

Response to Pre-bid Queries 06.11.2018

Bid for Purchase of Strong Motion Accelerographs , Earthquake Early Warning System (EEWS) & Rapid Notification System (RNS) on behalf of Institute of Seismological Research, Gandhinagar, Department of Science & Technology, Govt. of Gujarat. (Tender No. HWT111018520)

Sr. No.	Tender Reference		Query / Clarification / Suggestions from the Venders	Responses to Vendors
	Page No./Section No./ Clause No.	Tender Description		
1	Page No.9/Clause No. 28	Prices shall be inclusive of all Duties like GST. The prices shall strictly be submitted in the given format. Quoted prices shall be inclusive of all taxes. The tax components-G.S.T.as applicable shall be mentioned separately in the respective columns. However, payments related to the customs duty is ISR's responsibility. The bidder has to submit all the required documents relevant to the supply of the goods for customs clearance. The final prices quoted for each item are CIF basis.	Kindly let us know the applicable custom duty on the project. Do we need to include the customs duty in the price bid or we have to quote separately. If Gujarat Informatics Limited or Institute of Seismological Research are exempted from customs duty, will they provide us the customs duty exemption certificate.	ISR will provide custom duty exemption certificate which entails a minimum custom duty, which ISR will pay. Prices should be inclusive of all taxes like GST.
2	Page No.-2 point No. 2 under Category 2. Item 1.	2. The bidder/any consortium partner should have experience of having supplied Strong Motion Accelerographs to Govt. institutes/Govt. departments/Govt. boards. Bidders should have completed a single project of similar type costing not less than INR 50, 00,000/- in the last 10 years. Multiple purchase orders of Rs. 50 Lakhs in the last 10 years will be acceptable. Similar model will be allowed (Form No. E-2)	As we are based in Israel, we would like to join with a local partner who will be responsible for maintaining the sites (software and hardware). Can we have a 3 parties consortium?	No Change Its already mentioned in the RFP that the consortium of maximum two (2) partners is allowed to participate in the bid.
3	Page No.-2 point No. 2 under Category 2.	2. A consortium agreement must be submitted on Rs. 100 stamped paper duly signed by the consortium member. The consortium agreement must clearly specify the eligibility criterion which they fulfill and outline their roles and responsibilities.	Please clarify weather foreign bidder consortium has to submit the consortium agreement on stamp paper or board resolution document will be enough to submit.	No Change Consortium agreement needs to be submit in case of consortium.

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4	Page No. 2 point no. 4 under SMA.	<p>4. The bidder/any consortium partner should be an authorized Indian representative of the manufacturer, who must have manufactured, tested and supplied at least 25 units of the SMA similar to the type specified in this bid to any of the reputed organization / institute within last 10 years. The Goods/Software and services offered for supply must be of the most recent versions / models incorporating the latest improvements in design. Further, bidder/any consortium partner should be in continuous business of manufacturing products similar to that specified in the technical specifications section of each item during the last 3 years prior to bid opening, and should not be blacklisted by Indian or any state Govt. or any Govt. board/Nigam/institute/society/corporations etc.</p> <p>(a) Bid of bidder/any consortium partner quoting as authorized representative of a manufacturer meeting with the above requirement in full can also be considered provided.</p> <p>(b) The manufacturer furnishes authorization assuring full guarantee and warranty obligations</p> <p>(c) The bidder/any consortium partner as authorized representative has supplied, installed and commissioned satisfactorily at least 25 units of the SMA, which must be in satisfactory operation till Dec 2017 and must be providing annual maintenance services for the above installation.</p>	As this tender is in three parts hardware, software and Rapid Notification System. Please clarify, is hardware manufacturer experience of supplying 25 SMA will be also be considered for qualification terms.	Please see the revised bid document.
5	Page No. 4, item no.1, second bullet	<p>• The bidder has to supply 50 nos. of Strong Motion Accelerographs as per the specifications stipulated in this tender to ISR, Raisan, Gandhinagar, India. He has to demonstrate the workability of 50 nos. of Strong Motion Accelerographs for continuous 2 days operation and integrate with online transmission with demonstration of software features supplied along with the Strong Motion Accelerographs.</p>	We use small aperture seismic arrays to detect the earthquake in real time. Each seismic array has between 1-5 SMA and the seismic arrays are deployed every 25km to 45km. In order to evaluate the number of arrays needed and number of SMA's, we'll need a map defining the earthquake source area and the target area that needs to be protected.	Map is attached. It may be noted that requirement of 50 SMAs is fixed.
6	Page No. 16, Item no. 1, S. no 1. Topology	<p>Tri-axial transducers, horizontal - vertical in a single sealed unit with internal recorder.</p> <p>The unit should have an indicator mark on its body to indicate relative orientation of the sensors.</p>	In every seismic array, there will be a computer. This computer will record the data received from all sensors in the seismic array. This will simplify the hardware. We ask that the requirement to have the recorder embedded with the sensor be removed.	No change.
7	Page No. 16, Item no. 1, S.no 6. Input Power	<p>Single battery source for sensor and the recording unit with 7 days backup.</p> <p>Battery should be chargeable through Solar panel and AC main line (220 volt, 50 Hz).</p>	In certain locations, we will be using Power Over Ethernet (PoE) to provide power to the sensors in the array. We will be providing backup power to the sensors and recorder for 7 days but it will not be by using a single battery per sensor as stated. A centralized power source approach is more robust and manageable.	No change.

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8	Page No. 16, Item no. 1, S.no 8 Sampling Rate	up to 200 SPS	Our seismic algorithm is optimized to work at 500 SPS. This allows a more accurate and faster detection.	More than 200 SPS will be accepted.
9	Page No. 16, Item no. 1, S.no 16. Data Storage	Recording shall be on a SD card of the order 8 GB or more. One additional card with each unit. CF card will be acceptable.	We recommend using a rugged and hot swappable hard drive. This allows a more durable storage medium that can store more data.	No change.
10	Page No. 17, Item no.2, Sr. No 1.	Software should detect initial P-wave and generate Alarm within 10-15 seconds by computing EEWS attributes like PGA, PGV, PGD, Tau-c, Pd, CAV etc.	We are able to pick the P wave in under 200ms and the generate an alarm in under 5 seconds. We ask that the requirements be adjusted accordingly. Reducing the detection time from 10-15 seconds to under 5 will reduce the blind zone dramatically and provide more lead time to prepare.	No change.
11	Page No. 17, Item no.2, Sr. No 4.	Software should have facility of online Communication via Ethernet, and fiber optics (both way i.e. CRS server to remote SMA and remote SMA to CRS server).	Please clarify if communication (Fiber, VSAT) will be available and operated by GIL in every installation site.	Communication medium will be provided.
12	Page No. 17, Item no.2, Sr. No 10	EEWS support should be lifetime on 24 * 7 basis. Free lifetime Upgradation/ modification for software without any additional cost. Integration with existing setup of ISR. Lifetime license with one additional client option.	In order to provide a more manageable offer, we ask that the free support be limited to the warranty time of 2 years and after the 2 years, define a cost per event or as an annual support fee. Please clarify what is the setup ISR is using.	No change for Upgradation/ Modification. Presently ISR is using Earthworm to receive the data online in near real time .
13	Page No. 17, Item no.2, Sr. No 12.	The bidder should provide the list of computer systems, display systems and their configuration and all other hardware items required to install and operate the software on 24 *7 basis	In order to reduce the overall hardware and hosting costs, we ask to add the option of hosting the system in the cloud and only have the monitoring hardware in GIL/ISR premise.	No change.
14	Geneal Quarries/ Suggestion		We request you to please extend the due date about two weeks as there is another due in NGRI Hyderabad on 31.10.2018 because we have to submit lot of documentation from our principal and it is difficult to bid simultaneously.	The last date of bid submission is extended up to 22.11.2018 at 1500 hours.
15	Geneal Quarries/ Suggestion		The tender is national Competitive bid or International Competitive bid.	Please see the revised bid document.
16	Page No. 10, Point No.38	38 Bids shall be valid for 180 days after the date of financial bid opening. A bid valid for a shorter period shall be rejected as non-responsive. If required, GIL may extend the bid validity for further period from the date of expiry of bid validity in consultation with the successful bidder.	Point no.38-bid validity 180 days after the date of financial bid opening as it is difficult when the price bid opening so how can we decide the time and date.	No Change

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17	Page No. 11, Point No.44	<p>Payment for Goods and Services shall be made by the indenting department in INR/USD/EURO/CAD as follows:</p> <ul style="list-style-type: none"> • In case of Indian Bidder: <ul style="list-style-type: none"> On Delivery: Eighty percent (80%) of the contract price shall be paid on receipt of Goods and upon submission of the documents On Final Acceptance: the remaining twenty percent (20%) of the Contract Price shall be paid to the supplier within 30 days after the date of the satisfactory demonstration of working of SMA and software at purchaser's site. • In case of Foreign Bidder: The payment will be made by opening Letter of Credit (LoC) in the name of manufacturer/foreign bidder and will be released as below: <ul style="list-style-type: none"> On Delivery: Eighty percent (80%) of the contract price shall be paid on receipt of Goods and upon submission of the documents On Final Acceptance: the remaining twenty percent (20%) of the Contract Price shall be paid to the supplier within 30 days after the date of the satisfactory demonstration of working, and installation at purchaser's site. <p>Note: Payment for the software will be made after successful installation and demonstration of all the elements of the EEWS and RNS satisfactorily based on the recommendations of the expert technical committee.</p>	point no. 44- payment terms we request 90% payment against L/C and balance 10% after successful installation.	No change.
18	Page No. 16, Point No.6	<p>Single battery source for sensor and the recording unit with 7 days backup. Battery should be chargeable through Solar panel and AC main line (220 volt, 50 Hz).</p>	Technical Specifications (Accelerometer) point n. 6 - Please confirm do we have to supply the solar panels and batteries also.	Batteries and Solar panels are to be supplied as power source.
19	Page No. 16, Point No.16	Recording shall be on a SD card of the order 8 GB or more. One additional card with each unit. CF card will be acceptable.	Technical Specifications (Recorder) Point No. 16 Data Storage it is 8 GB SD Card We request it should be SD or Flash Card.	Flash card may be supplied. The supplied SD/CF/Flash cards etc. must be freely available in local market.
20	Geneal Quarries/ Suggestion		General Quarries - Could you please clarify the role of Consortium or the Indian agent is same as the Consortium.	Responsibility of Indian agent is same as of OEM or of Consortium.

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21	Page No.4, item No.1, second Bullet	The bidder has to supply 50 nos. of Strong Motion Accelerographs as per the specifications stipulated in this tender to ISR, Raisan, Gandhinagar, India. He has to demonstrate the workability of 50 nos. of Strong Motion Accelerographs for continuous 2 days operation and integrate with online transmission with demonstration of software features supplied along with the Strong Motion Accelerographs.	it is stated that 50 Strong Motion Accelerometers (SMA) must be provided in the offer. This (number of sensors), should not be fixed. It should be left open to the vendors to provide a system capable of meeting the technical requirements of the Early Warning System as defined in the Tender. For a superior system like ours, we can cover the same network provided by GIL with almost half the number of sensors. This will have a very major reduction in the overall cost of the project which will eventually be extremely beneficial for GIL as well. Therefore, we request GIL to NOT Fix the number of sensors at 50 and keep it open as per each individual solution of the different vendors.	No change.
22	Geneal Quarries/ Suggestion		As per the current specifications, the tender only asks for supply of SMA. This means that this system will only detect strong earthquakes. Any smaller intensity earthquakes will not be detected reliably by the SMAs. Hence, there will be no way to check the functioning of the system till a strong earthquake hits the region. And since there will be no means to check the system till a major earthquake hits, it is very much possible that the system malfunctions when the strong earthquake actually hits. In order to overcome this problem and have continuous monitoring on the functioning of the system, we would like to suggest that the type of sensors should not be kept as only SMA. It should remain open to the vendors. This will allow using a hybrid of different type of sensors (SMAs + Velocity Seismometers) that will allow a faster as well as a continuous detection of all levels of Earthquakes (strong and small ones). Since 1970 there were around 135 earthquakes of magnitude of more than 2.5 in the region out of which 12 were above 5. This detection of more frequent earthquakes can be used to i) Train and tune the system and reach a stable and optimized system in a very short time ii) Provide a clear indication on the system performance level, as opposed to be needing a strong earthquake to know if the system is working properly iii) Using advanced AI and ML algorithms to further shorten and detection time.	ISR is already having velocity sensor and data is coming online in near realtime. If necessary; the bidder may use this velocity data for the fine tuning of the system. If requested; Old velocity data will also be provided by ISR for fine tuning of the system.

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23	Page No.17, Item No.2, Sr. No. 1	Software should detect initial P-wave and generate Alarm within 10-15 seconds by computing EEWS attributes like PGA, PGV, PGD, Tau-c, Pd, CAV etc.	As per clause , the alert should be provided in 10-15 seconds. This is way TOO LONG for a real-time EEW. Therefore, we are unable to understand why GIL is open to considering system with such specifications when there is superior technology available in the market that allows a detection in a significantly faster time. This would defeat the purpose of Rapid Notification System. Therefore, we would like to suggest that the alert range should be kept at between 5 - 7 seconds and hence, request GIL to amend the specifications accordingly. These extra seconds of time are extremely significant in terms of earthquake early warning as the blind zone is substantially reduced which can result in saving of many lives and infrastructure. We are sure GIL too would want the earliest possible earthquake detection and alert warning dissemination.	No change.

