian dealer(s) / representative(s) for sales & service, should be furnished in detail with complete particulars, indicating	

1 ERECTION &
COMMISSIONING
(E&C) AND
DEMONSTRATION
CHARGES

clearly the amount or the amount as percent of the quoted price of the equipment separately by the vendor along with the offer. The amount or the amount as percent of the quoted price of the equipment need to be quoted as a LOT and not as per event / per day basis. In case, where the said charges are included in the price quoted for the equipment, the amount or the amount as percent of the quoted price of the equipment towards the commissioning and demonstration should be clearly indicated. Vendor to confirm and comply with the same. It is estimated that the charges towards Erection & Commissioning (E&C) and demonstration may not be more than 3% of the quoted price of the equipment. In the event of the vendor not indicating clearly the amount or the amount as percent of the quoted price of the equipment separately along with the offer, an amount equivalent to 3% of the quoted price shall be deemed to be the value for the charges towards Erection & Commissioning (E&C) and demonstration by BHEL and the payment will be adjusted / regulated from the quoted value and balance will be released as payment towards Erection & Commissioning (E&C) and demonstration

		accordingly. Vendor to confirm and comply with the same.	
2	ERECTION & COMMISSIONING (E&C) AND DEMONSTRATION PERIOD	The vendor should quote the earliest schedule for the Erection & Commissioning (E&C) and demonstration of the equipment. However, BHEL reserves the right to accept the offer not meeting the schedule for the supply indicated in the tender. Vendor to confirm and comply with the same.	
3	TOOLS AND FIXTURES FOR ERECTION & COMMISSIONING (E&C)	All necessary tools, fixtures and other items required for the commissioning of equipment within stipulated time shall be brought by vendor on returnable basis. All incidental charges towards the same to be borne by the vendor. Vendor to confirm and comply with the same.	
4	DEMONSTRATION	The vendor shall Demonstrate all features of the machine, including trial runs to the satisfaction of BHEL during the Commissioning / Demonstration. Vendor to confirm and comply with the same.	
G	General Specifications		
sl no	Descriptions	BHEL Specifications	Vendor Specifications/ Deviations
A	PRE-QUALIFICATION		
A1	LANGUAGE	The offer and all documents enclosed with offer should be in English language only	

A2	REPUTATION	The vendor shall be an Original Equipment Manufacturer (OEM) and should have supplied similar equipments in India. Vendor to certify this.
A3	AUTHORIZED REPRESENTATIVE	In the case of the vendor being the authorized Indian dealer(s) / representative(s) for sales & service, other than the Indian Office / Indian subsidiary of the OEM, appropriate agreement between the OEM & the authorized Indian dealer(s) / representative(s) for sales & service, mentioning clearly the commission amount / percent commission amount, if any, shall be provided.
A4	PLACEMENT OF ORDER	Offer can be submitted by the OEM or their authorized dealer (s) / representative(s) in India. However, Purchase Order will be placed on the lowest, technically acceptable OEM only. Vendor to agree for the same.
A5	MULTIPLE OFFERS	If the offer is from an authorized representative in India , the Indian representative cannot quote for the same equipment from more than one OEM. Vendor to comply with the same
A6	TRAINED MANPOWER	The vendor or their authorized service representatives shall have trained engineers in India 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. Vendor to confirm the same
A7	SUPPLY HISTORY	The vendor should have already supplied and installed at least THREE equipments of similar capacity in the preceding years in India and operating satisfactorily. The details of the customers with contact details, machine model installed, date of installation, etc. to be provided by the vendor. Vendor to comply with the same.
		If required by BHEL, the vendor

A8	DEMONSTRATION	shall arrange for a demonstration of the equipment or a similar system operating in India. All the incidental charges like travel, accommodation etc shall be borne by BHEL. Vendor to confirm and comply with the same.	
A9	NATURE OF EQUIPMENT	Offer shall be for new equipment and not for any refurbished / used equipment. All the parts used in the machine shall also be new and not used / refurbished ones. Vendor to confirm the same and a declaration to the above effect to be furnished by the vendor.	
A10	AFTER SALE SUPPORT	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 an authorized, trained service representative stationed in India. Vendor to confirm and comply with the same.	
A11	AMC	The vendor shall submit their offer for the AMC after the expiry of the warranty/ guarantee period for a period not less than 2 years from the expiry of the warranty/ guarantee period, indicating clearly the amount or the amount as percent of the quoted price of the equipment. The AMC offers shall be evaluated on "Cost to the Company" basis by appropriately loading the same along with the offered price. Vendor to confirm and comply with the same.	
B	EVALUATION OF PRE-QUALIFICATION		
B1	MANDATORY	The Pre qualification criteria are mandatory requirements and the technical bids will be evaluated only when the Pre Qualification criteria are met. Vendor to confirm and comply with the same	
		Vendor must submit complete information against Clause No. A	

B2	NATURE OF INFORMATION	Pre-Qualification Criteria. The offer meeting this clause would only be processed for Technical evaluation. Vendor to confirm and comply with the same	
B3	NATURE OF EVALUATION	Pre qualification will be carried out based on the details furnished by the vendor / feedback from their customers / inspection of the company / product if required by BHEL and at its sole discretion. Vendor to confirm and comply with the same	
B4	INFORMATION VERIFICATION	BHEL reserves the right to verify the information submitted by the vendor. The offer with false/ incorrect/incomplete information may be rejected by BHEL at its sole discretion. Vendor to confirm and comply with the same	
C	EVALUATION CRITERIA OF TENDER		
C1	LOADING	The offers shall be evaluated by appropriately loading the service charges / commission & commissioning charges and other incidentals on "Cost to the Company" basis, while evaluating the bid. Vendor to confirm and comply with the same	
D	SPARES AND SERVICES		
D1	SPARES	All the spares required for normal trouble free operation of equipment/instrument/item/system during the warranty period shall be listed and supplied along with the offer. These spares, if not included along with the offer for the main equipment, should be quoted separately, indicating clearly the spares for the NORMAL OPERATION. List of back up spares / additional spares, if any, should be listed and quoted separately as OPTIONAL SPARE item. Vendor to confirm and comply with the same	
		Vendor shall support the availability of spares and	

D2	SPARES AVAILABILITY	maintenance workforce for 5 years from date of commissioning. Vendor to confirm and comply with the same	
D3	SERVICING BASE	Vendor shall provide proof and details of servicing base facility, spare parts availability, etc. in India. Vendor to confirm and comply with the same	
E	ACCESSORIES		
E1	ESSENTIAL ACCESSORIES	All the essential accessories required for the normal operation of equipment during the warranty period shall be listed along with the offer. The essential accessories, if not included along with the offer for the main equipment, shall be listed and quoted separately, indicating clearly as ESSENTIAL ACCESSORIES. Vendor to confirm and comply with the same	
E2	OPTIONAL ACCESSORIES	The optional accessories, if any, should be listed and quoted separately as optional accessories. Vendor to confirm and comply with the same	
F	Manufacture Test Certificate	Manufacturer's Test Certificate required and shall be provided along with the dispatch documents	
G	Warranty	12 months from the date of commissioning of the system. Extended warranty for additional 2 years for the system as percentage of basic price of the system, if applicable, may be quoted as OPTIONAL.	

* Vendors are advised to write specifications in detail and not to write like 'Complied/ Yes / No ' etc. in specifications.

Signature of the bidder with Seal & Date

AUTHORISATION LETTER FOR E-PAYMENT/ NEFT / RTGS
(PLEASE FILL UP THE FORM COMPLETELY IN CAPITAL LETTERS ON YOUR COMPANY LETTERHEAD ONLY)

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

Type of Request (Tick one)	NEW	CHANGE
1 Company Name		
2 Address		
3 City with PIN Code		
4 State		
5 PAN Number		
6 TIN/ VAT No.		
7 CST No.		
8 Service Tax No.		
9 Name of Contact Person		
10 Mobile number		
11 Ph. no. with STD Code		
12 Fax No. with STD Code		
13 Email ID		
14 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



Bharat Heavy Electricals Limited

Corp. R&D DIVISION

VIKAS NAGAR,

HYDERABAD- 500 093 (INDIA)

RD:MPX:F-13

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/Secundrabad :

Phone Nos.:

Fax No.:

Email:

Contact Person:

Mobile No:

2.0 TYPE OF ORGANISATION:

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. It is requested that MSME registration certificate 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		

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.



RD:MPX:F-14

Bharat Heavy Electricals Limited

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:

1.1 NAME OF COMPANY

1.2 DETAILS OF HEAD OFFICE:

ADDRESS :
 TELEPHONE :
 FAX :
 EMAIL :
 WEB SITE :

1.3 DETAILS OF FACTORY/WORKS:

ADDRESS :
 TELEPHONE :
 FAX :
 EMAIL :
 WEB SITE :

1.4 DETAILS 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 :
EMAIL :

1.7 YEAR OF ESTABLISHMENT

1.8 PRODUCTION CAPACITY PER ANNUM

1.9 PARTICULARS OF PRODUCT INCLUDING
SPECIFICATION AND RANGE OFFERED
FOR REGISTRTION
(Attach brochures 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

4.0 FUTURE EXPANSION PLANS:

(Give details)

5.0 LIST OF ENCLOSURES:

(Including brochures, 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



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GUIDE LINES REGARDING DEALINGS WITH INDIAN AGENTS OF FOREIGN SUPPLIERS

- 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. 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.