

Tender for 40 Seismological Stations

[Supply, Installation & Commissioning of Seismic Equipment, its accessories for 40 new seismological observatories under NATIONAL SEISMOLOGICAL NETWORK.]

[National Center for Seismology]

[FEB 2020]

SECTION – I

GENERAL INSTRUCTIONS

1. Introduction:

1.1 The Purchaser has issued this Tender Enquiry (TE) document for purchase of goods/stores/articles and related services as mentioned in Section “List of requirements / Technical specifications”, which also indicates, inter alia, the required stores, delivery schedule, terms and place of delivery etc. This section “General Instructions to Bidders” (GIB) provides the relevant information as well as instructions to assist the prospective Bidders in preparation and submission of tenders.

1.2 Bidders shall have to agree/accept all the terms and conditions of Tender document including payment terms etc. Acceptance shall be unconditional and Bidders shall have no claim and right in future on their terms, if any.

1.3 Whenever there is any conflict between the provision in the “General Instructions to Bidders” with regard to specific item/para/clause under this section and that in the “RFP”, the provision contained in the RFP shall have an over-riding effect and treated as final. Any special instructions as per “RFP” section will also apply for this purchase. The conditions (like qualification criteria, maintenance services, penalty charges, etc.) mentioned in “RFP” will also apply for this purchase.

2. Tender Language: The tender submitted by the Bidder and all subsequent correspondence and documents relating to the tender exchanged between the Bidder and the purchaser shall be written in English language.

3. Tender Currency: The Bidder should quote the price in US Dollar (US \$) for non-indigenous (or imported) items and in INR (₹) for indigenous (locally sourced) items.

4. Eligible Goods and services: All goods and related services to be supplied shall have their origin either in India or in any other country with which India has not banned the trade relations. The term “origin” used in this clause means the place where the goods are mined, grown, produced or manufactured or from where the related services are arranged and supplied.

5. Tender Validity :

- 5.1 The tenders shall remain valid for acceptance for a period of 180 days (one hundred eighty days) after the date of tender opening prescribed in the TE document.
- 5.2 Purchaser's reserves the right to accept any tender and to reject any or all tenders.
- 5.3 The purchaser reserves the right to accept in part or in full any tender or reject any tender without assigning any reason or to cancel the tendering process and reject all tenders at any time prior to award of contract, without incurring any liability, whatsoever to the affected Bidder or Bidders.

6. Tendering Expenses: The Bidder shall bear all the costs and expenditure incurred and/or to be incurred by them in preparation, and uploading their tender including attending the pre-bid conference and/ or arranging demonstration of Services or Presentations before the Committee that may be deemed necessary by the Purchaser.

7. Pre-bid Meeting:

- 7.1 Pre-bid conference shall be held as per NIT schedule so as to provide an opportunity to the participating bidders to interact with NCS with regard to various tender provisions/clauses, before the bids are submitted. Bidders should depute their authorized representative for pre-bid meeting. In case, due to the points/doubts raised by the prospective Bidders, the RFP needs to be modified, and then the same will be considered for modification. After pre-bid conference, tender conditions will be frozen. No change will be permissible after pre-bid meeting. Clarification needed, if any, may be sent before commencement of pre-bid meeting. No reply in this regard shall be sent to individual Bidders. Pre-Bid minutes shall be uploaded on e-Procurement portal <https://eprocure.gov.in/cppp/> and NCS website <http://seismo.gov.in/content/tenders>
- 7.2 NCS shall hold a pre-bid meeting with the prospective Bidders as per Notice Inviting Tender(NIT) details. Queries received in writing, from the Bidders, prior to the pre-bid meeting only shall be addressed. The queries can be sent to NCS through email at g.suresh@imd.gov.in, rk74.singh@imd.gov.in and/ or faxed on 91-11-24619943.
- 7.3 Conditional tenders shall not be accepted on any ground and shall be rejected straightway. If any clarification is required, the same should be obtained on or before pre-bid meeting. No correspondence will be entertained after pre-bid meeting.

7.4 **Regular visit of website:** Prospective Bidders are advised to see e-Procurement portal <https://eprocure.gov.in/cppp/> or NCS website <http://seismo.gov.in/content/tenders> on regular basis for any change in NIT schedule, amendment / corrigendum in Tender Document including technical requirement and pre-bid minutes etc.

7.5 **Integrity pact:** As per directive of CVC all organizations including NCS have to adopt an Integrity Pact(IP) to ensure transparency, equity and competitiveness in major public procurement having procurement value above ₹ 5.0 crore.

- i. The integrity pact envisages an agreement between the prospective bidders / vendors with the buyer committing the persons / officials of both the parties with the aim not to exercise any corrupt influence on any aspect of the contract. Only those bidders / vendors, who are willing to enter in to such an integrity pact with the Purchaser, would be competent to participate in the bidding.
- ii. The Pre-Contract Integrity Pact is a binding agreement between the Buyer and Bidders for specific contracts in which the Buyer promises not to accept bribes during the procurement process and Bidders promise that they will not offer bribes or adopt any unfair means. Under this Pact, the Bidders for specific services or contracts agree with the Buyer to carry out the procurement in conformity with the commitments of either party as specified in the Pact.
- iii. Undertaking on behalf of a Bidding company will be made “in the name and on behalf of the company’s Chief Executive Officer”. IP also envisages Panel of Independent External Monitors (IEMs) which shall be provided / recommended by MoES and institutes with the approval of by CVC. The integrity Pact would be effective from the date of invitation of bids till complete execution of the contract.
- iv. The bidder is required to sign Pre-Contract Integrity Pact. The format of Integrity Pact is as given in **Annexure –13**.
- v. Any or all of the following set of sanctions could be enforced for any violation by a Bidder of its commitments or undertakings:
 - a) Denial or loss of contracts;
 - b) Forfeiture of the EMD and performance bond;

- c) Liability for damages to the Buyer and the competing Bidders; and
- d) Debarment of the violator by the Buyer for an appropriate period of time.

vi. The details of Independent External Monitors (IEMs) are as follows:

Name and Designation	Shri Arun Kumar, Ex. Secretary, Oil Industry Development Board (OIDB)	Shri Sushil Gupta, Ex. Chairman, Central Ground Water Board (CGWB) & Central Ground Water Authority (CGWA)
Address	B-38, Vrindavan Apartment, Plot No. 1, Sector 6, Dwarka, New Delhi -110075	B 702, Aravali Height, Sector 21 C, Faridabad, Haryana Pin - 121001
Contact Information	Email: kumararun_53@rediffmail.com Mobile:+919810621113	Email:sushilanitagupta@yahoo.com Mobile:+919999744061

8. Document comprising the tender:

8.1 Tender Enquiry Document seeks quotation in two parts by following **TWO Bid System**.

The First Part will be known as '**Technical Bid**', and the Second Part will be known as '**Price Bid**' (Details given below)

8.2 **Technical Bid(Un-priced Bid):** comprising of following

- a) Checklist section (Annexure-1) properly filled and signed.
- b) Earnest Money Deposit (**EMD**) (BG or FDR or MSME certificate for EMD exemption. (MSME certificate should be relevant to goods / services to be procured in the present tender)
- c) Technical proposal.
- d) Compliance statement/table.
- e) A copy of the blank price bid as per **Annexure 6**. The list of deliverables (un-priced) with make & model etc. as per **Annexure 12** should also be submitted along with the technical bid.
- f) Documentary evidence for eligibility as per Clause 48.12.1

- g) Tender Acceptance Letter (Annexure-2) Duly Stamped & Signed. (Bidder has to agree to accept all the terms & conditions of the Tender Enquiry Document).
- h) The bidder, who quotes for goods manufactured by some other manufacturer, shall furnish Manufacturer's Authorisation Form. (Annexure-3)
- i) Authorization Letter from the foreign principal for authorizing Indian Representative to sign and submit the tender document on behalf of foreign principal.
- j) All the above documents must be enclosed with technical bids, otherwise bids may be either ignored or not considered for technical evaluation.
- k) Pre-Contract integrity Pact duly signed on all pages

8.3 PRICE BID:

- a) All the pages of the price bid should be numbered, indexed and duly signed and stamped by the authorized signatory.
- b) Prices should be quoted as per Price Schedule Format (Annexure-6). The domestic Bidder shall indicate on the Price Schedule specifying all components of prices shown therein including the unit prices and total tender prices of the goods, services, packing, inland transportation/freight/insurance to the sites and GST etc. against the requirement.
- c) In case any charges are not mentioned in the price bid, it will be treated as "all the charges are free of cost for that item".
- d) Indian vendor shall quote prices on F.O.R destination (sites of consignee) basis. Payment will be made in Indian Rupees only. No payment will be made in foreign currency.
- e) **Foreign vendor shall quote prices on F.O.B basis.**
- f) **The bidder supplying indigenous goods or already imported goods shall quote only in Indian Rupees.**
- g) Unless otherwise specified, prices quoted by the bidder shall remain firm and fixed during the currency of the contract and not subject to variation on any account except statutory levies, taxes and duties etc., if any, chargeable on the goods are payable.

- h) If there is a discrepancy between the amount expressed in words and figures, the amount expressed in words shall prevail and will be treated as final.
- i) The Supplier shall bear all the Income-tax liability as per rates prevailing at the time of undertaking the job in accordance with the Income-Tax Act in force in India.
- j) Price bid shall prima-facia be rejected in case of any deviation from the technical bid of the bidder and if there is any fact concealed or hidden in price bid/technical bid.
- (k) Prices indicated on the price-schedule form shall be entered separately in the following manner:

(i) For Goods manufactured/sourced within India:

i)	The price of the goods quoted Ex-works including taxes already paid.
ii)	GST and other taxes like LBT / Octroi etc. which will be payable on the goods if the contract is awarded.
iii)	The charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination as specified in the price schedule form.
iv)	The installation, commissioning and training charges including any incidental services, if any.

(ii) For Goods manufactured abroad:

i)	The price of the goods, quoted on FCA (named Airport abroad) or FOB (named port of shipment), as specified in the price schedule form.
ii)	The charges for insurance and transportation of the goods to the port / place of destination.
iii)	The agency commission charges payable to Indian agent in Indian rupees, if any.
iv)	The installation, commissioning and training charges including any incidental services, if any

- l) The terms FOB, FCA, CIF, CIP etc shall be governed by the rules prescribed in the current edition of the Incoterms published by the International Chambers of Commerce, Paris.
- m) Where there is no mention of packing, forwarding, freight, insurance charges, taxes etc. such offer shall be rejected as incomplete.
- n) The price quoted shall remain fixed during the contract period and shall not vary on any account.
- o) All lots and items must be listed and priced separately in the Price Schedules. If a Price Schedule shows items listed but not priced, their prices shall be assumed to be

included in the prices of other items. Lots or items not listed in the Price Schedule shall be assumed to be not included in the bid.

- p) In case of imports the freight & insurance will be paid by the Purchaser, as the consignments are to be shipped through the Purchaser nominated freight forwarder unless otherwise mentioned specifically.
- q) **The quotation should be only in Indian Rupees for indigenous items. In case of foreign quote, the vendors may quote their rates in US \$.**
- r) In case of INR bids the price criteria should be on Free Delivery to NCS HQ, Lodi Road, New Delhi. Govt. Levies like GST, LBT / Octroi etc., if any, shall be paid at actual rates applicable on the date of delivery. Rates should be quoted accordingly giving the basic price, GST etc., if any.
- s) Customs Duty is levied on all import meant for NCS. Hence, the suppliers are requested to quote only on **FOB/FCA basis**, freight, insurance and custom duty as applicable to Govt./Service/R&D Institutions will be paid by the Purchaser.

Note: All payments due under the contract shall be paid after deduction of statutory levies at source (like ESIC, IT (TDS), GST, LBT / Octroi etc.), wherever applicable.

8.3.1 Taxes and Duties

- a) For goods manufactured outside India, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside India.
- b) For goods Manufactured within India, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred till its final manufacture / production.
- c) If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in India, the Purchaser shall make its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.
- d) All payments due under the contract shall be paid by the Purchaser after deduction of statutory levies (at source) (like ESIC, IT, etc.) wherever applicable.

8.4 The Bidder shall have to agree/accept all the terms and conditions of the tender including payment etc. Acceptance shall be unconditional and bidders shall have no claim and right in future on their terms

- 9. **Preparation of Tender:** A bidder shall complete all the documents of its tender, duly signed and stamped. The bidder shall scan all the documents and save them in PDF format.

- 10. Submission of Tender:** The bidders shall upload the soft copy of the tenders (in PDF Format) on CPP Portal within the specified date/time of submission of the tender as mentioned in the NIT document. Uploading of tender on CPP Portal is essential and mandatory otherwise their tenders shall be rejected. Additionally, hard copy of technical bid only is to be submitted by post or by hand to Sh. Ved Perakash Thakur, Scientist-C, Room No. 510, Sat. Met. Building, Mausam Bhavan, Lodhi Road, New Delhi.
- 11. Alteration of Tender:** The bidder, after submitting its tender, is permitted to alter / modify and upload its tender any number of times before the last date/time for submission of tender. The earlier tenders will get cancelled automatically and the latest uploaded tender will remain effective.
- 12. Opening of Tenders:** The purchaser shall open the tenders after the specified date/time and at the place as indicated in the NIT document. In case the specified date of tender opening falls on a holiday (or subsequently declared a closed day for the purchaser), then the tenders will be opened at the appointed time and place on the next working day. The bids downloaded by this office from CPP Portal will be available for the bidders automatically. The bidders need not come to this office as they can also download the opened bids directly from the CPP Portal. In case the bidders wish to come to this office during tender opening, they must bring an Authorization Certificate from their respective firms. The process of opening of the tenders in Two Bid System is as follows.
- 12.1 First Stage :** The Technical Bids are to be opened in the first stage on/after the prescribed date and time. These Bids are scrutinized and evaluated by Technical Evaluation Committee (**TEC**) constituted by the competent authority with reference to parameters prescribed in the Tender Enquiry Document. The bidders whose Technical Bids are found responsive and acceptable will pass on to the second stage. The details of the bidders, whose Technical bids have been accepted, will be uploaded on the CPP Portal along with the Report of TEC. The date of opening of Financial/Price Bids will also be published.
- 12.2 Second Stage :** In the Second Stage, the Price Bids of technically qualified bids only will be opened. The Price Bids will be scrutinized by Financial Evaluation Committee (**FEC**) constituted by the competent authority. The report of the FEC will decide the lowest

bidder. This report will also be uploaded on CPP Portal. Supply Order will then be issued to the lowest bidder.

13. Scrutiny and Evaluation of Tenders

13.1 Unresponsive bids: The tenders will be scrutinized to determine whether they are complete and meet the essential and important requirements, conditions etc. as prescribed in the Tender Enquiry Document. The tenders are liable to be treated as non-responsive and will be summarily ignored if following documents are not provided along with technical bids.

- a) Checklist (Annexure-1).
- b) Tender Acceptance Letter (Annexure-2) is not duly signed and stamped. (Bidder has to agree to accept all the terms & conditions of the Tender Enquiry Document)
- c) Tender Validity Period is shorter than the required period.
- d) Required EMD (Amount, Validity, etc.)/ Exemption document have not been provided.
- e) Bidder has not agreed to deposit the required performance security (In case of allotment of the tender).
- f) Copy of agreement of Indian agent with its foreign principal with the precise relationship between them and nature of services which would be available from Indian agent. Copy of this agreement must be attached with the tender.
- g) By any means/reason, the incomplete bid uploaded on e-procurement.gov.in shall also be treated as Unresponsive.
- h) Pre-Contract Integrity Pact

13.2 Technical Evaluation:

- a) A duly constituted Technical Evaluation Committee (TEC) will first select Bidders on the basis of eligibility criteria of this tender. The Bids conforming to the eligibility criterion will be considered for further evaluation
- b) If during the preliminary examination, the purchaser find any minor infirmity and/or irregularity and/or non-conformity in a tender, the purchaser may waive the same provided it does not constitute any material deviation and financial impact and, also, does not prejudice or affect the ranking order of the Bidder. Wherever necessary, the

purchaser will convey its observation on such 'minor' issues to the Bidder asking the Bidder to respond by a specified date. If the Bidder does not reply by the specified date or gives evasive reply without clarifying the point at issue in clear terms, that bid will be liable to be ignored.

- c) Technical Evaluation Committee (TEC) will shortlist Technical Bids on the basis of technical parameters, offered technical solutions/products and their features. The TEC can make any enquiry/seek clarification from the Bidders on the offered Service Solution. In such a situation, the Bidder shall extend full co-operation. The Bidders can also be asked to give technical presentation/discussion on the offered solution, in a short period notice, as such the **Bidders** have to be ready for the same.
- d) During the detailed Technical Presentations/Discussions, Bidder has to ensure availability of appropriate specialist, along with required documentation for interacting with Technical Evaluation Committee. If the required specialist along with proper documentation is not made available by Bidders, then such defaulting Bidders are likely to be debarred from further tender evaluation process.
- e) Compliance statement in the form of '**Complied**' or '**Not Complied**' shall be given against each term and specification mentioned in the tender document. The compliance statement as per Annexure -14 should contain the signature of the authorized person and the seal of the company. Any deviation should be mentioned / explained by the Bidder in Compliance Statement. The compliance statements should be supported by authentic documentation. Deviations in lower side will not be accepted.
- f) No enquiry shall be made by the Bidder(s) during the course of evaluation of the tender, after opening of bid, till final decision is conveyed to the successful Bidder(s).
- g) The names of technically short listed Bidders will be announced to only those Bidders whose bids will qualify for opening of the Price/Financial/Commercial Bids.

13.3 Financial Evaluation: In the second stage, the Price Bids of technically qualified bidders only shall be opened for further scrutiny and evaluation.

- a. The Financial Bids of only those Bidders short-listed from the Technical Bids by TEC will be opened in the presence of their representatives on a specified date and time

to be intimated to the respective Bidders, and the same will be evaluated by a duly constituted Finance Evaluation Committee (FEC).

- b. No enquiry shall be made by the Bidder(s) during the course of evaluation of the tender, after opening of bid, till final decision is conveyed to the successful Bidder(s). However, the Committee/its authorized representative and office of NCS can make any enquiry/seek clarification from the Bidders, which the Bidders must furnish within the stipulated time else bid of such defaulting Bidders will be rejected.
- c. If there is a discrepancy between the unit price and total price, The Unit Price shall prevail.
- d. The ultimate/landing cost in respect of store is arrived at by considering the following elements:
- i) **For Goods manufactured /sourced within India**

ii)	The price of the goods quoted Ex-works including taxes already paid.
iii)	GST and other taxes like LBT / Octroi etc. which will be payable on the goods if the contract is awarded.
iv)	The charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination i.e., field sites as specified in the price schedule form.
v)	The installation, commissioning and training charges including any incidental services, if any as given in Scope of Supply (Section IV)

ii) **For Goods manufactured abroad**

i)	The price of the goods, quoted on FCA (named Airport abroad) or FOB (named port of shipment), as specified in the price schedule form.
ii)	The charges for insurance and transportation of the goods to the port / place of destination i.e. CIP/CIF Price.
iii)	The agency commission charges payable to Indian agent in Indian rupees, if any.
iv)	The installation, commissioning and training charges including any incidental services, if any

e) **Conversion to Single Currency**

To facilitate evaluation and comparison, the Purchaser will convert all bid prices expressed in the amounts in various currencies in which the bid prices are payable to Indian Rupees at the selling exchange rate established by any bank in India as notified in the Newspapers on the date of bid opening of the Price Bids. For this purpose,

exchange rate notified in www.rbi.org or any other website would be used by the purchaser.

- 14. Packing and Marking:** The packing for the goods to be provided by the supplier should be strong and durable enough to withstand (Without limitation) the entire journey during transit including shipment (if any), rough handling, open storage etc. without any damage or deterioration of the packed goods.
- 15. Inspection, Testing and Site Acceptance Test (SAT):** The purchaser/consignee reserves the right to inspect goods before their dispatch if required in technical requirement. Goods accepted by the purchaser/consignee and/or its inspector at initial inspection and in final inspection in terms of the contract shall in no way dilute purchaser's/consignee's right to reject the same later, if found deficient in terms of the warranty clause of the contract. Purchaser will not undertake any Pre-dispatch inspection, unless mentioned, for imported stores in the suppliers country of origin and equipment will be sent to the supplier on the basis of supplier own inspection at the premises and guarantee and warranty. The equipment will be accepted subject to final inspection and test before handing over the equipment to consignee.

SECTION – II

GENERAL CONDITIONS

16. Whenever there is any conflict between the provision in the GCT under this section and that in the section “RFP”, the provision contained in the section “**RFP**” shall prevail and have an over-riding effect, i.e. The details given in the RFP will be treated as final.
17. Any Special instructions or conditions like delivery schedule, mode of delivery & sites of delivery etc., mentioned in “RFP” section will also be applicable
18. **Eligible Bidders** : The Firms in followings categories are eligible to participate in tender subject to fulfill other criteria in technical requirement section.
 - 18.1 Indian/Foreign Manufacturers of the required stores.
 - 18.2 Authorized Dealer/Supplier/Distributor of Indian manufacturer/Foreign principal. The bidder shall have to submit authorization certificate as per Annexure-3 from manufacturer that they will provide service support after sale.
 - 18.3 Indian agent on behalf of foreign principal.
 - 18.4 A copy of the valid agreement between Indian agent and the foreign principal(s) with the precise relationship between them, is required to be submitted as per Annexure -15.
19. **Alternative Tenders:** Alternative Tenders are not permitted.
20. **Validity of Tender:** The tenders shall remain valid for acceptance for a period of 180 days (One Hundred Eighty Days) for Technical Bid and 240 days (Two Hundred Forty Days) for EMD after the date of opening of tender as prescribed in the TE document.
21. **Purchaser’s Right to accept any tender and to reject any or all tenders:** The purchaser reserves the right to accept in part or in full any tender or reject any tender without assigning any reason or to cancel the tendering process and reject all tenders at any time prior to award of contract, without incurring any liability, whatsoever to the affected bidder(s).
22. **Earnest Money Deposit (EMD):**
 - 22.1 The Bidder shall furnish along with its tender, Earnest Money for an amount as shown in the tender notice.
 - 22.2 The bidders who are registered on Tender submission date with National Small Industries Corporation, New Delhi, shall be eligible for exemption from EMD. Micro and Small

Enterprises specified by Ministry of Micro, Small & Medium Enterprises (MSME) are exempted from the submission of Earnest Money Deposit (EMD).

22.3 EMD of an amount as shown in NIT has to be submitted through FDR/Bank Guarantee of any Scheduled Commercial Bank drawn in favour of “DDO, National Centre for Seismology, New Delhi”, physically on or before the last date of submission of bids; else bid will be rejected. However, the scanned copy of FDR/BG along with the Bid must be uploaded electronically on e-Procurement site.

22.4 The earnest money shall be valid for a period of sixty (60) days beyond the validity period of the tender.

23. Refund of EMD:

23.1 In the case of those Bidders who fail to qualify the eligibility criteria, the Earnest Money Deposit (EMD) will be refunded without any interest accrued immediately thereafter.

23.2 In the case of those Bidders whose technical bids do not qualify, the EMD will be refunded without any interest accrued within one month of the acceptance of TEC’s recommendations.

23.3 In the case of those Bidders whose technical bids have qualified but are not selected, the EMD will be refunded without any interest accrued within one month of the acceptance of Financial Evaluation Committee’s (FEC) recommendations.

23.4 Bidder whose bid was accepted and selected, the EMD will be refunded without any interest accrued after the submission of Performance Security.

23.5 Application of request for refund of EMD is given at **Annexure-5**

23.6 The bidders have to submit pre receipt for obtaining their EMD in the **FORM GAR 43D (Annexure-5)** in duplicate with original signatures. One form should be affixed with revenue stamp.

23.7 The clause “Encashment/release of FDR/BG requires clearance certificate from Purchaser i:e Director, National Centre for Seismology, New Delhi” must be mentioned in issued FDR/BG by Bank.

24. Forfeit of EMD:

24.1 Earnest money of a Bidder will be forfeited, if the Bidder withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of

validity of its tender or if it comes to notice that the information/documents furnished in its tender is incorrect, false, misleading or forged without prejudice to other rights of the purchaser.

24.2 The successful Bidder's earnest money will be forfeited without prejudice to other rights of Purchaser if supplier fails to furnish the required performance security within the specified period mentioned in clause 15.1.

24.3 Firm shall have to extend the validity of EMD if extension of tender validity is agreed on the request of purchaser in exceptional cases.

25. Performance Security:

25.1 Successful Bidder shall submit performance security within thirty (30) days from date of issue of supply order/award of contract by the purchaser or within twenty one (21) days from the receipt of supply order by the supplier whichever is earlier.

25.2 Performance security has to be submitted by the successful bidder, irrespective of its registration with NSIC/MSME. performance security is not relaxed to any supplier.

25.3 The purchaser may consider annulment/cancellation of supply order/ award of contract if performance security not received in stipulated time.

25.4 There is no relaxation/exemption in submitting of Performance Security.

25.5 The supplier shall furnish performance security to the purchaser for an amount equal to ten percent (10%) of the total value of the order, valid up to sixty (60) days beyond the warranty period or successful completion of all contractual obligation including warranty period whichever is later. The format of bank guarantee to be submitted as performance security is given in **Annexure-4**.

25.6 Performance Security shall be furnished by bidder for all the component including indigenous components to be taken representatives of foreign principals/OEM s.

25.7 Bank Guarantee issued from the foreign banks must be authenticated by State Bank of India (SBI) or any other Nationalized Bank of India.

25.8 Firms, registered with NSIC/ MSME, quoting on behalf of their foreign principal shall be responsible for furnishing performance security for the entire project tenure.

25.9 The successful Bidder will have to deposit Performance Security within specified time limit given above, equivalent to 10% (Ten Percent) of the total value of the work order,

in the form of FDR or Bank Guarantee from a Nationalized/ Scheduled Commercial Bank in favour of “**DDO, National Centre for Seismology, New Delhi**”. If the Security Deposit is not paid within time specified, the Earnest Money Deposit of the Bidder shall be forfeited. No interest will be payable for “Performance Security”.

- 25.10 Performance Security has to be submitted irrespective of its registration NSIC etc. Performance security is not relaxed to any supplier/service provider. Submission of Performance Security is must for all suppliers/service providers.
- 25.11 It shall be in any one of the forms namely Fixed Deposit Receipt or Bank Guarantee drawn/issued by a commercial bank doing Government business in the prescribed form in favour of the purchaser. In the event of any amendment issued to the contract, the supplier shall, within twenty-one (21) days of issue of the amendment, furnish the corresponding amendment to the Performance Security (as necessary), rendering the same valid in all respects in terms of the contract, as amended. Foreign Bidder may submit in the form of Bank Guarantee. Bank Guarantee issued from the foreign banks must be authenticated by STATE BANK OF INDIA or any other Nationalized Bank of India.
- 25.12 The purchaser will release the Performance Security without any interest to the supplier/ service provider on completion of the supplier’s all contractual obligations including the warranty obligations & after receipt of performance security for CAMC (if applicable).
- 25.13 In the event of non-providing the services, the Performance Security shall be forfeited to the extent the services are not provided. Further, if the purchaser has to get the services from any other Bidder because of failure to provide in full or part by the successful Bidder, the difference in payment may be made from such amount. Also, the amount retained towards “Performance Security” is subject to forfeiture if it is found at any point of time during the period of contract that the services offered by the supplier are not in conformity to the accepted specifications mentioned in RFP by the purchaser.
- 25.14 In case the Bidder backs out of the contract in mid stream without explicit consent of the NCS, the PBG will stand forfeited.

25.15 On completion of the Project, the Performance Security without any interest accrued shall be released after ascertaining that satisfactory support that has been provided during AMC period. In case, it is found that appropriate satisfactory support has not been provided by the Bidder, NCS will ensure that the prescribed penalty as per clause 25.3 for the default in service has been realized or shall be recovered from the Bidder out of already due payments.

26. Terms of Delivery: Goods shall be delivered by the supplier in accordance with the terms of delivery specified in the Supply Order. Suppliers should not deliver the goods without any valid delivery period. Purchaser shall not be held responsible for any thing (payment and loss of stores etc) if stores supplied without any valid delivery period as purchaser reserve the right to reject the delivery and terminate the supply order.

27. Delivery Schedule: As per RFP clause 48.12.3

28. Warranty: Warranty for a period of 24 months from the date of site acceptance of the systems at respective sites

28.1 Other condition under warranty clause of “RFP” under section 48.12.6 section shall also be applicable.

29. Penalty/Liquidity Damage:

29.1 The supplier shall deliver the goods as per the Supply Order within the time schedule specified by the purchaser in the “RFP” section. The delivery date, unless delivery is divided, on which all the items/stores/materials/services etc as per Supply Order are delivered shall be taken into account for penalty/LD purpose.

29.2 The purchaser shall, without prejudice to other rights and remedies available to the purchaser under the contract, deduct from the contract price a sum equivalent to 1% (one percent) per week of delay or part thereof on delayed supply of goods and/or delayed services subject to a maximum of 10% of the contract price of delayed items. Once the maximum is reached purchaser may also consider followings:

- a. Forfeiture of its performance security and
- b. Termination of the contract for default.

29.3 The supplier shall not be held responsible for any delay in custom clearance by purchaser, handing over proper site by consignee and any other delay in part of consignee/purchaser if responsible. These periods shall not be counted in LD. The supplier shall not dispatch the goods after expiry of the delivery period. The supplier is required to apply to the purchaser for extension of delivery period and obtain the same before despatch. In case the supplier dispatches the goods without obtaining an extension, it would be doing so at its own risk and no claim for payment for such supply and / or any other expense related to such supply shall lie against the purchaser. The supplier shall inform to the purchaser directly in writing about these delays on part of NCS.

- 30. Award Criteria and Tolerance Clause:** The Supply Order shall be issued to the eligible responsive tender evaluated as the most economical, technically qualified and suitable to the requirements subject to the availability of funds. The purchaser reserves the right to increase or decrease the quantity of required goods up to twenty five percent ($\pm 25\%$) till the placement of supply order without any change in the terms & conditions and prices quoted by the bidders.
- 31. Modification of Contract:** If necessary, the purchaser may, by a written order given to the supplier at any time during the currency of the contract, amend the contract by making alterations and modifications within the general scope of contract. If the supplier doesn't agree to the adjustment made by the purchaser, the supplier shall convey its views to the purchaser within fifteen (15) days from the date of the supplier's receipt of the purchaser's amendment / modification of the contract.
- 32. Custom Duty:** In case of India agent quoting on behalf of its foreign principal, the Custom Duty Exemption Certificate shall be provided by NCS on request by the firm only for the imported items. If additional Custom Duty is paid by the Indian agent, the same shall be reimbursed by NCS on submission of original documents. All other charges like Landing/Clearing/Bank charges, Freight/Insurance charges on imported stores will have to be paid by the vendor.

33. Taxes and Duties in India:

33.1 Duty and Local Taxes: As per Govt. of India Rules, the applicable GST shall be paid to the successful bidder/supplier. Normally, the materials to be supplied to Govt. Departments against Govt. contracts are exempted from levy of town duty, Octroi duty, terminal tax and other levies of local bodies. However, the local Town/Municipal Body regulations, at times, provide for such exemption only on production of exemption certificate from any authorized officer. The suppliers should ensure that the stores ordered against contracts placed by this office are exempted from levy of town duty/Octroi duty, Terminal tax or other local taxes and duties. Wherever required, they should obtain the exemption certificate from the indenter /consignee concerned, to avoid payment of such local taxes or duties. The supplier shall pay the Octroi, entry tax etc. if exemption certificate not agreed by local authorities and same may be got reimbursed from purchaser on proof of payments.

33.2 Supply of Road Permits by the consignees: In all such cases where the requirement of Road Permit for entry of goods into a particular State is mandatory, the following provisions shall be strictly followed: -

- a. The supplier shall request the consignee for providing Road permit/ Way bill within 10 days of the receipt of the Supply order. The supplier shall furnish all the necessary information and documents in this regard to consignee within a maximum period of two weeks so that the same reaches the supplier before the dispatch of the stores. However, in cases where the Road permit/Way Bill is issued on proof of actual invoice of the material, the consignee shall arrange to provide the Road permit/Way Bill from appropriate authorities within a maximum period of 5 days from the receipt of invoice.
- b. The supplier shall pay the local charges/taxes if exemption certificate not agreed by local authority and same will be reimbursed by purchaser on submission of receipt.
- c. The supplier shall not be held responsible for any delay in supply due to non-supply/delayed supply of Road permit.

33.3 Income Tax : Deduction of Income Tax at Source from the payment to the suppliers shall be done as per existing law in force. The bidders (Foreign as well as Indian) may visit the website of Income Tax Department of India for details of Tax Liabilities, Rules, and Procedures etc. The bidders shall have to provide their Permanent Income Tax Number (PAN) and TAN. Firm may also mention the applicable rates of TDS as per DTAA with India. Copy of same may also be enclosed. Foreign vendor shall have to mention the details of establishment in India if any.

34. Terms and Mode of Payments:

34.1 Payment Terms: Payment shall be made subject to recoveries, if any, by way of liquidated damages /penalty clause /TDS or any other charges as per the payment terms of the Supply Order if not specified elsewhere in the document.

34.2 Cases where installation and Commissioning not to be done by bidder

A. In case of Domestic goods

No advance payment for domestically supplied goods. 100 % payment shall be made to domestic supplier in Indian currency on receipt of entire goods/stores at sites and acceptance by consignee. No payment shall be made for partial delivery. The following documents shall be submitted:

- a. Three copies of supplier's invoice showing contract number, goods description, quantity, unit price and total amount.
- b. Consignee Receipt Certificate in original issued by the authorized representative of the consignee
- c. Copies of delivery challan identifying contents of each package.
- d. Inspection certificate by the nominated Inspection agency, if any.
- e. Insurance Certificate
- f. Final Acceptance Report from consignee.

B. In case of Imported goods

Ninety (90) % payment, against proof of dispatch of goods/stores as per S.O, shall be paid through irrevocable, non-transferable Letter of Credit (LC) opened in favour of the foreign supplier and upon submission of following documents:

- a. supplier's commercial invoice showing contract number, goods description, quantity, unit price and total amount
- b. Original on-board Bill of Lading/Air way billing
- c. Copies of packing list identifying contents of each package
- d. Manufacturer's/Supplier's warranty certificate
- e. Inspection certificate issued by the nominated inspection agency, if applicable as per contract
- f. Manufacturer's own factory inspection report
- g. Certificate of origin
- h. Insurance certificate
- i. Port of Loading
- j. Port of Discharge
- k. Expected date of arrival

Balance payment of 10 % of net FOB price of goods would be made against 'Acceptance Certificate' to be issued by the consignees.

34.3 Cases where installation & Commissioning to be done by supplier: Seventy percent (70%) of contract value of stores after proof of despatch along with Factory Quality Assurance Test certificate of the sensors, digitizers and its accessories to be dispatched by the OEM/foreign supplier, or receipt of goods at sites in case of domestic goods and balance 30% payment towards stores after their successful installation, commissioning and acceptance at site. Present procurement comes under this category.

34.4 100% payments towards services like Training, SAT, Installation & commissioning charges etc if any after their executions and completions.

34.5 A separate work order will be issued for the items sourced from India including civil and minor works to the authorized Indian agent of OEM. The payment for this component will be made after successful completion of works.

34.6 Necessary documents must be submitted for the release of payments.

34.7 Payment to the foreign supplier shall be made through IRREVOCABLE LC. LC shall be established for a specific period depending on delivery schedule only after receipt of unconditional acceptance supply/purchase order and performance security from the supplier. LC extension charges shall be borne by the supplier in case of extension of delivery period requested by the supplier and request agreed by the purchaser.

34.8 The bidder shall submit detailed particulars of his bank account in this office, like: Account Number, Bank Name, Branch Name, Address, IFSC code, MICR No. and Telephone No.; etc.

35. Termination of tender:

35.1 From the time of submission of tender up to the time of issuing of the Supply Order, if a bidder needs to contact the purchaser for any reason relating to this tender enquiry and / or its tender, it should do so only in writing.

35.2 In case a bidder attempts to influence the purchaser in the purchaser's decision on scrutiny, comparison & evaluation of tenders and awarding the contract, the tender of the bidder shall be liable for rejection in addition to appropriate administrative actions being taken against that bidder, as deemed fit by the purchaser.

35.3 The purchaser, without prejudice to any other contractual rights and remedies available to it (the purchaser), may, by written notice of default sent to the supplier, terminate the contract in whole or in part, if the supplier fails to deliver any or all of the goods or fails to perform any other contractual obligation(s) within the time period specified in the contract, or within any extension thereof granted by the purchaser. In the event of

the purchaser terminates the contract in whole or in part, the purchaser may procure goods and/or services similar to those cancelled, with such terms and conditions and in such manner as it deems fit and the supplier shall be liable to the purchaser for the extra expenditure, if any, incurred by the purchaser for arranging such procurement.

35.4 If the supplier becomes bankrupt or otherwise insolvent, the purchaser reserves the right to terminate the contract at any time, by serving written notice to the supplier without any compensation, whatsoever, to the supplier, subject to further condition that such termination will not prejudice or affect the rights and remedies which have accrued and / or will accrue thereafter to the purchaser

36. Arbitration

36.1 If dispute or difference of any kind shall arise between the purchaser and the supplier in connection with or relating to the extension of contract, the parties shall make every effort to resolve the same amicably by mutual consultations.

36.2 If the parties fail to resolve their dispute or difference by such mutual consultation within twenty-one days of its occurrence, then, unless otherwise provided in the “RFP” section either the purchaser or the supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided the applicable arbitration procedure will be as per Indian Arbitration and Conciliation Act, 1995 and any amendments thereto. In the case of a dispute or difference arising between the Purchaser/ Consignee and all suppliers relating to any matter arising out of or connected with the contract, such dispute or difference shall be referred to the sole arbitration of an officer, appointed to be the arbitrator by the Director General of Meteorology. The award of the arbitrator shall be final and binding on the parties to the contract. Each party shall bear its own cost.

36.3 **Venue of Arbitration:** The venue of arbitration shall be the place from where the contract has been issued, i.e., New Delhi. The contract shall be interpreted in accordance with the laws of India.

- 37. Force Majore:** Neither NCS nor Bidder shall be liable to the other for any delay in or failure of performance of their respective obligations under this contract caused by occurrence beyond the control of NCS or Bidder because of fire, floods, power, acts of God, acts of public enemy, wars, insurrection, riots, strikes, lockouts, sabotage or any agencies thereof or any local authority or any compliance therewith, or any other causes contingencies or circumstances similar to the above. Either party shall promptly but not later than thirty (30) days thereafter, notify the other to the commencement and cessation of such contingency, and if such contingency continues beyond six months, both parties agree to discuss and agree upon an equitable solution for termination of this agreement, or otherwise decide the further course of action to be adopted.
- 38. Fall Clause:** The bidder undertakes that it has not supplied/is not supplying similar products/systems or subsystems at a price lower than that offered in the present bid in respect of Ministry/Department of the Government of India or Public Sector Unit (PSU) and if it is found at any stage that similar products/systems or subsystems was supplied by the BIDDER, to any Ministry/Department of the Government of India or Public Sector Unit (PSU) at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and difference in the cost would be refunded by the BIDDER to the BUYER (National Center for Seismology) or it will be adjusted from their bills, if the contract has already been concluded

SECTION – III

SPECIAL CONDITIONS

OF TENDER (SCT)

SECTION – III

SPECIAL CONDITIONS OF TENDER (SCT)

39. The Government of India lays down public procurement policies for Micro, Small and Medium Enterprises (MSMEs), from time to time, to help inclusive national economic growth by providing long-term support these enterprises and disadvantaged sections of society and to address environmental concerns.
40. In this tender, the participating Micro, Small and Medium Enterprises (MSMEs) quoting price within price band of L1+25% (Twenty Five percent) shall also be allowed to supply up to 50% (Fifty percent) portion of total tendered value by bringing down their price to L1 price in a situation where L1 price is quoted by a firm other than an MSME. In case there are two or more MSME firms within such price band, then this 50% (Fifty percent) quantity is to be distributed proportionately among these bidders (As decided by the competent authority of this office).
41. Within this 50% (Fifty Percent) quantity, a purchase preference of 4% (Four percent) i.e. 4% (Four percent) out of 50% (Fifty percent) is reserved for MSMEs owned by Scheduled Caste (SC)/Scheduled Tribe (ST) entrepreneurs (if they participate in the tender process and match the L1 price). Provided that, in event of failure of such SC/ST MSME to participate in tender process or meet tender requirements and L1 price, four per cent sub-target shall be met from other MSME. The MSMEs would be treated as owned by SC/ ST entrepreneurs. The final distribution of the supply order shall be decided by the competent authority of this office.
42. Where any Aggregator has been appointed by the Ministry of MSME, themselves quote on behalf of some MSME units, such offers will be considered as offers from MSME units and all such facilities would be extended to these also.
43. This Policy is meant for procurement of only goods produced and services rendered by MSMEs and not for any trading activities by them. An MSME Unit will not get any purchase preference over another MSME Unit. The Purchaser has issued this Tender Enquiry (TE) document for purchase of goods/stores/articles and related services as mentioned in Section "List of requirements / Technical specifications", which also indicates, inter alia, the required stores,

delivery schedule, terms and place of delivery etc. This section “General Instructions to Bidders” (GIB) provides the relevant information as well as instructions to assist the prospective Bidders in preparation and submission of tenders.

- 44.** NCS is following and abides with the Public Procurement (Preference to Make in India), Order 2017, DIPP, MoCI Order No. P-46021/2/2017-B.E.II dated 15th June 2017 and subsequent amendments to the order. Accordingly preference will be given to the Make in India products while evaluating the bids, however, it is the sole responsibility of the bidder(s) to specify the product quoted by them is of Make in India product along with respective documentary evidence as stipulated in the aforesaid order in the technical bid itself.

Section IV

Request for Proposal (RFP)

**Supply, Installation & Commissioning of
Seismic equipments, its accessories and computer system
for autolocation & earthquake information dissemination**

for

NATIONAL SEISMOLOGICAL NETWORK

45. Introduction: National Centre for Seismology (NCS) is the nodal agency of Government of India (GoI) for monitoring and reporting earthquake activity in the country on a 24X7 basis. The earthquake information and data is supplied to various users including state and central government authorities responsible for disaster mitigation and relief and rescue operations, etc. NCS has in its archives earthquake data spanning over a century and is the main repository to support research in Seismology. NCS is presently maintaining the National Seismological Network (NSN) consisting of a total of 115 seismological stations spread over the entire country. It is intended to expand the seismic monitoring capabilities, through **Upgradation of National Seismological Network** to spatially densify the gap areas in country to improve the detection threshold.

46. Purpose of RFP: This RFP is an invitation for potential bidders to supply the required equipments with associated communication and application software for setting up 35 nos. of permanent seismological observatories in the country each having following equipments

- (i) Broadband Seismometer
- (ii) Strong Motion Accelerator
- (iii) Six channel Data Acquisition System (DAS) with GPS, associated cables etc.
- (iv) Data acquisition, health monitoring, Communication and other utility software with license and media

The list of field stations to be set up is enclosed as Annexure-9. Location of these stations may vary within 100 km from the proposed site. Central Receiving and Processing system (CRPS) of NCS is equipped with latest Sesiscomp3 Autolocation software and its inbuilt GDS (Gempa Dissemination Server) is used to auto disseminate the earthquake parameters. Bidder has to integrate continuous real time ground motion data from all the stations to existing Seiscomp3 Autolocation software.

47. Scope of the tender: The scope of the work under the subject proposal includes:

- (i) Setting up of **40 field stations** in various parts of India, with **broadband and strong motion sensors, Data Acquisition System (DAS)** etc. List of tentative location of station is at **Annexure-9**. These locations may vary at the time of final installation.

- (ii) **Power supplies** with full solar power backup to all the 40 field equipments to be provided.
- (iii) Provision for VSAT and GPRS Communication at field stations in such a way that in the event of failure of one means (VSAT/GPRS) other (GPRS/VSAT) start. Appropriate cables/modules for such provisions to be supplied.
- (iv) Construction of seismic pier of appropriate dimensions, at all new stations (**as mentioned in Annexure 10**), to install the seismic sensor.
- (v) Proper electrical grounding and lightning protection for all field equipment and minor works for installation of seismic equipment. Sensor and GPS cables are to be conduit through a tough all weather conduit pipes.
- (vi) 2 years warranty and 3 years comprehensive maintenance contract after installation and commissioning.

The bidder shall take all necessary actions related to the supply, transportation of equipments to the sites, installation, configuration and integration of the complete H/w and S/w modules to meet the requirements as per RFP on turn-key basis.

48. Technical Specifications

48.1 Broadband Seismometer:

48.1.1	Type	Triaxial electronic force balance broadband velocity transducer in a single sealed module with output for one vertical and two horizontal components orthogonal to each other.
48.1.2	Frequency Response	Flat (within ± 3 dB) to ground velocity, at least in the range of 120 sec to 50 Hz.
48.1.3	Dynamic range	Minimum 130 dB
48.1.4	Output voltage	± 20 V
48.1.5	Damping	0.7 critical
48.1.6	Sensitivity	1000 - 2000 V/m/s
48.1.7	Linearity	+/- 1% of full scale.
48.1.8	Mass centering	Automatic or on external command locally or from remote

48.1.9	Calibration Facility	Calibration facility from Data Acquisition System (DAS)
48.1.10	Frequency response curve and system information	Frequency response curve of the unit along with information regarding transfer function including poles and zeros should be provided as per serial number of each sensor.
48.1.11	Electronic self noise	Must be below the USGS Low Noise Model over 80 sec to 10Hz range
48.1.12	Indicator	a) Should have an indicator for leveling the transducer. b) Should have an indicator mark on its body to indicate the direction of relative orientation of the seismometer
48.1.13	Operating Temperature	-10° to 50°C
48.1.14	Humidity tolerance	0 to 100 % RH
48.1.15	Power Requirement	Less than 2.0 watts , derived from the DAS
48.1.16	Housing	All the components should be permanently mounted in single stainless steel or cast aluminum casing, water tight, vacuum tight enclosure.
48.1.17	Mass Locking	Mass Locking facility during transportation
48.1.18	Connectors	Water proof and rust proof
48.1.19	Cable	Low-loss shielded cable of at least 10 meters with end connectors.
48.1.20	Thermal insulation cover	Thermal insulation cover should not touch the outer wall of the sensor and must be supplied by OEM
48.1.21	Supporting Document	a) The Bidder should provide detailed technical documentation in support of specifications offered. b) The bidder should provide all details of poles and zero as per serial number.
48.1.22	Spare part	Spare connector to sensor cable
48.1.23	Test Report	Submit the test report of the offered model of Broadband seismometer from internationally recognized organizations like USGS or a third party scientific lab/agency

48.2 Strong Motion Accelerometer:

48.2.1	Type	Tri-axial, Mechanical Force balance transducer in a single sealed module with output for one vertical (Z) and two horizontal components (N-S and E-W) orthogonal to each other.
48.2.2	Frequency response	Flat response (within +/- 3dB) to ground acceleration, at least in the range of DC to 200 Hz.
48.2.3	Dynamic range	≥120 dB
48.2.4	Full Scale output voltage	Up to ±20V
48.2.5	Full Scale Range	±2g
48.2.6	Damping	0.7 of critical.
48.2.7	Clip level	Greater than full scale range.
48.2.8	Linearity	Less than 1% of full scale.
48.2.9	Cross-axis sensitivity	Less than 1% of full scale
48.2.10	Mass centering	Automatic
48.2.11	Calibration facility	Calibration procedure from the Data Acquisition System to check the working performance of the sensor, free period, damping etc. locally and from Central Receiving and Processing System(CRPS) at NCS HQ New Delhi, should be provided.
48.2.12	Frequency response curve and system information	Frequency response curve of the unit along with information regarding transfer function including poles and zeros should be provided.
48.2.13	Noise Response	Noise response should be less than 0.001% of full scale for entire frequency band.
48.2.14	Indicators	a) Should have an indicator for leveling the transducer. b) Should have an indicator mark on its body to indicate the direction of relative orientation of the sensor.
48.2.15	Humidity and operating temperature range	0 to 100 % RH and -10° to 50°C.
48.2.16	Power requirement	< 1.5 watt at 12V DC.
48.2.17	Housing	The tri-axial sensors should be mounted in a single water-proof and

		vacuum-tight enclosure.
48.2.18	Mass locking and safety mechanism	Must contain a robust locking and safety mechanism during transportation.
48.2.19	Connectors	a) All connectors should be water-proof and rust-proof. b) All nuts and bolts should be provided for installation/anchoring the sensor on the seismic pier. The anchoring nuts shall preferably be 2" long for firm anchoring
48.2.20	Cable	Low-loss shielded cable of at least 10 meters with end connectors.
48.2.21	Supporting Document	The Bidder should provide detailed technical documentation in support of specifications offered.

48.3 Data Acquisition System(DAS):

48.3.1	Number of Channels	Six channel (3 for weak motion sensors and 3 for strong motion sensor)
48.3.2	Dynamic range	135dB or more measured at 100 sps
48.3.3	ADC resolution	24 bit or more; independent digitizer for each channel
48.3.4	Input Range	Should match to the sensor outputs
48.3.5	Common Mode Rejection	Greater than 70 dB
48.3.6	Channel to channel skew	a) Zero- Simultaneous sampling of all channels. b) Immune to electro magnetic interference.
48.3.7	System noise	Not more than 2-3 counts
48.3.8	Sampling rate	a) User- selectable 1,10,20,50,100 and 200 sps per channel in different streams both in continuous and trigger modes simultaneously as per user requirements. b) Provision to select different sampling rates for weak motion and strong motion channels.
48.3.9	Filter	Linear phase digital FIR filter.
48.3.10	Internal Storage	At least 8 GB or more
48.3.11	External Storage	USB/SD/CF card of 32 GB or more
48.3.12	Recording Format	Standard seismological format compatible to Windows/UNIX with proven compression technique. It

		should be easily convertible to SEED format.
48.3.13	GPS Timing System	<ul style="list-style-type: none"> a) UTC timed with digitally controlled precision VCXO clock phase locked to GPS b) Timing accuracy less than 0.1mSec when GPS is locked c) Free running TCXO accuracy of 1 ppm over wide temperature range. d) GPS receiver electronic circuit should be inside the DAS with Antenna exposed outside. e) Antenna cable length should be 15 mts or more. f) Antenna should be enclosed in water tight and can work effectively in extreme climatic condition. g) Antenna mounting rod and its accessories
48.3.14	Sensor control	<ul style="list-style-type: none"> a) Sensor calibration facility for both BB seismometer and SMA b) Sensor mass position monitoring for BB seismometer. c) Sensor mass centering on command for BB seismometer.
48.3.15	State of Health of each Channel	Provision for checking state of health information like sensor mass position, temperature voltage, condition of GPS time lock etc. locally and remotely.
48.3.16	Status display	Status display indicators for power, data acquisition, SOH, GPS etc. should be provided.
48.3.17	Gain	Hardware gain selection through software for 0.5, 1, 2 and 4
48.3.18	Data acquisition Mode	Both continuous and trigger mode
48.3.19	Trigger	User selectable, independently for each channel at different sampling rate based on triggering criteria as STA/LTA level etc.
48.3.20	Communication	a) In built communication interface circuitry for provision of remote data acquisition and State-of-Health in near real time mode through

		<p>V-SAT.</p> <p>b) Suitable interface for computer/ laptop for parameter setting and data downloading.</p>
48.3.21	Transmission setting	<p>Should have facility to select transmission of data to remote location in the following options:</p> <p>a) continuous mode transmission for BB data</p> <p>b) continuous or trigger mode transmission of SMA data as per user configuration</p>
48.3.22	VSAT connectivity	<p>a) Ethernet port (10/100 Base-T) supporting TCP/IP and UDP/IP</p> <p>b) Compression of data before transferring to VSAT.</p> <p>c) Continuous and trigger both. (6 channels)</p> <p>d) Duplex communication between field and both hubs</p> <p>e) Extensive error correction</p> <p>f) Support for off-the-shelf communication equipment</p> <p>g) Appropriate cable to connect the DAS with the VSAT (RJ-45 port)</p>
48.3.23	Power Supply	<p>a) Supply voltage 10-15Volts through solar panel activated maintenance free batteries.</p> <p>b) Power consumption of DAS less than 6W at 12V DC recording 6 channels at 100 SPS.</p> <p>c) Low battery voltage protection and</p> <p>d) DAS shall resume data acquisition and transmission automatically when the power is restored.</p>
48.3.24	DC- DC Connector	<p>A DC-DC convertor between DAS and Battery must be provided to safeguard from</p> <p>a) Spurious voltage</p> <p>b) Low Voltage</p> <p>c) Over voltage charging of batteries, etc.</p>
48.3.25	Operating temperature and humidity range	<p>a) Operating Temperature -10 deg to 50 deg C</p> <p>b) Humidity Upto 100% RH</p>

48.3.26	Environment	All the indoor units should work in typical tropical environment conditions and should work without air conditioning.
48.3.27	Housing	GPS and DAS modules should be enclosed in a weather- and shock-proof sealed enclosures.

48.4 Power Supply: DC Power supply for Sensors, DAS, GPS for each site

- a) All these equipments will be powered through Branded Sealed Maintenance Free (SMF) batteries charged through solar panel as well as through AC power supply.
- b) Bidder should provide power calculation at each field station and provide appropriate number of batteries and solar panels required to operate seismic equipments for **at least three days** (72 hours) under bad weather conditions(no direct sunshine).
- c) Batteries to be mounted on movable strong rack.
- d) A suitable battery charger from AC mains (230VAC 50Hz) is also to be supplied.
- e) All outside exposed cables between solar panels and solar charge controlled should pass through good ducting pipe.

48.5 Communication Facility:

- a) Bidder has to provide the facility of transmitting data from field stations to CRPS through GPRS Modem as well as through VSAT. VSAT service provider shall be selected through bidding process by the purchase separately.
- b) Bidder has to make provisions of communication facility in hotstand by mode between GPRS and VSAT

48.6 Software Requirement:

Firmware/software in DAS should support

- a) Real time ground motion data acquisition (weak motion and acceleration data) in DAS including GPS data and State of Health monitoring,

- b) Transmission of recorded data to central station in near real time using VSAT communication facilities in continuous or trigger mode or both as per user selected criteria.
- c) Restoration of automatic data acquisition in DAS on assumption of power in case of power failure.
- d) Capability to serve the request from CRPS for re-transmission of data in case of real time data transmission break/failure.
- e) Provision to supply off-line waveform data transfer of any segment from the ring buffer on manual request from CRPS.
- f) In case of communication failure, automatic request/transfer for the pending data from the point at which it was executing just before the failure.

48.7 Central Receiving and Processing System(CRPS):

The required Computer Hardware towards continuous data acquisition will be provided by the Purchaser. In this connection, the Vendor should provide the details of computer hardware and OS required in their bid document.

- a) Application software utilities for parameter setting, On-site control panel, sensor calibration, data retrieval as per user criteria from CRS, processing and analysis of the weak and strong motion data.
- b) The Data acquisition software to fetch continuous data from all field sites to central site.
- c) In the event of communication link failure, all the past data from field site should be retrieved automatically at CRS, once the communication link is restored.
- d) Display of incoming continuous data from all field stations with Station code assigned by the user
- e) Software to configure station parameters in the DAS from remote site and also from Central Receiving Station through VSAT or GPRS modem.

- f) Bidder should provide GUI based Application software to monitor the GPS lock status, co-ordinates of field station, battery voltage, broadband sensor mass position, and other State of Health parameters of each field station.
- g) To find out the details of data gaps in the ring buffer / archive memory in respect of each station in the Acquisition computer of CRS.
- h) Offline analysis software from strong motion data to compute PGA, PGV, PGD, response spectra, Intensity, duration of ground shaking, etc.
- i) Old recorded data plotting and display software from the ring buffer memory or Archive at CRS.

48.8 Spare and Accessories:

- a) 6 channel DAS (specified in Clause 45.3) (including GPS antenna and cable, solar panels and battery charger, GPRS modem and its connecting cable, excluding batteries) (5 nos.)
- b) Broadband Sensor and Accelerometer sensor with cables (specified in Clause 45.1 and 45.2) (5 nos. each)
- c) GPS antenna with cable of length 15m for DAS (5no.s)
- d) Sensor cables for Seismometer and Accelerometer (sensor to DAS) (10m length each) – 5nos.
- e) Power cables from DAS to Battery (10 nos.)
- f) Data cables (LAN port of DAS to GPRS Modem) (10 nos.)
- g) Memory card (same capacity as supplied in DAS)– 50 nos.
- h) Internal battery installed with DAS (if any) – 10 nos.
- i) Memory card reader- 2 nos.

48.9 Portable Notebook:

48.9.1	Input through multipoint touch
48.9.2	Not less than 13 inches, Super-anmoled High resolution monitor (touch panel)
48.9.3	a) Appropriate latest OS compatible to run all application software's. b) OS license with media. c) Anti-virus package

48.9.4	Processor: <i>2.9GHz 6-core Intel Core i7, Turbo Boost up to 4.8GHz, with 12MB shared L3 cache or equivalent</i>
48.9.5	RAM: 16 GB or more
48.9.6	<i>HARD: 1TB SSD or more</i>
48.9.7	Maxi Weight: Not more than 2.0kg
48.9.8	1 nos of 10/100/1000Mbps Ethernet port
48.9.9	Suitable slot or external reader for read and write of storage disk of DAS
48.9.10	Suitable interface for connecting to the field sites through GPRS communication. All necessary cables, connectors and devices should be provided to meet the requirements for reception of the continuous waveform data from field sites.
48.9.11	At least 5-8hrs internal battery backup in case of power failure
48.9.12	Charger unit for the Notebook Computer – compatible with Indian AC socket Line voltage 220V AC, 50 Hz
48.9.13	Good quality carrying case/Bag

48.10 Seismic Pillar Construction:

The Bidder is to **arrange for construction of seismic pier**, as per standard criteria indicated below, to house the seismic sensors at the selected unmanned field stations.

- a) The pier should have a platform of dimension 4'x3' with a height of 2.5' above ground and extending to a depth upto bed rock or hard soil level (or a maximum depth of 6' from the ground surface). The pier should have proper moat of 6" all around the pier right from base of the pier to the ground surface filled with dry loose sand. The design construction diagram of the seismic-pier shall be provided
- b) The material used for construction of pier should be homogeneous mixture of cement, sand and stone chips (of size 3/8"-1") in the ratio of 1:2:4
- c) The seismic pier shall be constructed under the supervision of a designated officer of NCS.
- d) Alternatively, the vendor may propose suitable design for the installation of seismic sensor and other accessories
- e) There should be scope to make slight changes in the location and number of field stations at the time of placing the order to finally selected bidder.

48.11 Civil works:

- a) The Bidder is solely responsible for minor civil, electrical and other works required for site preparation at all 35 field stations such as laying of cables in conduit pipes including cables from solar panels, GPS, LAN connection etc.
- b) Chemical-earthing for seismic equipments at all the 35 field stations are to be provided.
- c) Iron-caging for solar panels and GPS antenna for all the 35 sites.
- d) The Purchaser will identify the sites well in advance, before the scheduled installation date and allow the Bidder to perform a site inspection to verify the appropriateness of the sites before the Bidder begins Site Preparation Work and the installation of the hardware.

48.12 General Terms and Condition:

48.12.1 Qualification Criteria

- a) The bidder should be an **OEM (Original Equipment Manufacturer) of seismic equipments** (Broadband Seismometer, Strong Motion Accelerometer and Data Acquisition System). This claim must be accompanied by supporting documents as evidence.
- b) The bidder should have at least **ten years of experience** as on Dec 2019 in supplying, integrating and commissioning **at least three Seismic Telemetry Networks**, for a national institution anywhere in the world. **At least one such Seismic Telemetry Network system with autolocation capabilities established by the bidder should be in successful operation for at least consecutive two years** as on date of submission of bid.
- c) The bidder should furnish the **information on past supplies** (during last **seven years** as on Dec 2019) of seismic and associated equipments along with the auto-location software and satisfactory performance in the proforma under **Annexure-7**.
- d) Bid submitted shall **also include the following information**:
 - i. Copies of original documents defining the constitution or legal status, place

of registration and principle place of business of the company or firm or partnership, etc.

- ii. The bidder should furnish a brief write-up supported by adequate data, explaining the available experience (both technical and financial) for the manufacture and supply of the required equipments within the stipulated time frame of completion after meeting all their current commitments.
 - iii. The bidder should clearly confirm that all the facilities exist in the factory of the manufacturer for inspection and testing and these will be made available to the purchaser or his representative for inspection.
 - iv. Reports on financial standing of the Bidder such as, profit and loss statements, balance sheets and auditor's report for the past three years, bankers certificates etc.
- e) Average annual turnover of the bidder should be at least of ₹ 9 crore during last three years ending on DEC 2019. Bidder should submit the annual turnover statement as per **Annexure-11**.
 - f) Notwithstanding anything stated above, the Purchaser reserves the right to assess Bidder's capability and capacity to perform the contract, should circumstances warrant such an assessment in the overall interest of the purchaser.
 - g) The bidder firm should not have run into loss for a period of more than one year over a period of last 3 years ending 31.3.2019 or 31.12.2018 as the case may be. This should be certified by the Chartered Accountant/ Competent authority.
 - h) The net worth of the bidder firm should not be negative and the same should not have been eroded by more than 30% over a period of 3 years.

48.12.2 Installation

- a) The work requires supply of seismic equipment and other items as per specification, their installation at field stations and CRPS to achieve functionalities as per technical requirements mentioned in various sections of RFP. Bidder is required to supply, install, configure and integrate the complete H/w and S/w modules **on turn-key basis**.
- b) After custom clearance of goods by NCS, these stores shall be handed over to the supplier or their authorized transporter for further dispatch to respective sites. The safe **delivery of the instruments** to the respective field stations and at central site (CRPS) will be the responsibility of the supplier
- c) The bidder should **submit tentative delivery and installation schedule** for all the stations.
- d) Bidder must submit a detailed plan of Project Management and the composition of their Project Management Team.
- e) **Design Review:** The successful bidder shall submit 3 copies of a detailed design review document within two weeks of award of contract for approval by NCS. This document will contain full details of system design both from hardware and software points of view, so as to meet the requirements laid down in the bid document. Preliminary Design Review (PDR) followed by Critical Design Review (CDR) meetings shall be organized during implementation of the project in the form of meetings between NCS officials and the successful bidder to discuss and finalize the design and the requirements to achieve the objectives of the project.
- f) The Bidder will be **responsible for all unpacking**, assembling, wiring, installations, cabling between equipment hardware units and connecting to power supplies, etc.
- g) The Bidder will **provide all cables and connectors** required for the installation and integration of Sensors, DASs, etc., which may be spread in different rooms of the field observatories. All the power connectors should plug into the Indian-type electric sockets.

48.12.3 Delivery schedule:

- i. All the stores (field equipment for **35** field stations and equipments of **CRPS**) should be installed at respective field stations and CRPS in **18 (eighteen) weeks** from the date of payment through LC excluding the period taken by the purchaser for custom clearance.
- ii. Construction seismic piers to house the seismic sensor at the required field stations to be completed before installation of stores.
- iii. The Bidder will **test all** hardware & software operations and carry-out all adjustments necessary for successful and continuous operation of the equipment at all installation sites and fulfill the project goal.
- iv. The Bidder should be ready **to accommodate changes** in application software and its customization, hardware, etc., in order to fulfill such requirements that may arise during the intervening period between preparation of this document and commissioning of the system within the scope of the project.
- v. The system design should be **modular and upgradable** to meet the future requirements.
- vi. **Flow of data within the CRPS should be through local LAN only.**
- vii. The supplier should provide **Lifetime License of the all application software.**
- viii. The supplier should also provide at no **extra cost for a period of 10 years, all the latest version of** upgraded firmware of DAS, application software, data retrieval software, communication software etc., which are being upgraded from time to time along with the relevant installation steps.
- ix. A complete list of deliverables is enclosed at **Annexure-12.**

48.12.4 Training:

- a) Bidder should provide operational and maintenance training of seismic equipments for 10 working days to 4 NCS officials at OEM's Site. Expenditure on official towards travel, boarding and lodging would be borne by NCS.
- b) Bidder should also provide training for a period of 10 working days for 10 NCS officials in Delhi, India. During the training period installation of all application and operating software should be demonstrated. Visit to one field station is required to be organized. The travel charges of NCS Officials will be borne by the NCS.
- c) A **detailed training plan** about the topics to be covered in the training, shall be submitted by the Bidder, sufficiently in advance before commencement of training programme, for NCS's approval.

48.12.5 Factory Acceptance Test:

Supplier should submit FAT certificate providing the satisfactory Quality Assurance /Performance Tests of each seismic equipments like Seismometer, Accelerometer, Seismic Digitizer etc. (with the model and serial number of equipment to be dispatched) along with proof of dispatch for making a payment through Bank L/C.

The objective of the FAT shall be the verification of performance of the system as per the specifications and functional requirements detailed in the tender document, before shipment. All FAT tests should be carried out at Supplier's premises prior to shipment.

48.12.6 Site Acceptance Test:

- a) The supplier shall submit detailed Site Acceptance Test (**SAT**) plans for system acceptance. **The supplier should submit the test plan well in advance for each phase separately.** The test plan shall require concurrence by the Purchaser.
- b) The purpose of the site acceptance test is to verify the performance of the system as per the specifications and functional requirements. This will include both the H/w and S/w tests. The acceptance tests will comprise of

overseeing and evaluating the satisfactory and fail proof performance to ensure trouble-free operations for **seven consecutive days** of all the equipment simultaneously and collectively, namely the Broadband Seismometers, Strong Motion Sensors, Digital Seismic Data Acquisition Systems, Network operations (both H/w and S/w), Seismic Data Analysis and Information dissemination systems, Computer hardware and software at CRPS, Solar Panel etc., in conformity with the Technical Specifications and RFP.

- c) As per the mutually agreed test procedures, site acceptance test should be carried out at site after installation (at each site or at designated field station and the CRPS). The supplier shall arrange for necessary **test equipment**.
- d) In the event of equipment **failing to pass the site acceptance test**, a period not exceeding four weeks will be given to rectify the defects and clear the acceptance test, failing which the Purchaser reserves the right to get the equipment replaced by the Bidder at no extra cost to the Purchaser or to cancel the order and recall all the payments with applicable interest rate from the date of the respective payments.

48.12.7 Warranty and CAMC

48.12.7.1 Warranty:

- a) The Bidder warrants that the Goods supplied under the Contract are **new**, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract.
- b) The Bidder further warrants that all Goods supplied under this Contract should have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the Purchaser's specifications) or from any act or omission of the Bidder, that may

develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.

- c) The bidder should offer **comprehensive on site free warranty** for a period of **two years** from date of **acceptance of the Goods**. Any rates quoted for warranty will be considered for deciding lowest bidder.
- d) During the period of warranty, in the event of the equipment developing snags or malfunctioning or if it stops functioning altogether, the Purchaser will promptly inform the Bidder, and the Bidder's maintenance engineers should attend to the complaint immediately and operationalize the equipment in the least possible time. During the period of warranty , the **upkeep time for the whole Network** should be:
 - i. no down time for CRPS,
 - ii. not more than 10% of the field stations should be down at any time, and
 - iii. no individual field station on main land should be down for more than 48 hours while the down time for field stations in the Himalayas should not be more than 72 hours from the time the complaint is logged
- e) The **time period for which the equipment** was down and not operational, beyond least possible time mentioned above, will be deemed to be the downtime and would be taken into consideration for extending the warranty period by twice the downtime for that system.
- f) The Bidder should supply, **free of cost**, during the period of Warranty, updates of all software supplied at the time of initial installation and commissioning.

- g) The warranty is to be provided at the site. The bidder shall be responsible for arranging dispatch of any defective unit from the site to their factory site for any repair work/replacement, at their own cost. All the cost towards re-export/re-import of defective unit including custom duties, transportation charges etc. shall be borne by the supplier.

48.12.7.2 CAMC:

- a) Followed by two years warranty, the bidder should offer **on site Comprehensive Maintenance Contract (CMC)** for a period of **three years**. Rates quoted for CMC will be considered for deciding lowest bidder.
- b) During the period of CMC, in the event of the equipment developing snags or malfunctioning or if it stops functioning altogether, the Purchaser will promptly inform the Bidder, and the Bidder's maintenance engineers should attend to the complaint immediately and operationalize the equipment in the least possible time. During the period of CMC, the **upkeep time for the whole Network** shall be **same** as mentioned during the warranty period.
- c) Response time to make the system operational is of 72 Hours from the time of report of problem / non- operational of system .
- d) In case vendor fail to make system operational within response time penalty of an amount equal to 0.1% of CAMC charges per day basis shall be imposed.
- e) The Bidder should supply, **free of cost**, during the CMC, updates of all software supplied at the time of initial installation and commissioning.
- f) The CMC is to be provided at the site. The bidder shall be responsible for arranging dispatch of any defective unit from the site to their

factory site for any repair work/replacement, at their own cost. All the cost towards re-export/re-import of defective unit including custom duties, transportation charges etc. shall be borne by the supplier.

- g) Bidder shall quote (**Annexure-6**) the cost of Comprehensive Annual Maintenance Contract (CAMC) giving detailed breakup of each system and subsystems. The bid has to include the break up charges for routine / preventive maintenance, lot, sub lot and other equipments. The firm shall also mention rates for the service tax or any other applicable taxes separately.
- h) The bidder shall adhere to the payment terms & conditions and other requirements of maintenance contract mentioned in the tender document **elsewhere** .

48.12.8 Documentation:

Supplier will deliver **all documentation** in English language in three sets both in hard (bound volume) and soft copies at the time of delivery of equipments. It should include system integration; Operation, maintenance, and trouble-shooting procedures; application software, software logic diagrams, for each field station and at Central Receiving and Processing System (CRPS).

48.12.9 Bidder's Obligation:

- a) The Bidder is responsible for customization of software requirements and conduct all contracted activities in accordance with the Contract using state-of-the-art methods and economic principles and exercising all means available to achieve the Performance specified in the Contract.
- b) The Bidder is obliged to work closely with the Purchaser's staff, act within its own authority and abide by directives issued by the Purchaser for the implementation of various activities.

- c) The Bidder will abide by the job safety measures prevalent in India and will free the Purchaser from all demands or responsibilities arising from accidents or loss of life, the cause of which is the Bidder's negligence. The Bidder will pay all indemnities arising from such incidents and will not hold the Purchaser responsible or obligated.
- d) The Bidder is responsible for managing the activities of its personnel or sub-contracted personnel and will hold himself responsible for any misdemeanours.
- e) The Bidder will treat as confidential all data and information about the Purchaser, obtained in the execution of his responsibilities, in strict confidence and will not reveal such information to any other party without the prior written approval of the Purchaser.
- h) The bidder is liable to pay TDS and other applicable taxes as per GoI norms for the contract and services provided by them, as per rates prevailing at the time of contract.

ANNEXURE-1

CHECKLIST

SN	Activity	Compliance Yes/No/ NA	Page No. of bid
1.	(i) Is the EMD of required amount as per NIT enclosed? (as per clause no. 22.1 of Tender document)		
	(ii) Is the EMD in original submitted on or before the last date of submission of Bid document to Sh. Vedprakash Thakur.		
	(iii) Is the Validity of EMD (FDR/BG) 240 days starting from the date of opening of tender? (as per clause no. 22.4 of Tender document)		
	(iv) Is Registration certificate from MSME/NSIC attached for relaxation of EMD? (as per clause no. 22.2 of Tender document)		
	(iv) Is the “EMD Submitting Firm” other than the participating firm? If yes, then bid is likely to be ignored.		
2.	Have you quoted the price in US Dollar for Non-Indigenous (or imported) items and in INR for Indigenous (locally sourced) items? (as per clause no. 3 of tender document)		
3.	Have you kept validity of your bid as mentioned in Section II-GCT of the TE Document? (as per clause no. 20 of Tender document)		
4.	Have you enclosed duly filled and signed Tender Acceptance Letter on firm’s letterhead (Accepting all the terms and conditions of the tender)? (Bid may be ignored if not signed) (as per clause no. 8.2 (g) of Tender document)		
5.	Have you enclosed clause-by-clause Compliance Statement for the “List of requirements/ technical specifications” section? (as per clause no. 13.2 (e) of Tender document)		
6.	Have you submitted copy of the last purchase order(s) and end user certificate?		
7.	(i) Is tender Submitted as Manufacturer/OEM?		
	(ii) Is tender Submitted as Authorized Agent/ Dealer/ Supplier/ Distributor of OEM? Is Authorization Certificate attached? (as per clause no. 18.2 of Tender document)		
	(iii) Is tender submitted as an Integrator? Whether Back-to-back support agreement with equipment manufacturer and software developer company attached?		
	(iv) Is tender submitted by Indian agent quoting on behalf of foreign principal: If yes, whether the necessary documents are attached as mentioned in TE Document? (as per clause no. 18.3 of Tender document)		

8.	(i) Permanent Account No. of bidding firm with proof.		
	(ii) Is GST Number with Registration Certificate attached?		
9.	Is bidder signed pre-contract integrity pact as given in Annexure-13. (as per clause no. 7.5 (iv) of Tender documents)		
10.	Is Signed and stamped of each pages of bid document to be uploaded on website. (as per clause no. 9 of Tender document)		
11.	(i) Is Submission of Tender/Bid (as per clause no. 10 of Tender document)		
	(ii) Hard copy of uploaded bid is required to be submitted to Sh. Vedprakash Thakur, Scientist-C, Room No.-512, Sat. Met. Building, IMD, Complex, Lodi Road, New Delhi-03		
12.	Is Submission of un-price Bid as per clause no. 8.2 (e)		
13.	Is Price bid submitted as per Annexure-6		
14.	Name of the supplier with complete address to whom supply order is to be placed.		
15.	Contact details (Email & Phone No.) of Supplier/Bidder		

(Signature with date)

(Full name, designation on behalf of the Bidder)

Annexure-2**TENDER ACCEPTANCE FORM**

(For all the terms & conditions of tender document are acceptable to Tenderer)

To

The Director, National Centre for Seismology,
Mausam Bhawan Complex, Lodi Road, New Delhi-110003

Ref: TE document No. NCS/_____dated _____

I/We, the undersigned have examined the above mentioned TE document, including amendment/corrigendum No. _____, dated _____ (if any), the receipt of which is hereby confirmed. We now offer "Supply, Installation and Commissioning of Seismic Equipment and their accessories at 40 Seismological Stations" in conformity with your above referred document.

If our tender is accepted, we undertake to supply the goods and perform the services of (Installation & commissioning etc.), as mentioned in tender document with the requirements, terms and conditions specified in the Section 1 and Section II of tender document.

I/We further confirm that, if supply / purchase order is placed to firm, we shall provide performance security of required amount in an acceptable form for due performance of the contract.

I/We agree to keep our tender valid for acceptance as required in tender document or for subsequently extended period, if any, agreed to by us. I/We also accordingly confirm to abide by this tender up to the aforesaid period and this tender may be accepted any time before the expiry of the aforesaid period. I/We further confirm that, until a formal contract is executed, this tender read with your written acceptance thereof within the aforesaid period shall constitute a binding contract between us.

I/We further understand that you are not bound to accept the lowest or any tender you may receive against your above-referred tender enquiry.

We confirm that we do not stand deregistered/banned/blacklisted by any Govt. Authorities.

I/We confirm that we fully agree to the terms and conditions specified in above mentioned TE document, including amendment/ corrigendum etc. if any.

(Signature with date and seal of the company)
(Name and designation)

Duly authorised to sign tender for and on behalf of Bidder / Tenderer

**Note* : Firm/company shall use their own printed letter head for issuing this certificate
Acceptance shall be unconditional.**

Annexure-3**MANUFACTURER'S AUTHORISATION FORM**

(Bidders, quoting products other than his own manufactured products, shall submit this certificate in following format on the Letter Head of the firm)

To,

The Director, National Centre for Seismology

IMD Campus, Mausam Bhawan, Lodi Road, New Delhi-110003

Sub: Manufacturer Authorization for Tender No _____.

Sir,

We, **<OEM/ Manufacturer name>**having our registered office at**<OEM/ Manufacturer address>**, are an established and reputed manufacturer of

We confirm that **<Bidder Name>** having its registered office at **<Bidder Address>** is our authorized partner for We authorize them to quote for in the above-mentioned tender.

We hereby confirm that we shall provide all service and maintenance support to our authorized partner during the entire contract period. We also ensure to provide required spares and service support to the above authorized partner while offering onsite maintenance services.

Yours faithfully,

[Signature with date, name and designation]
for and on behalf of Messrs_____

[Name & address of the manufacturers along with Seal of the firm]

Note: This letter of authorisation should be on the letter head of the manufacturing firm and should be signed by a person competent and having legal binding to the manufacturer (original letter to be attached or to be shown at the time of opening of bids).

Annexure – 4

MODEL BANK GUARANTEE FORMAT FOR FURNISHING EMD**(format only)**

Whereas (hereinafter called the “tenderer”)has submitted their offer dated.....for supply of seismic equipments and its accessories for 35 stations.....(hereinafter called the “tender”) against the purchaser’s tender enquiry No.KNOW ALL MEN by these presents that WEof having our registered office at..... are bound unto(hereinafter called the “Purchaser”) in the sum of for which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this..... day of20.....

THE CONDITIONS OF THIS OBLIGATION ARE:

- (1) If the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.
- (2) If the tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity:-
 - a) If the tenderer fails to furnish the Performance Security for the due performance of the contract.
 - b) Fails or refuses to accept/execute the contract.

WE undertake to pay the “Director, National Centre for Seismology”, up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force upto and including 60 days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

Bank Guarantee issued with the tender enquiry reference No.NCS/..... Dated.....

.....

(Signature of the authorized officer of the Bank)

Name and designation of the office

Seal, name & address of the Bank and address of the Branch

Annexure-5

APPLICATION-CUM-BILL FOR REFUND OF EMD

FORMGAR 43D [See Rule 186(1)]

Director, (Kind Attn. to: DDO) National Centre for Seismology
IMD Campus, Mausam Bhawan, Lodi Road, New Delhi-110003

MONTH.....BILL NO.

Original Challan or Receipt No. & date	Bank/Office in which deposited	Name of depositor	Amount Originally deposited
1	2	3	4

Received this day of20..... the sum of
₹(₹) only being repayable
on Account of release of deposited described above.

Claimant's Signature.

(with revenue stamp affixed)

For use in Departmental Office

1. Received payment of ₹..... (₹.....) for
arranging disbursal to claimant.

2. Passed for Payment of ₹(₹) to claimant(s)
Shri/Smt./Ms..... against personal deposit account administered by me.

DDO(NCS)

For Director National Centre for Seismology
In case of endorsement of above

For use in Pay & Account office in case of endorsement of 1 above

Passed for payment of Rs.Payment by Cheque
No.

Pay & Account Office

Annexure-6

PRICE SCHEDULE (Financial Bid format)**A. Table: Quotes from OEM (as per Clause no.3)**

Sr. No.	Particulars	No. of Unit	Make	Model	UNIT PRICE			Total price
					Base price	Applicable taxes & duties	Total unit price	
A	B	C	D	E	F	G	H=F+G	I=HxC
1.	Broad Band Seismometer (BBS)	40						
2.	Strong Motion Accelerometer (SMA)	40						
3.	Six Channel Data Acquisition System (DAS)	40						
4.	Application Software for 35 set of digital seismographs	40						
5.	GPRS Modem	40						
6.	Portable Notebook	2						
7.	Spare as per 48.8	1 Lot						
8.	Training as per 48.12.4	1 Lot						
9.	Warranty as per 48.12.7.1	1 Lot						
A	Total							

B. Table: Indian component(as per Clause no.3)

Sr. No.	Particulars	No. of sites	Make	Model	UNIT PRICE			Total price (6x9)
					Base price	Applicable taxes & duties	Total unit price	
A	B	C	D	E	F	G	H=F+G	I=HxC
1	Construction of seismic pillar as per 48.10	35						
2	Minor civil work as per 48.11	35						
3	power system at field as per 48.3	40						
B	Total							

C. Table: CAMC Charges(as per Clause no.3)

SN	Particulars	Sites	Rate per annum	Total
A	B	C	D	E=DxC
1.	Per annum CAMC charges for Broadband Sensor including cables and other accessories	35		
2.	Per annum CAMC charges for SMA including cables and other accessories	35		
3.	Per annum CAMC charges for DAS including cables and other accessories	35		
4.	Per annum CAMC charges for GPRS modem	35		
5.	Per annum CAMC charges for Portable Notebook	2		
6.	Per annum CAMC charges for CRS and field application software as per 48.6 and 48.7	1		
7.	Per annum CAMC charges for power system at field as per 48.4	35		
8.	Per annum CAMC charges for communication facility as per 48.5	35		
9.	Any other charges to make available realtime all stations data at CRS 24x7 basis	35		
C	Total			

D. Table: Grand Total (to decide lowest bidder)

SN	Particulars	Total
1	Total from A above (quotes from OEM/imported goods)	
2	Total from B above (Indian Component)	
3	Total from C above (Post Warranty CAMC charges)	
4	Grand Total (TOTAL TENDER PRICE)	

Total Tender price: (In words)**Note:**

1. The names of each stores/items must be mentioned including services if any. The deliverables list attached with financial bid must be exactly same as per technical bids without mentioning prices.
2. Charges ,if any, for inland (within the India) Transportation /freight/insurance of stores shall be mentioned separately. In case not mentioned, it is treated as free of cost.
3. If there is a discrepancy between the unit price and the total price, then THE UNIT PRICE shall prevail.
4. All applicable taxes must be mentioned against each item. Rate of each applicable tax must be mentioned in price bid.
5. Price schedule for optional items should be attached separately and not to be mentioned in main price bid.

Place : _____ Date : _____ Signature of Bidder _____ Seal of the Bidder _____

Annexure-7

ROFORMA FOR PERFORMANCE STATEMENT

(For a period of last Ten years)

Order placed by (Full address of the purchaser)	Order No. and date	Description and quantity of ordered equipment	Value of order	Date of completion of delivery as per contract actual	Remarks including reason for late delivery, if any	Has the system /equipment been satisfactorily functioning?(attach a certificate from the purchaser / consignee)

Signature and seal of the bidder.....

.....

.....

Annexure-8

AUTHORISATION LETTER FOR ATTENDING TENDER OPENING

No.

Date:

To,
The Director,
National Centre for Seismology
Ministry of Earth Sciences
New Delhi-110003, India

Subject- Tender No. _____

Sir,
Mr. _____ has been authorized to be present at the time of opening of above tender due on _____ at _____, on my/our behalf.

Yours faithfully

Signature of Bidder

Copy to: Mr _____ for information and for production before the _____ (MM) _____ at the time of opening of bids.

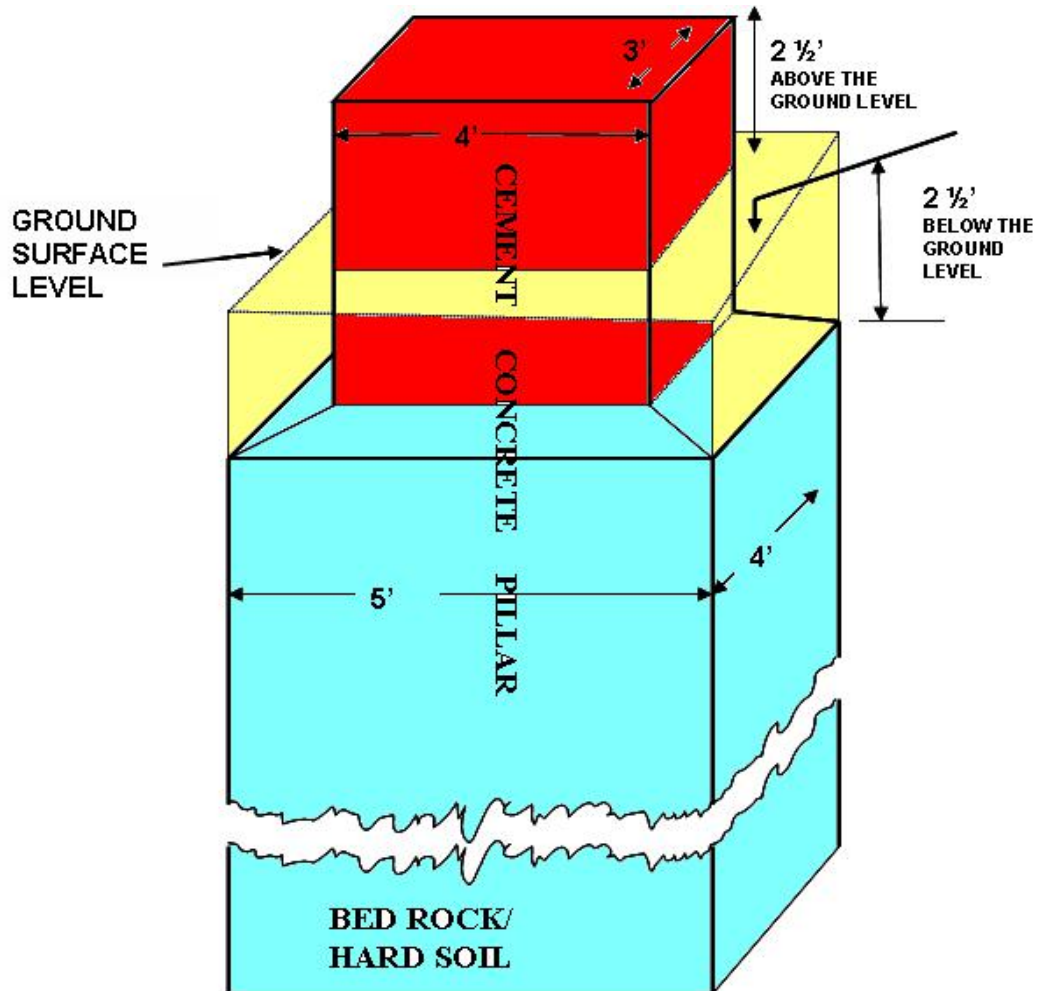
Annexure-9**Tentative List of Sites^**

SN	LONG	LAT	Name of the site
1.	76.6932	11.4064	Ooty
2.	77.5946	12.9716	Bengaluru
3.	72.7655	19.6936	Palghar
4.	73.1134	26.4711	Jodhpur
5.	79.6467	29.5892	Almohra
6.	80.2373	30.0715	Munshiyari
7.	79.4322	29.6434	Ranikhet
8.	76.1258	32.5534	Chamba
9.	77.0595	10.0889	Munnar
10.	76.3388	9.4981	Allepy
11.	76.6394	12.2958	Mysore
12.	75.7873	26.9124	Jaipur
13.	74.8723	31.634	Amritsar
14.	75.7754	13.3153	Chikmagalur
15.	75.8069	12.3375	Coorg
16.	74.3188	14.5479	Gokaran
17.	79.4192	13.6288	Tirupati
18.	81.804	17.0005	Rajahmundry
19.	77.772	20.920	Amravati (Maharashtra)
20.	73.7898	19.9975	Nashik
21.	72.5714	23.0225	Ahmedabad
22.	79.9864	23.1815	Jabalpur
23.	75.9064	17.6599	Solapur
24.	77.321	19.1383	Nanded

25.	77.6017	14.6824	Anantapur
26.	75.124	15.3647	Hubli
27.	78.0373	15.8281	Kurnool
28.	82.008	19.0741	Jagdalpur
29.	75.8577	22.7196	Indore
30.	75.3433	19.8762	Aurangabad
31.	94.8455	28.977	Tuting
32.	96.52569	28.08265	Hayuliang
33.	78.1828	26.2183	Gwalior
34.	74.9707	28.2925	Churu
35.	71.4181	25.7532	Barmer
36.	75.6208	15.4026	Gadag
37.	72.8311	21.1702	Surat
38.	70.3629	20.9159	Verraval
39.	81.6296	21.2514	Raipur
40.	BGRL, Karad		

Note: ^This list is tentative and may vary slightly. There will be 35 sites from this list and 5 sets of equipment are required to be delivered at BGRL, Karad.

Annexure-10



Annexure-11**ANNUAL TURN OVER STATEMENT****(On Bidders Letter-head)****[Ref. Clause No. 2(b) in general terms and conditions]**

The average Gross Annual Turnover of M/s

_____ address

_____ for the past three financial years are given below and certified that the statement is true and correct.

	S. no.	Financial years
Turnover in Crores (Rs)		
1.	2016-17	
2.	2017-18	
3.	2018-19	

Total Indian Rupees _____ (In Crores)

Average gross annual turnover (Crores) Rs. _____

Note:

Turn over for the year 2018-19 may also be considered, if the accounts are audited and certified by Chartered Accountant. Turn over issued over by the Central Excise Department shall also be considered.

Date:
Auditor/Seal

Signature of the Bidder

Signature of

Name and address:

Tel. No.

Mob. No.

Annexure-12**List of Deliverable**

SN	Item	Quantity
1	Broadband Seismometer with cables and accessories	40
2	Strong Motion Accelerometer with cables and accessories	40
3	Data Acquisition system (DAS) with cables and accessories	40
4	GPRS Modem	40
5	Power system (Solar panels, Batteries, battery chargers, etc) as per 48.4	40
6	Portable Notebook as per 48.9	2
7	Data acquisition, SOH monitoring, Application software as per 48.6 and 48.7	2
8	Spares as per 48.8	One lot
9	Training as per 48.12.4	as per tender
10	Civil works as per 48.10 and 48.11	as per tender
11	Warranty and CAMC as per 48.12.7	as per tender

Annexure-13**PRE CONTRACT INTEGRITY PACT****1. General**

This pre-bid pre-contract Agreement (hereinafter called the Integrity Pact) is made on day of the Month of**2019**, between, on one hand, the President of India acting through Shri _____, National Center for Seismology(NCS), Ministry of Earth Sciences(MoES), Government of India (hereinafter called the "BUYER", which expression shall mean and include, unless the context otherwise requires, his successors in office and assigns) of the First Part and represented by (hereinafter called the "BIDDER/Seller" which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second Part.

WHEREAS the BUYER proposes to procure ***Seismic Equipment and its Accessories & Services for 40 New Stations*** (Name of the Stores/Equipment/Item) and the BIDDER/Seller is willing to offer/has offered the stores and

WHEREAS the BIDDER is a private company/public company / Government undertaking / partnership / registered export agency, constituted in accordance with the relevant law in the matter and the BUYER is a Ministry / Department of the Government of India / PSU performing its functions on behalf of the President of India.

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:

Enabling the BUYER to obtain the desired said stores/equipment at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling BIDDERS to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the BUYER will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

2. Commitment of the BUYER

2.1 The BUYER undertakes that no official of the BUYER, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organisation or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.

- 2.2 The BUYER will, during the pre-contract stage, treat all BIDDERS alike, and will provide to all BIDDERS the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERS.
- 2.3 All the officials of the BUYER will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.
- 2.4 In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the BUYER with full and verifiable facts and the same is prima facie found to be correct by the BUYER, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the BUYER and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the BUYER the proceedings under the contract would not be stalled.
- 3. Commitment of BIDDER :** The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:
- 3.1 The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER, connected directly or indirectly with the bidding process, or to any person, organisation or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.
- 3.2 The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the contract or any other contract with the Government
- 3.3 BIDDERS shall disclose the name and address of agents and representatives and Indian BIDDERS shall disclose their foreign principals or associates.
- 3.4 BIDDERS shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid/contract.
- 3.5 The BIDDER further confirms and declares to the BUYER that the BIDDER is the original manufacturer/integrator/authorised government sponsored export entity of the defence stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the BUYER or any of its functionaries, whether officially or

unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

- 3.6 The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the BUYER or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.
- 3.7 The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
- 3.8 The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
- 3.9 The BIDDER shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the BUYER as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.
- 3.10 The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
- 3.11 The BIDDER shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.
- 3.12 If the BIDDER or any employee of the BIDDER or any person acting on behalf of the BIDDER, either directly or indirectly, is a relative of any of the officers of the BUYER, or alternatively, if any relative of an officer of the BUYER has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filing of tender.

The term 'relative' for this purpose would be as defined in Section 6 of the Companies Act 1956.

- 3.13 The BIDDER shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the BUYER.

4. Previous Transgression

- 4.1 The BIDDER declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged here under or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the tender process.

- 4.2 The BIDDER agrees that if it makes incorrect statement on this subject, BIDDER can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

5. Earnest Money (Security Deposit)

- 5.1 While submitting commercial bid, the BIDDER shall deposit an amount of ₹ 30,00,000/- as Earnest Money/Security Deposit, with the BUYER through a Bank Draft or a Pay Order in favour of DDO, NCS, New Delhi.
- 5.2 The Earnest Money/Security Deposit shall be valid upto a period of five years or the complete conclusion of the contractual obligations to the complete satisfaction of both the BIDDER and the BUYER, including warranty period, whichever is later.
- 5.3 In case of the successful BIDDER a clause would also be incorporated in the Article pertaining to Performance Bond in the Purchase Contract that the provisions of Sanctions for Violation shall be applicable for forfeiture of Performance Bond in case of a decision by the BUYER to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.
- 5.4 No interest shall be payable by the BUYER to the BIDDER on Earnest Money/Security Deposit for the period of its currency.

6. Sanctions for Violations

- 6.1 Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the BUYER to take all or any one of the following actions, wherever required:
- (i) To immediately call off the pre contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.
 - (ii) The Earnest Money Deposit (in pre-contract stage) and/or Security Deposit / Performance Bond (after the contract is signed) shall stand forfeited either fully or partially, as decided by the BUYER and the BUYER shall not be required to assign any reason therefore.
 - (iii) To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.
 - (iv) To recover all sums already paid by the BUYER, and in case of an Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the BIDDER from the BUYER in connection with any other contract for any other stores, such outstanding payment could also be utilised to recover the aforesaid sum and interest.

- (v) To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the BUYER, along with interest.
- (vi) To cancel all or any other Contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the BUYER resulting from such cancellation/rescission and the BUYER shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.
- (vii) To debar the BIDDER from participating in future bidding processes of the Government of India for a minimum period of five years, which may be further extended at the discretion of the BUYER.
- (viii) To recover all sums paid in violation of this Pact by BIDDER(s) to any middleman or agent or broker with a view to securing the contract.
- (ix) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the BUYER with the BIDDER, the same shall not be opened.
- (x) Forfeiture of Performance Bond in case of a decision by the BUYER to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

6.2 The BUYER will be entitled to take all or any of the actions mentioned at para 6.1(i) to (x) of this Pact also on the Commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

6.3 The decision of the BUYER to the effect that a breach of the provisions of this Pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Independent Monitor(s) appointed for the purposes of this Pact.

7. Fall Clause: The BIDDER undertakes that it has not supplied/is not supplying similar product/systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the Government of India or PSU and if it is found at any stage that similar product/systems or sub systems was supplied by the BIDDER to any other Ministry/Department of the Government of India or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the BIDDER to the BUYER, if the contract has already been concluded.

8. Independent Monitors

8.1 MoES has approved the following officers as Independent External Monitors (IEM) vide order No. MoES/20/06/2016-(VIG.) dated 06/12/2016.

- (i) Shri Arun Kumar, Ex Secretary, Oil Industry Development Board (OIDB);
Address: B-38, Virandavan Apartment, Plot No -1, Sector-6, Dwarka New
Delhi-110075

Email: kumararun_53@rediffmail.com

Mobile: 9810621113

- (ii) Shri Sushil Gupta, Ex-Chairman, Central Ground Water Board (CGWB) & Central Ground Water Authority (CGWA),
Address: B-702, Arravali Heights, Sector 21 C, Faridabad, Haryana-121001
Email: sushilanitagupta@yahoo.com
Mobile: 9999744061

8.2 The BUYER has appointed Independent Monitors (hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance Commission (Names and Addresses of the Monitors to be given).

8.3 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

8.4 The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

8.5 Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings.

8.6 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the BUYER.

8.7 The BIDDER(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the BUYER including that provided by the BIDDER. The BIDDER will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor shall be under contractual obligation to treat the information and documents of the BIDDER/Subcontractor(s) with confidentiality.

8.8 The BUYER will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings.

8.9 The Monitor will submit a written report to the designated Authority of BUYER/Secretary in the Department / within 8 to 10 weeks from the date of reference or intimation to him by the BUYER / BIDDER and, should the occasion arise, submit proposals for correcting problematic situations.

9. Facilitation of Investigation: In case of any allegation of violation of any provisions of this Pact or payment of commission, the BUYER or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

10. Law and Place of Jurisdiction: This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the BUYER.

11. Other Legal Actions: The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

12. Validity

12.1 The validity of this Integrity Pact shall be from date of its signing and extend upto 5 years or the complete execution of the contract to the satisfaction of both the BUYER and the BIDDER/Seller, including warranty period, whichever is later. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.

12.2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

The parties hereby sign this Integrity Pact at _____ on _____

BUYER

BIDDER

Name of the Officer :

Designation :

Deptt./Ministry/PSU:

Witness:

Witness:

1. _____

1. _____

2. _____

2. _____

Annexure-14**Format Technical Compliance Statement**

Note: Bidder should write make and model of each hardware /firmware/software offered in appropriate place. Write Not Applicable (N/A) wherever not required.

47. Scope of the tender:

NCS's Requirements		Specifications Offered by the Bidder	Complied/N on-Complied	Deviation if any with remarks
I.	Setting up 35 field stations in various parts of India, with broadband and strong motion sensors, Data Acquisition System (DAS) etc.List of tentative location of station is at Annexure-9 . these location may vary at the time of final installation			
II.	Power supplies with full solar power backup to all the 35 field equipments to be provided			
III.	Provision for VSAT and GPRS Communication at field stations in such a way that in the event of failure of one means(VSAT/GPRS) other (GPRS/VSAT) start. Appropriate cables/modules for such provisions to be supplied			
IV.	Construction of seismic pier of appropriate dimensions, at all new stations (as mentioned in Annexure 10), to install the seismic sensor			
V.	Proper electrical grounding and lightning protection for all field equipment and minor works for installation of seismic equipment			
VI.	2 years warranty and 3 years comprehensive maintenance contract after installation and commissioning.			
VII.	The bidder shall take all necessary actions related to the supply, transportation of equipments to the sites, installation, configuration and integration of the complete H/w and S/w modules to meet the requirements as per RFP on turn-key basis			

48. Technical Specifications:**48.1 Broadband Seismometer:**

Specification Required			Specifications Offered by the Bidder	Complied/ Non-Complied	Deviation if any with remarks
48.1.1	Type	Triaxial electronic force balance broadband velocity transducer in a single sealed module with output for one vertical and two horizontal components orthogonal to each other.			
48.1.2	Frequency Response	Flat (within ± 3 dB) to ground velocity, at least in the range of 120 sec to 50 Hz.			
48.1.3	Dynamic range	Minimum 130 dB			
48.1.4	Output voltage	± 20 V			
48.1.5	Damping	0.7 critical			
48.1.6	Sensitivity	1000 - 2000 V/m/s			
48.1.7	Linearity	+/- 1% of full scale.			
48.1.8	Mass centering	Automatic or on external command locally or from remote			
48.1.9	Calibration Facility	Calibration facility from Data Acquisition System (DAS)			
48.1.10	Frequency response curve and system information	Frequency response curve of the unit along with information regarding transfer function including poles and zeros should be provided as per serial number of each sensor.			
48.1.11	Electronic self noise	Must be below the USGS Low Noise Model over 80 sec to 10Hz range			
48.1.12	Indicator	c) Should have an indicator for leveling the transducer. d) Should have an indicator mark on its body to indicate the direction of relative orientation of the seismometer			
48.1.13	Operating Temperature	-10° to 50°C			
48.1.14	Humidity tolerance	0 to 100 % RH			
48.1.15	Power Requirement	Less than 2.0 watts , derived from the DAS			
48.1.16	Housing	All the components should be permanently mounted in single stainless steel or cast aluminum casing, water tight, vacuum tight			

		enclosure.			
48.1.17	Mass Locking	Mass Locking facility during transportation			
48.1.18	Connectors	Water proof and rust proof			
48.1.19	Cable	Low-loss shielded cable of at least 10 meters with end connectors.			
48.1.20	Thermal insulation cover	Thermal insulation cover should not touch the outer wall of the sensor and must be supplied by OEM			
48.1.21	Supporting Document	c) The Bidder should provide detailed technical documentation in support of specifications offered. d) The bidder should provide all details of poles and zero as per serial number.			
48.1.22	Spare part	Spare connector			
48.1.23	Test Report	Submit the test report of the offered model of Broadband seismometer from internationally recognized organizations like USGS, IRIS			

48.2 Strong Motion Accelerometer:

Specification Required			Specifications Offered by the Bidder	Complied/Non-Complied	Deviation if any with remarks
48.2.1	Type	Tri-axial, Force balance transducer			
48.2.2	Frequency response	Flat response (within +/- 3dB) to ground acceleration, at least in the range of DC to 150 Hz.			
48.2.3	Dynamic range	≥120 dB			
48.2.4	Full Scale output voltage	±20V			
48.2.5	Full Scale Range	±2g			
48.2.6	Damping	0.7 of critical.			
48.2.7	Clip level	Greater than full scale range.			
48.2.8	Linearity	Less than 1% of full scale.			
48.2.9	Cross-axis sensitivity	Less than 1% of full scale			
48.2.10	Mass centering	Automatic			
48.2.11	Calibration facility	Calibration procedure from the Data Acquisition System to check the working			

		performance of the sensor, free period, damping etc. locally and from CRPS should be provided.			
48.2.12	Frequency response curve and system information	Frequency response curve of the unit along with information regarding transfer function including poles and zeros should be provided.			
48.2.13	Noise Response	Noise response should be less than 0.001% of full scale for entire frequency band.			
48.2.14	Indicators	c) Should have an indicator for leveling the transducer. d) Should have an indicator mark on its body to indicate the direction of relative orientation of the sensor.			
48.2.15	Humidity and operating temperature range	0 to 100 % RH and -10° to 50°C.			
48.2.16	Power requirement	< 1.5 watt at 12V DC.			
48.2.17	Housing	The tri-axial sensors should be mounted in a single water-proof and vacuum-tight enclosure.			
48.2.18	Mass locking and safety mechanism	Must contain a robust locking and safety mechanism during transportation.			
48.2.19	Connectors	c) All connectors should be water-proof and rust-proof. d) All nuts and bolts should be provided for installation/anchoring the sensor on the seismic pier			
48.2.20	Cable	Low-loss shielded cable of at least 10 meters with end connectors.			
48.2.21	Supporting Document	The Bidder should provide detailed technical documentation in support of specifications offered.			

48.3 Data Acquisition System(DAS):

Specification Required	Specifications Offered by the	Complied/ Non-Complied	Deviation if any with remarks
------------------------	-------------------------------	------------------------	-------------------------------

			Bidder		
48.3.1	Number of Channels	Six channel (3 for weak motion sensors and 3 for strong motion sensor)			
48.3.2	Dynamic range	135dB or more measured at 100 sps			
48.3.3	ADC resolution	24 bit or more independent digitizer for each channel			
48.3.4	Input Range	Should match the sensor outputs			
48.3.5	Common Mode Rejection	Greater than 70 dB			
48.3.6	Channel to channel skew	c) Zero- Simultaneous sampling of all channels. d) Immune to electro magnetic interference.			
48.3.7	System noise	Not more than 2-3 counts			
48.3.8	Sampling rate	c) User- selectable 1,10,20,50,100 and 200 sps per channel in different streams both in continuous and trigger modes simultaneously as per user requirements. d) Provision to select different sampling rates for weak motion and strong motion channels.			
48.3.9	Filter	Linear phase digital FIR filter.			
48.3.10	Internal Storage	At least 8 GB or more			
48.3.11	External Storage	USB/SD/CF card of 32 GB or more			
48.3.12	Recording Format	Standard seismological format compatible to Windows/UNIX with proven compression technique. It should be easily convertible to SEED format.			
48.3.13	GPS Timing System	h) UTC timed with digitally controlled precision VCXO clock phase locked to GPS i) Timing accuracy less than 0.1mSec when GPS is locked j) Free running TCXO accuracy of 1 ppm over wide temperature range. k) GPS receiver electronic circuit should be inside the DAS with Antenna exposed outside. l) Antenna cable length should be 15 mts or more. m) Antenna should be enclosed in water tight and can work effectively in			

		<p>extreme climatic condition.</p> <p>n) Antenna mounting rod and its accessories</p>			
48.3.14	Sensor control	<p>d) Sensor calibration facility for both BB seismometer and SMA</p> <p>e) Sensor mass position monitoring for BB seismometer.</p> <p>f) Sensor mass centering on command for BB seismometer.</p>			
48.3.15	State of Health of each Channel	Provision for checking state of health information like sensor mass position, temperature voltage, condition of GPS time lock etc. locally and remotely.			
48.3.16	Status display	Status display indicators for power, data acquisition, SOH, GPS etc. should be provided.			
48.3.17	Gain	Hardware gain selection through software for 0.5, 1, 2 and 4			
48.3.18	Data acquisition Mode	Both continuous and trigger mode			
48.3.19	Trigger	User selectable, independently for each channel at different sampling rate based on triggering criteria as STA/LTA level etc.			
48.3.20	Communication	<p>c) In built communication interface circuitry for provision of remote data acquisition and State-of-Health in near real time mode through V-SAT.</p> <p>d) Suitable interface for computer/ laptop for parameter setting and data downloading.</p>			
48.3.21	Transmission setting	<p>Should have facility to select transmission of data to remote location in the following options:</p> <p>c) continuous mode transmission for BB data</p> <p>d) continuous or trigger mode transmission of SMA data as per user configuration</p>			
48.3.22	VSAT connectivity	<p>h) Ethernet port (10/100 Base-T) supporting TCP/IP and UDP/IP</p> <p>i) Compression of data before transferring to VSAT.</p> <p>j) Continuous and trigger both. (6 channels)</p>			

		<ul style="list-style-type: none"> k) Duplex communication between field and both hubs l) Extensive error correction m) Support for off-the-shelf communication equipment n) Appropriate cable to connect the DAS with the VSAT (RJ-46 port) 			
48.3.23	Power Supply	<ul style="list-style-type: none"> e) Supply voltage 10-15Volts through solar panel activated maintenance free batteries. f) Power consumption of DAS less than 6W at 12V DC recording 6 channels at 100 SPS. g) Low battery voltage protection and h) DAS shall resume data acquisition and transmission automatically when the power is restored. 			
48.3.24	DC- DC Connector	<p>A DC-DC convertor between DAS and Battery must be provided to safeguard from</p> <ul style="list-style-type: none"> a) Spurious voltage b) Low Voltage c) Over voltage charging of batteries, etc. 			
48.3.25	Operating temperature and humidity range	<ul style="list-style-type: none"> a) Operating Temperature -50 deg to 50 deg C b) Humidity Upto 100% RH 			
48.3.26	Environment	All the indoor units should work in typical tropical environment conditions and should work without air conditioning.			
48.3.27	Housing	GPS and DAS modules should be enclosed in a weather- and shock-proof sealed enclosures.			

48.4 Power Supply: DC Power supply for sensors, DAS, GPS, etc. for each site

Specification Required		Specifications Offered by the Bidder	Complied/Non-Complied	Deviation if any with remarks
a	All these equipments will be powered through Branded Sealed Maintenance Free (SMF) batteries charged through solar panel as well as through AC power supply.			

b	Bidder should provide power calculation at each field station and provide appropriate number of batteries and solar panels required to operate seismic equipments for at least three days (72 hours) under bad weather conditions(no direct sunshine).			
c	Batteries to be mounted on movable strong rack.			
d	A suitable battery charger from AC mains (230VAC 50Hz) is also to be supplied.			
e	All outside exposed cables between solar panels and solar charge controlled should pass through good ducting pipe.			

48.5 Communication Facility:

Specification Required		Specifications Offered by the Bidder	Complied/Non-Complied	Deviation if any with remarks
a	Bidder has to provide the facility of transmitting data from field stations to CRPS through GPRS Modem as well as through VSAT. VSAT service provider shall be selected through bidding process by the purchase separately.			
b	Bidder has to make provisions of communication facility in hotstand by mode between GPRS and VSAT			

48.6 Software Requirement: Firmware /software in DAS should support

Specification Required		Specifications Offered by the Bidder	Complied/Non-Complied	Deviation if any with remarks
a	Real time ground motion data acquisition (weak motion and acceleration data) in DAS including GPS data and State of Health monitoring,			

b	Transmission of recorded data to central station in near real time using VSAT communication facilities in continuous or trigger mode or both as per user selected criteria.			
c	Restoration of automatic data acquisition in DAS on assumption of power in case of power failure.			
d	Capability to serve the request from CRPS for re-transmission of data in case of real time data transmission break/failure.			
e	Provision to supply off-line waveform data transfer of any segment from the ring buffer on manual request from CRPS.			
f	In case of communication failure, automatic request/transfer for the pending data from the point at which it was executing just before the failure.			

48.7 Central Receiving and Processing System(CRPS): The required computer Hardware towards continuous data acquisition will be provided by the Purchaser. In this connection, the Bidder should provide the details of computer hardware and OS required in their bid document.

Specification Required		Specifications Offered by the Bidder	Complied/Non-Complied	Deviation if any with remarks
a	Application software utilities for parameter setting, On-site control panel, sensor calibration, data retrieval as per user criteria from CRS, processing and analysis of the weak and strong motion data.			
b	The Data acquisition software to fetch continuous data from all field sites to central site.			
c	In the event of communication link failure, all the past data from field site should be retrieved automatically at CRS, once the communication link is restored.			
d	Display of incoming continuous data from all field stations with Station code assigned by the user			
e	Software to configure station parameters in the DAS from remote site and also from Central Receiving Station through VSAT or GPRS modem.			
f	Bidder should provide GUI based Application software to monitor the GPS lock status, co-ordinates of field station, battery voltage, broadband sensor mass position, and other State of Health parameters of each field station.			

g	To find out the details of data gaps in the ring buffer / archive memory in respect of each station in the Acquisition computer of CRS.			
h	Offline analysis software from strong motion data to compute PGA, PGV, PGD, response spectra, Intensity, duration of ground shaking, etc.			
i	Old recorded data plotting and display software from the ring buffer memory or Archive at CRS.			

48.8 Spare and Accessions:

Specification Required		Specifications Offered by the Bidder	Complied/Non-Complied	Deviation if any with remarks
a	Broadband Sensor and Accelerometer sensor with cables (specified in Clause 45.1 and 45.2) (5 nos. each)			
b	GPS antenna with cable of length 15m for DAS (5no.s)			
c	6 channel DAS (specified in Clause 45.3) (including GPS antenna and cable, solar panels and battery charger, GPRS modem and its connecting cable, excluding batteries) (5 nos.)			
d	Sensor cables for Seismometer and Accelerometer (sensor to DAS) (10m length each) – 5nos.			
e	Power cables from DAS to Battery (10 nos.)			
f	Data cables (LAN port of DAS to GPRS Modem) (10 nos.)			
g	Memory card (same capacity as supplied in DAS)– 50 nos			
h	Internal battery installed with DAS (if any) – 10 nos.			
i	Memory card reader- 2 nos.			

48.9 Portable Notebook:

Specification Required		Specifications Offered by the Bidder	Complied/Non-Complied	Deviation if any with remarks
48.9.1	Processor: 2.9GHz 6-core Intel Core i7 or better			

48.9.2	HDD: 1TB SSD or more			
48.9.3	RAM: 16 GB or more			
48.9.4	Not less than 13 inches, Super amoled High resolution monitor (1900 X 1200) ; Input through Touch screen			
48.9.5	a) Appropriate latest OS compatible to run all application software's. b) OS license with media. c) Anti-virus package			
48.9.6	1 nos of 10/100/1000Mbps Ethernet port			
48.9.7	Suitable slot or external reader for read and write of storage disk of DAS			
48.9.8	Suitable interface for connecting to the field sites through GPRS communication. All necessary cables, connectors and devices should be provided to meet the requirements for reception of the continuous waveform data from field sites.			
48.9.9	Charger unit for the Notebook Computer – compatible with Indian AC socket Line voltage 220V AC, 50 Hz			
48.9.10	At least 5-8hrs internal battery backup in case of power failure			
48.9.11	Good quality carrying case/Bag			

48.10 Seismic Pillar Constructions:

The Bidder is to **arrange for construction of seismic pier**, as per standard criteria indicated below, to house the seismic sensors at the selected unmanned field stations.

Specification Required		Complied/Non-Complied	Deviation if any with remarks
a	The pier should have a platform of dimension 4'x3' with a height of 2.5' above ground and extending to a depth upto bed rock or hard soil level (or a maximum depth of 6' from the ground surface). The pier should have proper moat of 6" all around the pier right from base of the pier to the ground surface filled with dry loose sand. The design construction diagram of the seismic-pier shall be provide		
b	The material used for construction of pier should be homogeneous mixture of cement, sand and stone chips (of size 3/8"-1") in the ratio of 1:2:4		
c	The seismic pier shall be constructed under the supervision of a designated officer of NCS.		
d	Alternatively, the vendor may propose suitable design for the		

	installation of seismic sensor and other accessories		
e	There should be scope to make slight changes in the location and number of field stations at the time of placing the order to finally selected bidder.		

48.11 Civil Works:

Specification Required		Complied/Non-Complied	Deviation if any with remarks
a	The Bidder is solely responsible for minor civil, electrical and other works required for site preparation at all 35 field stations such as laying of cables in conduit pipes including cables from solar panels, GPS, LAN connection etc.		
b	Chemical-earthing for seismic equipments at all the 35 field stations are to be provided. Iron-caging for solar panels and GPS antenna for all the 35 sites.		
c	The Purchaser will identify the sites well in advance, before the scheduled installation date and allow the Bidder to perform a site inspection to verify the appropriateness of the sites before the Bidder begins Site Preparation Work and the installation of the hardware		

48.12 General Terms and Conditions

48.12.1 Installation

Specification Required		Complied/Non-Complied	Deviation if any with remarks
a	The work requires supply of seismic equipment and other items as per specification, their installation at field stations and CRPS to achieve functionalities as per technical requirements mentioned in various sections of RFP. Bidder is required to supply, install, configure and integrate the complete H/w and S/w modules on turn-key basis .		
b	After custom clearance of goods by NCS, these stores shall be handed over to the supplier or their authorized transporter for further dispatch to respective sites. The safe delivery of the instruments to the respective field stations and at central site (CRPS) will be the responsibility of the supplier		

c	The bidder should submit tentative delivery and installation schedule for all the stations.		
d	Bidder must submit a detailed plan of Project Management and the composition of their Project Management Team.		
e	Design Review: The successful bidder shall submit 3 copies of a detailed design review document within two weeks of award of contract for approval by NCS. This document will contain full details of system design both from hardware and software points of view, so as to meet the requirements laid down in the bid document. Preliminary Design Review (PDR) followed by Critical Design Review (CDR) meetings shall be organized during implementation of the project in the form of meetings between NCS officials and the successful bidder to discuss and finalize the design and the requirements to achieve the objectives of the project.		
f	The Bidder will be responsible for all unpacking , assembling, wiring, installations, cabling between equipment hardware units and connecting to power supplies, etc.		
g	The Bidder will provide all cables and connectors required for the installation and integration of Sensors, DASs, etc., which may be spread in different rooms of the field observatories. All the power connectors should plug into the Indian-type electric sockets.		

48.12.2 Devlry Schedule:

	Specification Required	Complied/Non-Complied	Deviation if any with remarks
a	All the stores (field equipment for 35 field stations and equipments of CRPS; if any) should be installed at respective field stations and CRPS in 18 (eighteen) weeks from the date of payment through LC excluding the period taken by the purchaser for custom clearance.		
b	Construction seismic piers to house the seismic sensor at the required field stations to be completed before installation of stores.		
c	The Bidder will test all hardware & software operations and carry-out all adjustments necessary for successful and continuous operation of the equipment at all installation sites and fulfill the project goal.		

d	The Bidder should be ready to accommodate changes in application software and its customization, hardware, etc., in order to fulfill such requirements that may arise during the intervening period between preparation of this document and commissioning of the system within the scope of the project.		
e	The system design should be modular and upgradable to meet the future requirements.		
f	Flow of data within the CRPS should be through local LAN only.		
g	The supplier should provide Lifetime License of the all application software.		
h	The supplier should also provide at no extra cost for a period of 10 years, all the latest version of upgraded firmware of DAS, application software, data retrieval software, communication software etc., which are being upgraded from time to time along with the relevant installation steps.		
i	Deliverable as per Annexure-12.		

48.12.3 Training:

	Specification Required	Complied/Non-Complied	Deviation if any with remarks
a	Bidder should provide operational and maintenance training of seismic equipments for 10 working days to 4 NCS officials at OEM's Site.		
b	Bidder should also provide training for a period of 10 working days for 10 NCS officials in Delhi, India. During the training period installation of all application and operating software should be demonstrated. Visit to one field station is required to be organized. The travel charges of NCS Officials will be borne by the NCS.		
c	A detailed training plan about the topics to be covered in the training, shall be submitted by the Bidder, sufficiently in advance before commencement of training programme, for NCS's approval.		

48.12.4 Site Acceptance Test:

	Specification Required	Complied/Non-Complied	Deviation if any with remarks
a	The supplier shall submit detailed Site Acceptance Test (SAT) plans for system acceptance. The supplier should submit the test plan well in advance for each phase separately. The test plan shall		

	require concurrence by the Purchaser.		
b	The purpose of the site acceptance test is to verify the performance of the system as per the specifications and functional requirements. This will include both the H/w and S/w tests. The acceptance tests will comprise of overseeing and evaluating the satisfactory and fail proof performance to ensure trouble-free operations for seven consecutive days of all the equipment simultaneously and collectively, namely the Broadband Seismometers, Strong Motion Sensors, Digital Seismic Data Acquisition Systems, Network operations (both H/w and S/w), Seismic Data Analysis and Information dissemination systems, Computer hardware and software at CRPS, Solar Panel etc., in conformity with the Technical Specifications and RFP.		
c	As per the mutually agreed test procedures, site acceptance test should be carried out at site after installation (at each site or at designated field station and the CRPS). The supplier shall arrange for necessary test equipment .		
d	In the event of equipment failing to pass the site acceptance test , a period not exceeding four weeks will be given to rectify the defects and clear the acceptance test, failing which the Purchaser reserves the right to get the equipment replaced by the Bidder at no extra cost to the Purchaser or to cancel the order and recall all the payments with applicable interest rate from the date of the respective payments.		

48.12.5 Warranty:

	Specification Required	Complied/Non-Complied	Deviation if any with remarks
a	The Bidder warrants that the Goods supplied under the Contract are new , unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract.		
b	The Bidder further warrants that all Goods supplied under this Contract should have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the Purchaser's specifications) or from any act or omission of the Bidder, that may develop under normal use of the supplied		

	Goods in the conditions prevailing in the country of final destination.		
c	The bidder should offer comprehensive on site free warranty for a period of two years from date of acceptance of the Goods . Any rates quoted for warranty will be considered for deciding lowest bidder.		
d	During the period of warranty, in the event of the equipment developing snags or malfunctioning or if it stops functioning altogether, the Purchaser will promptly inform the Bidder, and the Bidder's maintenance engineers should attend to the complaint immediately and operationalize the equipment in the least possible time. During the period of warranty , the upkeep time for the whole Network should be: <ul style="list-style-type: none"> i. no down time for CRPS, ii. not more than 10% of the field stations should be down at any time, and iii. no individual field station on main land should be down for more than 48 hours while the down time for field stations in the Himalayas should not be more than 96 hours from the time the complaint is logged 		
e	The time period for which the equipment was down and not operational, beyond least possible time mentioned above, will be deemed to be the downtime and would be taken into consideration for extending the warranty period by twice the downtime for that system.		
f	The Bidder should supply, free of cost , during the period of Warranty, updates of all software supplied at the time of initial installation and commissioning.		
g	The warranty is to be provided at the site. The bidder shall be responsible for arranging dispatch of any defective unit from the site to their factory site for any repair work/replacement, at their own cost. All the cost towards re-export/re-import of defective unit including custom duties, transportation charges etc. shall be borne by the supplier.		

48.12.6 CAMC:

	Specification Required	Complied/Non-Complied	Deviation if any with remarks
a	Followed by two years warranty, the bidder should offer on site Comprehensive Maintenance Contract (CMC) for a period of three years . Rates quoted for CMC will be considered for deciding lowest bidder.		
b	During the period of CMC, in the event of the equipment developing snags or malfunctioning or if it stops functioning altogether, the Purchaser will promptly inform the Bidder, and the Bidder's maintenance engineers should attend to the		

	complaint immediately and operationalize the equipment in the least possible time. During the period of CMC, the upkeep time for the whole Network shall be same as mentioned during the warranty period.		
c	Response time to make the system operational is of 96 Hours from the time of report of problem / non- operational of system .		
d	In case Bidder fail to make system operational within response time penalty of an amount equal to 0.1% of CAMC charges per day basis shall be imposed.		
e	The Bidder should supply, free of cost , during the CMC, updates of all software supplied at the time of initial installation and commissioning.		
f	The CMC is to be provided at the site. The bidder shall be responsible for arranging dispatch of any defective unit from the site to their factory site for any repair work/replacement, at their own cost. All the cost towards re-export/re-import of defective unit including custom duties, transportation charges etc. shall be borne by the supplier.		
g	Bidder shall quote (Annexure-6) the cost of Comprehensive Annual Maintenance Contract (CAMC) giving detailed breakup of each system and subsystems. The bid has to include the break up charges for routine / preventive maintenance, lot, sub lot and other equipments. The firm shall also mention rates for the service tax or any other applicable taxes separately.		
h	The bidder shall adhere to the payment terms & conditions and other requirements of maintenance contract mentioned in the tender document elsewhere .		

48.12.7 Documentation:

	Specification Required	Complied/Non-Complied	Deviation if any with remarks
a	Supplier will deliver all documentation in English language in three sets both in hard (bound volume) and soft copies at the time of delivery of equipments. It should include system integration; Operation, maintenance, and trouble-shooting procedures; application software, software logic diagrams, for each field station and at Central Receiving and Processing System (CRPS).		

48.12.8 Bidder's Obligation:

	Specification Required	Complied/Non-Complied	Deviation if any with remarks
a	The Bidder is responsible for customization of software requirements and conduct all contracted activities in accordance		

	with the Contract using state-of-the-art methods and economic principles and exercising all means available to achieve the Performance specified in the Contract.		
b	The Bidder is obliged to work closely with the Purchaser's staff, act within its own authority and abide by directives issued by the Purchaser for the implementation of various activities.		
c	The Bidder will abide by the job safety measures prevalent in India and will free the Purchaser from all demands or responsibilities arising from accidents or loss of life, the cause of which is the Bidder's negligence. The Bidder will pay all indemnities arising from such incidents and will not hold the Purchaser responsible or obligated.		
d	The Bidder is responsible for managing the activities of its personnel or sub-contracted personnel and will hold himself responsible for any misdemeanours.		
e	The Bidder will treat as confidential all data and information about the Purchaser, obtained in the execution of his responsibilities, in strict confidence and will not reveal such information to any other party without the prior written approval of the Purchaser.		

Annexure -15**Letter Head of the OEM****AGENCY AGREEMENT.**

Tender Enquiry No. N..... dated

This is to certify that _____(as Indian Agent) having their registered Office at _____ (complete Address of Indian Agent) will be representing _____ (as Manufacturer/OEM) as our Agents in India for products being manufactured, under following terms.

1.	Date of appointment as Indian Agent	
2.	Date to which the Agreement is valid	
3.	Authority to commit & sign on behalf of OEM whose signature, Name, Designation are given.	
4.	Product (s) covered in Agreement.	
5.	After-sales Services and Back up Support	
6.	Back to Back arrangement during installation, warranty, CAMC	

<p>(Authorized signatory of OEM)</p> <p>Designation Name : Address of Indian Agent: Email Id: Tel No. Fax No.</p> <p>Company seal</p>

<p>(Authorized signatory)</p> <p>Designation Name : Address of Indian Agent: Email Id: Tel No. Fax No.</p> <p>Company seal</p>
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