Minutes of pre-bid the meeting for the procurement of Customised Rainfall Information System (CRIS)-II held 1100 hrs IST on 01 Nov., 2021 at Room No. 615, ISITC, Satmet Building, O/o DGM, New Delhi

A pre-bid meeting for the procurement of Customised Rainfall Information System (CRIS)-II was held at 1100hrs IST on 01 Nov., 2021at room No. 615, ISITC, Satmet Building, O/o DGM, New Delhi. In this regard, competent authority has already constituted a pre-bid committee with the following members;

1. Sh. B. P. Yadav, Sci.-F/ Head, Hydromet, Chairman
2. Sh. Rahul Saxena, Sci.-F, Member
3. Dr. Ashok Kr. Das, Sci.-E, Member
4. Sh. Chinmay Rajendra Khadke, Sci.-C, Member
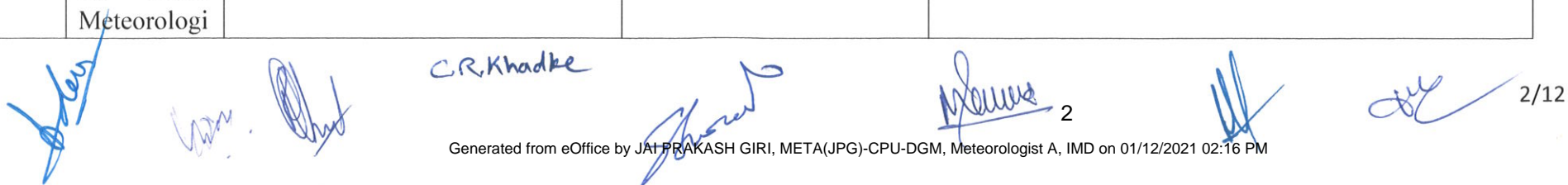5. S. S. K. Manik, Sci.-C, Member Secretary

Special Invitee

1. Dr. G. Suresh, Sci.-G, NCS
2. Sh. Ravikant Singh, Sci.-E, NCS

Also, Sh. K. V. Singh, Sci.-F/Head, CPU was invited and attended the meeting. The officials from M/s. ESRI India, M/s. Hexagon Geospatial and M/s. AURA were attended the pre-bid meeting physically. However, no request was received from any firm for online VC meeting. The queries as received from various firms is discussed in the meeting. Following are the remarks of IMD on the queries made by the firms;

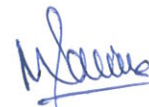| S. NO	Clause	Description	Query	Remarks
1	1. Introduction at page 25	Now, it is proposed to enhance the features, introduce more automation in preparation of all operational products & new products which needs to be generated in the new version	We request to let us know the existing features and products which are readily available on existing platform and which needs to be developed on new platform	The products of CRIS is available in the IMD website link at http://hydro.imd.gov.in/hydrometweb/(S(foqda3fpnzj e0s45ec15xenh))/landing.aspx" which is mentioned in the tender document in Chapter 3 under 4.4 General functionalities: at point xxviii). Reporting Module: at page 34.
2	1. Introduction at page 25	Now, it is proposed to enhance the features, introduce more automation in preparation of all operational products & new products which needs to be generated in the new version	Please let us know what is the technology used for existing system. Specify the data format in which existing data is stored	CRIS application was developed on GIS platform (ArcGIS 10.4) using C/C++, python, shell scripting in a centralized server on windows 64 bit platform. The data formats in the current application is .csv, .xls and .txt formats. Graphical Outputs are generated in PNG formats.
3	1. Introduction at page 25	Now, it is proposed to enhance the features, introduce more automation in preparation of all operational products & new products which needs to be generated in the new version	Request you to let us know the database currently been used to store the existing data	PostgreSQL.
4	4.3 Functionality in customized application for Flood Meteorologi	xi). The data format may be binary viz., *.nc, *.grib1/*.grib2, *.hd5 etc.	Please provide the sample data to us to provide the feasibility studies and effort estimation	Agreed.

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S. NO	Clause	Description	Query	Remarks
	cal Module at page 32			
5	4.4 General functionalities: at page 33	xiv). Cross-platform capability: Application can run on Microsoft Windows, Linux, and macOS etc (independent of OS).	we understand cross platform is required to run the browser based user application to access the modules and generate various outputs. Server application can be compatible with any of listed OS(Windows, Linux or Mac)	YES.
6		General Query	Can you let us know how many concurrent users will be accessing the newly developed CRIS system	Hardware Specs :- 2 X 64 core AMD based EPYC 7th series Servers 25 TB external San storage,
7		General Query	We understand that the required support and expertise will be offered to successful bidders by IMD in developing the various products in the new proposed system	Yes
8	1. Introduction at page 25	General Query on the basis on the discussions during Pre-bid meeting	We understand the RFP envisages to provide level playing opportunity to all	The existing licenses and platform are the property of IMD. Vendor needs to arrange all supporting licenses and platform for the development of CRIS-II.

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		regarding status of existing licenses and platform	the prospective bidders (COTS & Opensource platform), hence bidder need to provide fresh licenses / platform against the requirement. Upgrading of existing licenses will not be an option as it may provide unfair advantage to existing OEM.	
9	1. Introduction at page 25	General Query	We request you to share finalized SRS & SLA documents of Customize Rainfall Information system (CRIS)- I	It will be shared to the successful bidder at the time of SRS/SLA.
10.	2.2.2 at page 26	Synoptic analogue tool for RMC's/MC's based on last five years data and also a software will be developed to enter the latest synoptic information in respect of each sub-basins to a software which will be used to update the synoptic analogue model every year for each FMOs.	Possible weather systems in respect of each forecasting centre and some test data would be provided by IMD?	Yes. Will be provided for technical presentation and at the time of SRS/SLA.

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S. NO	Clause	Description	Query	Remarks
11.	4.1 (ii) at page 27	Functionality for uploading the real time spatial (Lat./Long.) rainfall data and other georeferenced products (shape files) to the centralized server through web base GUI interface tool at RMCs/MCs. Provision to update database in offline mode from email received in csv, txt, xls format from various users.	What kind of georeferenced products (shapefile) will be uploaded by RMC/MCs. Also, please elaborate the database update in offline mode by RMC/MCs to centralised server.	station-wise rainfall data along with lat/long coordinate. Shape file of Taluka/Block/District/Met sub-division/state/Homogeneous region/Country/river basin etc.
12.	4.1 (xii) at page 28	The system shall have capability to provide data latency reports as per user defined time intervals.	Data latency reports across the network or in respect of data receipt.	Data latency in respect of data receipt.
13.	4.1 (xvii) at page 28	Automated Functionality for GIS based Isohyetal analysis of station rainfall for the country (techniques at Annexure - 14 Module 1) for computation of the areal rainfall of District, Block/Tehsil and for the various river basins & sub-basins or any pre-defined boundary at specified temporal scales. These areal rainfall values will be tabulated and available to the user in json/xml/excel/text formats. Also, the map of Pan India with respective boundaries (like	Will the Products be based only on iso-hyetal analysis or will be in addition to the existing arithmetic/area weighted algorithms?	Yes

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		District, Block/Tehsil, River-basin/sub-basin etc.) will be prepared with depiction of % departures of rainfall using category-wise color codes. The products will be published in the CRIS portal with GIS layers.	29	
14.	4.1 (xviii) at page 29	Functionalities for preparation of Subdivision-wise Rainfall Distribution and Monsoon Activity is to be plotted on Pan India map.	Criteria for Subdivision-wise Rainfall Distribution and Monsoon Activity will be provided.	This will be provided at the time of SRS/SLA to the successful bidder.
15.	4.1 (xxi) at page 29	The system should also be able to generate dynamical model based forecast maps of cumulative rainfall/departures for a Block/Tehsil/district/state/homogenous region/country by using the gridded forecast rainfall which will be equivalent to station rainfall for next 5-7 days. In this case, computation methodology will be same as used for station wise observed rainfall. These maps will be uploaded on the IMD website as various GIS layers.	Computational methodology – arithmetic averaging (since data will be equally spaced at regular grid points) or using iso-hyetal?	Both

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16.	4.1 (xxiii) at page 29	Migration and integration of existing (legacy and current) Rainfall data to the data base. Develop a GUI query analysis tool for retrieval of rainfall information from the available data base.	Existing database structure with all details will be provided.	It will be provided at the time of SRS to the successful bidder
17.	4.4 (viii) at page 32	Functionality for domain oriented product generation by RMC's/ MC's/FMO's/DGM(RMU)	The functionality of domain oriented products generation by RMC/MCs may please be further elaborated.	As per tender document
18.	4.4 (ix) at page 32	Majority Web GIS Application features includes Dynamic Query, Overlay analysis, Buffer analysis, Data Modelling, Animations., Zoom in/Zoom out	Data Modelling may please be further elaborated.	GIS functionalities for Model and observed rainfall data and products
19.	4.4 (xi) at page 33	Alignment of AI & ML concept to support Data Gap, quality, etc	(a) Artificial Intelligence (AI) & Machine Learning (ML) concepts in addition to techniques provided by IMD as in 4.4(v)? (b) To be used for Historical data?	a. Yes b. Yes
20.	7.(B).f at page 9	Comprehensive Annual Maintenance Contract (CAMC) shall be only for them maintenance of stores (all equipment and	Request to clarify the context of the "Capital Cost".	Minimum 6% of the cost of the project as per RFP

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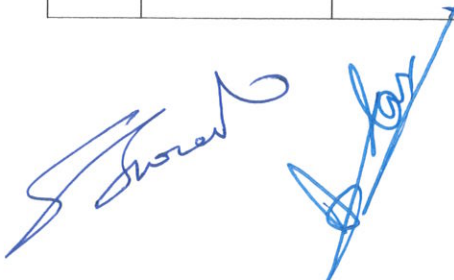| S. NO	Clause	Description	Query	Remarks
		software supplied by bidder only) therefore prospective bidders are advised to quote CAMC charges accordingly andspecificallyfor36monthsafter theexpiryof24monthsofwarranty period. The charges are to be quoted for each year, on annual basis. Minimum amount can not be less than 6% of the capital cost.		
21.	13.a at page 17	Post warranty, the complete system shall be under comprehensive AMC for 36 months from the date of expiry of 24 months warranty. Upgradation/migration of system if required due to any change in technology, hardware, software, or any other unforeseen reasons, shall be done by the firm during warranty and AMC period.	RFP stated that the hardware component and its cost is out of scope. Bidder will only provide hardware composition and its configuration considering overall solution perspective. Hence any hardware technology change etc. and its impact should not be linked to the Bidder Scope. Kindly Confirm.	As per remarks at S No 6 above.
22.	13.a at page 17	Post warranty, the complete system shall be under comprehensive **AMC**	The change in technology, its genetics transformation etc. are	As per tender document

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S. NO	Clause	Description	Query	Remarks
		for 36 months from the date of expiry of 24 months warranty. Upgradation/migration of system if required due to any change in technology, hardware, software, or any other unforeseen reasons, shall be done by the firm during warranty and **AMC** period.	very subjective and it is linked to the roadmap of the software product lifecycle. Minor Changes (effort less than 05 Man days) is logical industry standard value addition as part of any changes arises because of technology/software updates/upgrade. Any major changes / new 'functionality requirements or base line transformation need considering Application development during Warranty and AMC phases should be out of scope. This clause attracts unlimited financial liabilities, performance risk etc. Kindly attend the clause suitably.	

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23.	13.b at page 18	Bidder should carry out necessary modifications and improvements in application software due to new requirements and in the formats which may come up in course of time during the warranty and CAMC period.	It is suggested to cover minor modifications and improvements as part of the scope during Warranty and AMC period. Any major change or new enhancement must get covered as part of change request /additional scope with additional time and cost. Please confirm.	As per tender document
24.	17. Terms and Mode of payment 17.(a)II. at page 19	Payment of software and services (design, development, hosting of website and integrated mobile apps) excluding CAMC: 20% on successful CDR (Critical Design Review) meeting and remaining 80% on commissioning of project including security audit, completion of training, commissioning, test and acceptance of the system.	This is to propose that to bring at least03levelpaymentMile stone to support cash flow and to meet the financial requirement phase during development phase and rollout. The proposed Milestone could be 20% on submission of functional requirement study (FRS), 40% on successful CDR	As per tender document

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S. NO	Clause	Description	Query	Remarks
			and remaining 40% on completion of training, commissioning, test and acceptance of the system.	
25.	17.(A).III at page 19.	**CAMC** charges shall be paid for the completed half yearly period, after providing satisfactory service for the period post warranty; however, charges for **CAMC** shall be considered for deciding the lowest bidder(L-1).	In RFP it seems contradictions considering payment terms for CAMC. We understand that the CAMC payment shall be Quarterly basis. Please confirm.	CAMC payment will be Quarterly basis.
26.	6.Other Terms and Conditions 6.19. at page 39	Licensing: Bidder has to provide lifetime licenses for all the applicable hardware and software and services; if any.	The hardware and its system software are not part of the bidder scope hence no licensing aspect applicable for hardware related aspect.	Yes
27.	6.14.1 at page 41	Penalty Clause. The complete system should be failure proof at any point of time (during warranty and CAMC period) without which a penalty shall be imposed as per following:	If application will down due to hardware failure/ non availability of the hosting environment then application penalty clause should not be applicable to the bidder. Please confirm.	Yes

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29	Suggestion	Change Request Mechanism as enhancement for new requirement	Kindly confirm on change request mechanism as enhancement for new requirement. Application development time need to be defined for maintenance purpose. Kindly confirm.	Change/upgradation/modification is a continuous process and will be done in the scope of warranty and CAMC of the project.
30	Suggestion	Extended Warranty and CAMC (if applicable)	Kindly confirm year on year escalation rate for financial purpose.	As per tender document

Committee

(B P Yadav)
Sc.-'F. Head Hydromet
Chairman

(Rahul Saxena)
Sc.-'F'
Member

(Dr. Ashok Kr. Das)
Sc.-'E'
Member

(Chinmay R Khadke)
Sc.-'C'
Member

(S K Manik)
Sc.-'C'
Member

Special Invitee

(Dr. G. Suresh)
Sc.-'G', NCS

(Ravikant Singh)
Sc.-'E'

(K. V. Singh)
Sc. – 'F'/Head, CPU