INVITATION FOR GLOBAL TENDER FOR SUPPLY OF EQUIPMENT

Sealed tender offers are invited in two separate sealed covers (Technical and Commercial offers) from eligible manufacturers/suppliers or their direct Indian agents for supply of the following equipment:

**Portable Multi-electrode Resistivity, IP & SP 2D & 3D Imaging System**

Please send offers, ALONG WITH DESCRIPTIVE CATALOGUE/ BROCHURE. The validity of the bid should be at least four months from the date of opening of this tender. Please ensure that your quotation reaches this office not later than **08.04.2015 at 15:00 hrs** at the following address:

**Dr. Sudha Agrahari,**  
**Department of Geology & Geophysics,**  
**Indian Institute of Technology Kharagpur, Pin-721 302**  
**West Bengal, India**

Earnest money of **Rs. 20,000/-** is to be deposited in the form of Account payee Demand Draft in favor of IIT Kharagpur, payable at Kharagpur, India. Any Bid which is not accompanied with an EMD shall be summarily rejected. Earnest money deposited will be forfeited if the tenderer withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender. No interest will be paid on the earnest money of the unsuccessful bidders.

<table>
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<tr>
<th>Tender Reference</th>
<th>IIT/SRIC/GG/GAA/SA/EQ/2014-15/2, dated 10.03.2015</th>
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<tbody>
<tr>
<td>Price of Tender Document</td>
<td>NIL</td>
</tr>
<tr>
<td>Last date and time for receipt of technical/commercial bids in separate sealed envelopes</td>
<td><strong>08.04.2015 (15:00 Hrs)</strong></td>
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<tr>
<td>Time and Date of Opening of Bids</td>
<td><strong>08.04.2015 (16:00 Hrs)</strong></td>
</tr>
<tr>
<td>Place of Opening tender offers</td>
<td><strong>Department of Geology &amp; Geophysics, Indian Institute of Technology Kharagpur, West Bengal, INDIA, PIN-721302</strong></td>
</tr>
<tr>
<td>Address of Communication</td>
<td><strong>As stated above</strong></td>
</tr>
<tr>
<td>Contact Telephone Numbers</td>
<td><strong>+91- 3222 283362</strong></td>
</tr>
<tr>
<td>E-mail:</td>
<td><strong><a href="mailto:sudha@gg.iitkgp.ernet.in">sudha@gg.iitkgp.ernet.in</a></strong></td>
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Detailed Specification of
Portable Multi-electrode Resistivity, IP & SP 2D & 3D Imaging System

a) The system shall be able to measure Resistivity, IP and SP in a basic vertical
electrical sounding and in a multi electrode configuration.
b) The system should be compact single field rugged unit with built in main
resistivity unit, Relay matrix and GPS.
c) Number of channels: minimum 4 channels and it should be possible to
upgrade to up to 12 input channels
d) The instrument shall have a graphical user interface with a sunlight readable
8.4" active TFT color LCD.
e) The measurement cycle shall be user definable in arbitrary lengths.
f) The instrument should be based on a standardized and open operating
system (such as Windows or Linux) and allow for remote control, software
updates and diagnostics over Internet.
g) For data quality control, the instrument should display Resistivity data in
field in a pseudo section view.
h) The instrument software should assist the user and reconfigure the
measurement set up in case of a cable or electrode connection failure.
i) The instrument MUST have a built-in GPS.
j) **Voltage measuring resolution:** 1 µV or better
k) **Current measuring resolution:** 1 µA or better
l) **Input Impedance:** minimum 50MΩ or more
m) **Input Voltage Protection:** up to 1000V
n) **SP Compensation:** automatic
o) **Data Storage/Memory:** 4GB or more
p) **Noise Reduction:** Continuous digital stacking selectable from 1 to 255
stacks. Noise can be monitored before injection of current.
q) **Standard Deviation:** Standard Deviation Computation facility should be
there for the quality check of data collected in the field.
r) Standard accessories required for the spread along a profile for example
cables, winches, electrodes, connectors etc

1. **Power source:** Internal rechargeable battery source for complete field survey,
Imaging & VES data acquisition.

2. **Multi electrode configuration:**
a. The system shall be based on a 4 cable layout and should allow for “roll-along”
field methodology.
b. The instrument should have a built-in relay switch unit, capable of self diagnostics to assure that every cross-point is functional.

3. **Transmitter:**
   
a. The transmitter output should be galvanically isolated from any other circuitry such as external battery supply or system ground.
   
b. The manufacturer must submit the layout of the schematic for achieving galvanically isolation of Transmitter on their system.
   
c. It should be able to source regulated constant current with accuracy better than 0.5%.
   
d. The output shall be able to instantly switch from a positive to a negative current and vice versa.
   
e. The output current and voltage shall be monitored and recorded in full wave form.
   
f. In case of an emergency it should be easy and intuitive to cut the transmitter output power using an emergency stop switch.
   
g. **Transmitter output power:** minimum 250 W
   
h. **Output current:** approx. 100 mA or more
   
i. **Output Voltage:** 400 V (peak to peak) or more

4. **Receiver:**
   
a. The input channels shall be galvanically isolated thus not referring to each other or any other circuitry such as external battery supply or system ground. The manufacturer must submit the layout of the schematic for achieving galvanically isolation receiver input channels of their system.
   
b. **It shall be possible to acquire the full waveform data on a per sample basis as well as integrated values over time.**

5. **Interface:** Equipment can be interfaced with PC or laptop for data processing and creation of sequences.

6. **Communication:** The instrument shall be able to transfer data to an external system using a high speed standard interface such as USB or TP Ethernet. The system must have at least 1 USB – No cable connection to convert RS 232 to USB is acceptable.

7. **Future Upgradable:** The system must be upgradable and be ready to work as borehole logging system with additional external manual borehole logging unit.
8. **Service Support:** The vendor must have a service backup unit available for exchange of the breakdown unit for instant exchange. The vendor must submit evidence of such ownership along with their offer.

9. Vendors must specify the country of origin of all the accessories. Optionally vendors may offer the Indian make accessories of good quality.

10. **Environmental:** The instrument should operate within an ambient temperature of -20 to +50 degrees Celsius and withstand outdoor climate conditions such as humidity, rain and wind according to standard IEC IP66 or better.

11. **Users in India:** The vendor must submit copies of the supply orders of reputed GOI organization like CSIR Lab/Universities/IIT of the offered system.

12. Setup of instrument and field demonstration will be required.

13. The vendor must submit point wise technical compliance statement.
GENERAL TERMS & CONDITIONS

PLEASE SPECIFICALLY INDICATE THE FOLLOWING POINTS IN YOUR QUOTATIONS AND COMPLY THE TERMS AS MENTIONED HEREUNDER:-

1. TENDER ARE INVITED COMPLYING THE REQUIREMENT FOR TENDER AS DETAILED IN THE TENDER SPECIFICATION TO BE SUBMITTED IN THE COMPANY’S/FIRM’S LETTERHEAD NEATLY PRINTED/TYPED DULY SIGNED BY AUTHORIZED PERSON WITH THE SEAL OF THE BIDDERS. ALL ENVELOPS CONTAINING THE TENDER SHOULD BE PROPERLY SEALED. SEPARATE ENVELOPS SHOULD BE USED FOR TECHNICAL AND PRICE BID AND INDICATION TO THEIR EFFECT MAY PLEASE BE SUPERSCRIBED ON THE ENVELOP.

THE FOLLOWING DOCUMENTS ARE REQUIRED FROM THE INDIAN AGENTS OF FOREIGN FIRMS:

1.1 FOREIGN PRINCIPAL’S PROFORMA INVOICE INDICATING THE COMMISSION PAYABLE TO THE INDIAN AGENT AND NATURE OF AFTER SALES SERVICE TO BE RENDERED BY THE INDIAN AGENT.

1.2 COPY OF THE AGENCY AGREEMENT WITH THE FOREIGN PRINCIPAL INDICATING THE NATURE OF AFTER SALES SERVICES, PRECISE RELATIONSHIP BETWEEN THEM AND THEIR MUTUAL INTEREST IN THE BUSINESS.

1.3 PLEASE ENCLOSE THE DOCUMENT(S) RELATED TO THE ENLISTMENT OF THE INDIAN AGENT WITH DIRECTOR GENERAL OF SUPPLIES & DISPOSALS (DGS & R) UNDER THE COMPULSORY REGISTRATION SCHEME OF MINISTRY OF FINANCE.

2. TECHNICAL CATALOGUE/LEAFLET SHOULD BE ENCLOSED WITHOUT FAIL. PROVIDE COMPLIANCE STATEMENT WITH RESPECT TO THE TECHNICAL SPECIFICATIONS MENTIONED ABOVE.

3. PLEASE CONFIRM WHETHER YOU ARE AUTHORISED TO QUOTE ON BEHALF OF YOUR PRINCIPALS AND IF SO, PLEASE ENCLOSE A COPY OF SUCH AUTHORISATION WITH YOUR QUOTATION.

4. PRICE BIDS FOR FOREIGN FIRMS: PRICES ARE TO BE QUOTED ON ‘EX-WORKS’ DULY PACKED OR ON “FCA/FOB” INTERNATIONAL PORT” BASIS AND ALSO INCLUDING AGENCY COMMISSION PAYABLE TO YOUR INDIAN AGENTS, IF ANY SHOWING CLEARLY THE FOLLOWING BREAK UP:-

I) EX-WORKS PRICE
II) PACKING & FORWARDING
III) FREIGHT
IV) ANY OTHER RELEVANT EXPENSES.
V) TAXES PAYABLE BY THE INSTITUTE

INSURANCE WILL BE PAID BY OUR INSTITUTE SEPARATELY AND SHOULD NOT FORM PART OF THE QUOTED PRICE.
PRICE BIDS FOR INDIAN FIRMS: PRICES ARE TO BE QUOTED ON F.O.R., IIT KHARAGPUR, ON DOOR DELIVERY BASIS CLEARLY SHOWING THE BREAK UP.

5. PERIOD OF VALIDITY: BIDS SHALL REMAIN VALID FOR ACCEPTANCE FOR A PERIOD OF 120 DAYS FROM THE DATE OF OPENING.

6. INDIAN AGENTS ADDRESS AND PERCENTAGE OF AGENCY COMMISSION INCLUDED IN ABOVE F.O.B./EX-WORKS PRICE. (THIS WILL BE PAID TO THE INDIAN AGENTS IN INDIAN RUPEES ONLY AND NOT IN FE). PLEASE ENCLOSE COPY OF AGENCY AGREEMENT ENTERED INTO WITH YOUR PRINCIPALS INDICATING THE NATURE OF AFTER SALES SERVICES OF INDIAN AGENTS, PRECISE RELATIONSHIP & MUTUAL INTEREST IN THE BUSINESS.


8. SCOPE OF SUPPLY: SHOULD INCLUDE FREE INSTALLATION AND COMMISSIONING

9. PAYMENT TERMS FOR FOREIGN FIRMS

   A) 100% PAYMENT THROUGH SIGHTDRAFT/FOREIGN DEMAND DRAFT/LC (EXCEPTIONAL CASES)/SWIFT TELE TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER AND CONDITION.

   B) BANK CHARGES ON LC/SD (WITHIN INDIA APPLICANT ACCOUNT AND OUTSIDE INDIA TO BENEFICIARY ACCOUNT).

PAYMENT TERMS FOR INDIAN FIRMS

   A) 100% PAYMENT THROUGH CROSSED ACCOUNT PAYEE CHEQUE / ELECTRONIC TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER AND CONDITION.

   B) ENSURE MENTIONING

   i) BANK DETAILS OF THE BENEFICIARY AND PAN NUMBER

   ii) FULL NAME AND ADDRESS OF THE BENEFICIARY ON WHOM ORDER HAS TO BE PLACED

10. WHETHER ANY EXPORT LICENCE IS REQUIRED FROM YOUR GOVERNMENT, IF SO, PLEASE CONFIRM WITH DETAILS.

11. COUNTRY OF ORIGIN OF THE GOODS IS TO BE MENTIONED.

13. **LIQUIDATED DAMAGES:** THE STORES SHOULD BE DELIVERED / DISPATCHED TO DESTINATION AND READY FOR OPERATION NOT LATER THAN THE DELIVERY DATE SPECIFIED. IF THE SUPPLIER FAILS TO DELIVER ANY OR ALL THE STORES OR PERFORM THE SERVICE BY THE SPECIFIED DATE, LIQUIDATED DAMAGES AT 1% PER MONTH OR PART THEREOF IN RESPECT OF THE VALUE OF STORES WILL BE DEDUCTED FROM THE CONTRACT PRICE SUBJECT TO A MAXIMUM OF 5%. ALTERNATIVELY, THE ORDER WILL BE CANCELLED AND THE UNDELIVERED STORES PURCHASED FROM ELSEWHERE AT THE RISK AND EXPENSE OF SUPPLIER.

14. **PATENT RIGHTS:** THE SUPPLIER SHALL INDEMNIFY THE PURCHASER AGAINST ALL THIRD PARTY CLAIMS OF INFRINGEMENT OF PATENT, TRADEMARK OR INDUSTRIAL DESIGN RIGHTS ARISING FROM USE OF THE GOODS OR ANY PART THEREOF IN INDIA.

15. ONLY THOSE BIDDERS WHO’S BIDS HAVE BEEN TECHNICALLY FOUND ACCEPTABLE WILL ONLY BE INVITED FOR PARTICIPATION IN THE PRICE BID.

16. THOSE BIDDERS WHO DO NOT RECEIVE ANY COMMUNICATION FOR PARTICIPATION IN PRICE BID OPENING MEETING MAY PRESUME THAT THEIR BID HAS NOT BEEN ACCEPTED BY THE INSTITUTE.

17. CONDITIONAL OFFER WILL NOT BE ACCEPTED.

18. LATE TENDERS I.E. TENDER RECEIVED AFTER THE DUE DATE AND TIME OF SUBMISSION AS MENTIONED ABOVE SHALL NOT BE ACCEPTED.

19. BIDDERS TO ENCLOSE THE FOLLOWING DOCUMENTS:-

   A) CURRENT INCOME TAX AND SALES TAX CLEARANCE CERTIFICATES AND PAN NO.

   C) BANKER’S SOLVENCY CERTIFICATE

   C) SUMMARY OF AUDITED STATEMENT OF ACCOUNTS FOR THE LAST THREE YEARS TO BE ENCLOSED AND FINANCIAL HIGHLIGHTS AND THE KEY PERFORMANCE DURING THE LAST THREE QUARTERS TO BE ENCLOSED AS PER FORMAT:-

   COMPANY’S KEY PERFORMANCE

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<th>DESCRIPTION</th>
<th>JAN. TO MARCH</th>
<th>APRIL TO JUNE</th>
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<tr>
<td>GROSS REVENUE</td>
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<td>PROFIT BEFORE TAX</td>
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<td>RETURN ON INVESTED</td>
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D) CUSTOMER SATISFACTION CERTIFICATE FROM ONE SUCH ORGANIZATION IS TO BE ATTACHED WITH THE TECHNICAL BID AND PRICE BID.

E) NAME AND ADDRESS OF MINIMUM THREE CLIENTS TO WHOM SUCH EQUIPMENT HAVE BEEN SUPPLIED SHOULD BE MENTIONED.

20. WARRANTY / GUARANTEE: THIS COMPREHENSIVE WARRANTY / GUARANTEE SHALL REMAIN VALID FOR 36 MONTHS AFTER THE GOODS (OR ANY PORTION THEREOF AS THE CASE MAY BE) HAVE BEEN DELIVERED AND COMMISSIONED TO THE FINAL DESTINATION.

21. THE INSTITUTE DOES NOT BIND ITSELF TO OFFER ANY EXPLANATION TO THOSE BIDDERS WHO’S TECHNICAL BID HAS NOT BEEN FOUND ACCEPTABLE BY THE EVALUATION COMMITTEE OF THE INSTITUTE.

22. ALL TENDERS (UNLESS OTHERWISE SPECIFIED) ARE TO BE SUBMITTED / HANDED OVER TO DR. SUDHA AGRAHARI, DEPARTMENT OF GEOLOGY & GEOPHYSICS, INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR - 721 302 AND ACKNOWLEDGEMENT TO BE OBTAINED.

IMPORTANT

1. IIT Kharagpur authority may accept or reject any or all the bids in part or in full without assigning any reason and does not bind itself to accept the lowest bid. The Institute at its discretion may change the quantity / upgrade the criteria / drop any item or part thereof at any time before placing the Purchase Order.

2. Promptly make arrangements for repair and / or replacement of any damaged item (s) irrespective of settlement of claim.

3. In case of any dispute, the decision of the Institute authority shall be final and binding on the bidders.

4. For any query pertaining to this bid document correspondence may be addressed to Dr. Sudha Agrahari, at the address mentioned above.

LAST DATE FOR SUBMISSION OF SEALED BIDS: 08.04.2015

1) Please Note that the Institute remains closed during Saturdays & Sundays and all specified government holidays.

2) Fax, e-mail Tender will not be accepted.

3) The General Terms and Conditions as stated above relate to supply of stores / equipment /assets etc. and for specific service other terms and conditions of the Institute will apply.

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