

MINUTES OF THE PRE-BID MEETING FOR PROCUREMENT OF "SOLAR TRACKER AND PYRHELIOMETER-QTY.- 22NOS."

In response to Tender Enquiry No. CPU/54/0719/67 Dt. 07.10.2019, Head, CRS Pune constituted a committee for conducting pre-bid meeting on 24th October, 2019 for procurement of "Solar Tracker and Pyrheliometer-Qty.- 22Nos.". Following IMD officers and bidders attended the meeting held at 1100 Hrs in the office of DDGM (SI), Pune.

IMD officers

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| 1. Shri Anjit Anjan, Scientist-E (IMD) | Chairman |
| 2. Smt Swati Bhagwat, Met B (IMD) | Member |
| 3. Shri P.D.Kokate – Met A (IMD) | Member Secretary |
| 4. Smt Bindu Nambiyar, Met A (IMD) | Member |

Bidders

1.	Shri Raju Sukla	M/s Rational Technology Pvt Ltd., New Delhi
2.	Shri Huzefa Motiwala	M/s EKO Instruments Co Ltd.,

- I. M/s SGS Weather & Environmental System Pvt. Ltd., Gurugram have send queries by email.
 II. M/s Phame Enterprises, Indore have also sent queries by email.

Following are clarifications given by the committee in response to queries raised by bidders' representative.

Tender document Reference Para Nos.	Query	Response of query
I. M/s Rational Technology Pvt Ltd, New Delhi		
Page No. 29, Point 4 ,para 9 It Should work on 12V SMF battery and charging assembly to be provided with each unit	Can we propose 24 V DC based system with panel batteries	As per tender document

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P.D. Kokate
P.D. Kokate

Swati Bhagwat
Swati Bhagwat

Anjit Anjan
(ANJIT ANJAN)

Page No 30, Point 4 and Para 14 540AH, zenith -90° to +90°	Is it Okay to propose with 360-degree rotations? there is a need for limiter also to protect from over rotation. our sensors are also working fine even in Antarctica	360-degree rotation is accepted.
Page No.29, Point 4.2, para 7, Impedance should be less than 500 Ohm	We wish to propose an advanced fast response detector-based sensor which has impedance of 15k Ohm. We can also propose mod bus and MA output.	As per tender document.
Page No. 29, Point 4.1, para 6, Torque: 30 Nm	We request to limit the torque up to 24 Nm	As per tender document.
Page No.29, Point 4.1, para 7, Payload: 30 Kg or more	We request to reduce the weight to 20 kg as it sufficient.	Payload: 20 kg or more acceptable
M/s Phame Enterprises, Indore		
Page no. 30 Para: 14 <u>Specification of Solar Tracker,</u> Point Number 14: "Zenith Rotation -90 deg to +90 deg"	It is important that a Tracker should aim at the sun when the Sun is 5 deg below the horizon to account of refraction effects at sunrise and sunset. Is IMD referring Northern Hemisphere as -90 deg? So SZA should be -95deg to +95deg not -90 to +90, because this encompasses the total actual range of the sun.	SZA should be -95deg to +95deg is acceptable.
Page no. 30 Para: 4.2 point number 1: Sensor "Thermopile with suitable glass window	As the tender spectral range is 280nm to 4000nm, which cannot be achieved by glass (glass is 300nm to 3,000nm). Please consider the " optical sapphire window " which has spectral range of 200nm to 5000nm.	As per tender document.

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<p>Page no.34 Para: 12</p> <p><u>ELIGIBILITY:</u></p> <p>a) The bidder/manufacturer should have minimum two years' experience in successful installation, maintenance, calibration of 10 Nos of GSM/GPRS Solar radiation networks for any government/public sector/internationally or nationally recognized institutes or sectors.</p>	<p>Please consider for GSM/GPRS based AWS /ARS Networks and the Installation of Solar Radiation Sensor and NET Radiometers as experience in radiation field.</p>	<p>As per tender document.</p>
<p>Page no.34 Para: 12</p> <p>A certificate in this regard from the minimum three users about satisfactory and proven performance of the networks of the system must be enclosed with the technical bid.</p>	<p>Please consider performance certificates for GSM/GPRS based AWS /ARS Networks and the Installation of Solar Radiation Sensor and NET Radiometers as experience in radiation field.</p>	<p>As per tender document</p>
<p>Page no.34 Para: 12</p> <p>The bidder should have minimum annual turnover of INR 2 Crore or equivalent value for past three years ending on 31.03.2018.</p> <p>Necessary documentary evidence in support of turnover shall be submitted with technical bid. Annual financial performance for past three years should be submitted. Out of three years the company must have made profit at least for two years.</p>	<p>Please consider the Turnover 2 Crore in one of past three years as on 31.03.2018 and average Turnover 2.0 Crore for past three years.</p>	<p>As per tender document</p>

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<p>Page no.33 Para: 9 Delivery of all equipment and accessories shall be done at respective sites in single consignment within three months from the date of placement of supply order (For Indian supplier) and</p> <p>..... Single Consignment: 22 Nos. of Solar Tracker and Pyrheliometer within six months from the date of placement of supply order and delivery of one-set equipment shall be done at each respective SRS field site</p>	<p>Please clarify the delivery period is Six Months or Three months?? As we are offering the PRODUCT of reputed Australian Company and it requests to make delivery at one place i.e. STORE of Radiation Lab, IMD Pune after Custom Clearance then we will deploy to each SRS field site.</p>	<p>Delivery period is 6 months after accepting the supply order & 3 months for installation and commissioning of system.</p> <p>Total time for completion of project is 9 months after accepting the supply order.</p>
<p>Page no.33 Para: 10 Payment for supply, installation & Commissioning Payment for supply, installation & Commissioning</p> <p>a.40% after successful supply of hardware/material.</p> <p>b. 30 % after installation of SRS and training at site.</p> <p>c.20% after commissioning of solar tracker and Pyrheliometer at SRS site.</p> <p>d. 10% after completion of the project (successful commissioning of all 22 Nos. Solar Tracker and Pyrheliometer).</p>	<p>Please consider the payments as below:</p> <p>a. 60% after successful supply of hardware/material.</p> <p>b. 20 % after installation of SRS and training at site.</p> <p>c. 10 % after commissioning of solar tracker and Pyrheliometer at SRS site.</p> <p>d. 10% after completion of the project (successful commissioning of all 22 Nos. Solar Tracker and Pyrheliometer).</p>	<p>As per tender document</p>

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<p>Page no.29 Para: 4.1 Specification of Solar Tracker</p>	<p>We request you to kindly include the following specifications for the Solar Tracker, which will enable you to get best commercially available solar tracker.</p> <ol style="list-style-type: none"> 1) The solar tracker should retain to Automatic solar tracking after power failure using GPS. 2) Inbuilt Automatic daily two axis calibration using GPS 3) The offered model of the Solar Tracker must be field proven system and at least in production from last more than 3 years. The OEM must issue a letter of undertaking in this regard and attach a list of references of customer with address of correspondence, which are using the offered model. 	<p>As per tender document</p>
<p>Page no.29 Para: 4.1 S.N. 7 Torque:30 Nm</p>	<p>We kindly request you to change the torque from 30Nm to 12 Nm as for the specified load (2 pyranometers, 2 pyrheliometers, and 1 shading disc) a torque 12 Nm is enough. Additional torque for a greater weight solar tracker is not required.</p>	<p>As per tender document</p>
<p>Page no: 30 Para :4.1 S.N. 14 Rotation : 540° AH, zenith -90° to +90°</p>	<p>We request you to kindly change the Rotation given to 360° AH, zenith -10° to +100°, instead of 540° AH, zenith -90° to +90°.</p> <p>To ensure sun tracking at any location in the world, it is enough to provide 360° in azimuth and 110° in elevation (-10° to +100°). The existing specification corresponds to</p>	<p>Rotation given to 360° AH is accepted. Zenith -10° to +100°, will also be accepted.</p>

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	K&Z equipment and it is related to the particular design of their product, and in no case it could be a requirement for other manufacturers.	
Page no: 30 Para 4.2 Specifications of Secondary Standard Pyrheliometer	We request you to kindly change the Secondary Standard Pyrheliometer to First Class, High Quality Normal Incidence Pyrheliometer as there is no terminology of Secondary standard in pyrheliometer.	As per new ISO 9060 norms, Secondary Standard Pyrheliometer is also considered as First Class Pyrheliometer/ Class A.
Page no.28 Para 2 SCOPE OF TENDER	You have mentioned that the supplier shall have full responsibility to execute the project on a TURN- KEY BASIS by taking up the supply, installation, integration and commissioning of all equipment and interface the Pyrheliometer with data Acquisition System (DAS) However, you have not mentioned any specification for data logger in RFP. In any project where solar sensor is used, we require a highly accurate data logger which can collect and convert the data. The existing datalogger details and channel available should be disclosed.	The existing Datalogger is Sutron USA make and 9210 model will be used for interface of Pyrheliometer sensors.
Page no.28 Para 3.7. The firm shall provide demonstration of the complete Solar tracker and Pyrheliometer, and other accessories etc. as per RFP, offered in their bids, for a period of 15 days at No cost and No commitment basis as a part of Technical Evaluation at IMD designated site, Pune. Failure and/or Non-compliance of any component during the	You have asked for the demonstration of the complete system for 15 days. If the system with a quantity of more than 50 units is already satisfactorily working with a government organization, this field trial should be exempted to the particular brand and company.	TEC will decide regarding demonstration of the complete Solar tracker and Pyrheliometer, and other accessories etc. as per RFP, offered in their bids, for a period of 15 days at No cost and No commitment basis.

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above period will be liable to cancel the bid.		
Page no.28 Para 9 Power Requirement	<p>You have asked for the system to operate for 15 working days on battery without charging. You have also asked for 65AH battery and 40-Watt solar panel.</p> <p>In a RFP either you can specify the backup required so that the bidder can chose his battery and solar panel as per the power budget calculation</p> <p>or</p> <p>you should ask for the fixed capacity of battery and solar panel.</p> <p>Asking for both is not technically not viable requirement.</p>	<p>SMF Battery should be supplied as per Bidder Power budget calculation.</p> <p>Solar tracker should work for 15 days even if SMF battery is not charged by solar panel.</p>
Page no.31 Para IV	<p>You have asked for 40-Watt solar panel to charge 65AH SMF battery.</p> <p>This solar panel is not adequate to charge the battery as per the standard time of 4 Sunny days. We request you to kindly change the requirement to 75W Solar Panel.</p>	<p>Solar Panel may be supplied as per bidder power budget calculation.</p>

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