

**Subject:** Request for quotation for Ground Penetrating Radar for measuring the depth of the glaciers in the high-altitude Himalayan region.

**Bid Notification Number: DCCC/01/2019., dt. 12/12/2019**

QUOTATIONS SHOULD BE SUBMITTED IN TWO SEALED COVERS (TECHNICAL & COMMERCIAL BID) AND SUPERSCRIBED WITH THE ENQUIRY NUMBER AND SHOULD BE SUBMITTED WITHIN DUE DATE. QUOTATIONS VIA FAX AND EMAIL ARE NOT ACCEPTABLE.

**INTRODUCTION:**

Indian Institute of Science (IISc) is in the city limits of Bengaluru City Corporation. There are about 45 departments and centers in IISc that work on a wide range of scientific and technological areas of research. Divecha Centre for Climate Change is one of the centers in IISc and our research addresses a wide variety of topics concerning the effect of climate change on the natural environment and Human lives. One of the research topics in the center is effect of climate change on Himalayan glaciers. These glaciers are a very important source of water for the human settlements in the downstream for drinking, irrigation and other utility purposes. They are also a source of water for several hydropower projects in the Himalayan region. However, glaciers are sensitive to climate change and due to the warming of the climate, the glaciers across the Himalaya are predominantly melting. This will affect the runoff pattern and alter the availability of water in the downstream. Therefore, to understand the threat to the water security, it is very crucial to estimate the volume of a glacier to evaluate the total amount of glacier stored water. Models are developed to estimate the volume of the glacier using satellite data, but it is very important to calibrate and validate these models using field measurements. Depth of a glacier can be measured using a ground penetration radar on the surface of the glacier.

The instrument intended in this tender is meant for measuring the depth of a given glacier from its surface.

**BRIEF SCOPE OF THE PROJECT:**

1. Supply of the instrument and accessories.
2. Pilot measurement at the site including post processing of the data.
3. Complete maintenance for three years.

**ELEGIBILITY CRITERIA:**

Following are the minimum qualifying requirements for the firms, who intend to express their interest.

1. The bidder shall be an established agency having adequate experience in supply, installation and maintenance of similar instruments in the last three years (evidence supported by copies of purchase orders). Bidder should have setup at least three instruments in India.
2. The bidder should have an annual turnover of not less than 1 Crore in any last three completed financial years.

**SELECTION PROCESS:**

Step-1: Short listing based on documents submitted by the firm along with the expression of interest, in proof of satisfying the two eligibility criteria given above.

Step-2: Subsequent evaluation of the competency and other technical merits of the product and the financial capabilities during the purchase committee meeting. Only those firms who satisfy step-1 will be selected for the evaluation process under step-2.

**Terms and Conditions:**

1. Kindly arrange to enclose GST copies along with copies of orders executed recently and performance Track Record, if not submitted earlier.
2. Please arrange to enclose valid Exclusive Dealer/Distributor Certificate.
3. 3 years onsite warranty should be confirmed while quoting the offer.
4. For software items, updates during the warranty period are to be provided without any additional cost to IISc.

5. Supply, Configuration, installation, commissioning, demonstration and training are also the responsibility of the supplier only.
6. Please arrange to send Brochure, literature and Pamphlets of the products quoted.
7. Please arrange to send your Bank details for making E-payment.
8. Delivery period is to be specified.
9. The quotation should be in two sealed covers (Technical and Commercial bid). The cover should be submitted to the DCCC office. The last date for submitting the bid is 11/01/2020.
10. The offer should be valid for a period of at least 90 days from the last date for submission of quotes.
11. Price quoted should be inclusive of all taxes / duties and shown separately. The price quoted should be for delivery of the items to the site and installation at site.
12. Mode of payment through Letter of Credits. 80% after supply and remaining 20% after satisfactory completion of installation, testing and training.

Technical specification is attached with this.

**Important Dates:**

Date of release of the enquiry: 12/12/2019

Last date for submission of quotes: 11/01/2020

For any clarifications, contact:

Tel: 080-22933425, 080-22932075

Email: [office.dccc@iisc.ac.in](mailto:office.dccc@iisc.ac.in)

NO	PART	DESCRIPTION
1	<b>Antennas</b>	<ol style="list-style-type: none"> <li>1. Multiple Low Frequency (MLF) ranging from (15 to 80 MHz )</li> <li>2. Mid frequency with Hyper stacking feature (350 MHz)</li> <li>3. Wireless data transfer unit</li> </ol>
2	<b>Radar Control System</b>	<ol style="list-style-type: none"> <li>1. Different Operating modes:</li> <li>2. High Scan rate interval</li> <li>3. Operating Temperature: - 40°C to 60°C</li> <li>4. Memory: internal SSD/Flash Storage with at least 32 GB and RAM of at least 1GB.</li> <li>5. Colour LED display</li> <li>6. GPS System : external connection support to GPS along with internal data logger for GPS data storage</li> </ol>
3	<b>Software</b>	<ol style="list-style-type: none"> <li>1 Windows based, Should have correction and filters</li> <li>2 Facility to measure the velocity from hyperbolas and CMP data files</li> <li>3 image optimization of gain, colour palette, contrast and sensitivity, for better interpretation.</li> </ol>
4	<b>Survey wheel, Carrying case Carry Harness &amp; Stand</b>	Hard Pelican Carrying Case with wheels for easily dragging on the surface while transportation, Harness to carry the GPR controller and Stand
	<b>Other</b>	<ol style="list-style-type: none"> <li>1. Warranty – 3 years</li> <li>2. Maintenance – 3 years</li> <li>3. Training – one-time training and field support</li> </ol>