

TENDER DOCUMENTS

HIRING OF SERVICES OF SATELLITE COMMUNICATION FOR CHINESE-DEPLOYED SEISMIC STATIONS



No. I&P/Seismic/Comm/26-27

**Pakistan Meteorological Department
Sector H-8/2,
Islamabad,
September, 2026**

Government of Pakistan
Pakistan Meteorological Department
Sector H-8/2, Islamabad

INVITATION TO BID

Bids are invited from reputable IT firms/Companies/Service Providers/ Contractors/Government/ Semi Government Organizations/Suppliers/ Vendors/ duly registered with relevant Government Agencies and active tax payers for Hiring of Services of Satellite Communication for Chinese Deployed Seismic Stations **through PPRA EPADS 2.0** having relevant profile and meeting the criteria as mentioned in the bidding documents.

S. No	Items Name	Closing Date & Time	Bid Opening Date & Time
1.	HIRING OF SERVICES OF SATELLITE COMMUNICATION FOR CHINESE-DEPLOYED SEISMIC STATIONS	29-09-2026 at 10:30PST	29-09-2026 at 11:00PST

Terms & Conditions:

- i. Method of Single Stage – two envelope procedure under Rule 36(b) of the Public Procurement Rules, 2004 shall be followed. Bidding documents having detailed specifications are available free of cost at the website <https://weather.gov.pk>, PPRA EPADS 2.0 <https://pa.epads.gov.pk> as well as <https://epms.ppra.gov.pk>.
- ii. Detailed bidding document can be obtained from PMD and PPRA Websites and proposals shall be submitted through EPADS 2.0 latest by 29-09-2026 till 1030 hrs. The same will be opened by the constituted committee at 1100 hrs. on the same day in the presence of participants or their authorized representatives.
- iii. Competent Authority reserves the right to reject or accept any or all the proposals without assigning any reason under PPRA Rules.
- iv. Bid Security of **Rs 500,000/-** in the form of CDR/ Bank Draft/Pay Order in favour of **Director General, Pakistan Meteorological Department (PMD), Islamabad** shall be submitted along with the Bid. Bids submitted without the required Bid Security shall not be entertained.
- v. The successful bidder will furnish performance guarantee in the shape of CDR/Pay Order/Bank Draft/ Bank Guarantee @ 10% of his work order in favor of D.G. PMD till the completion of work/ Contract.

Note: All Firms are directed to quote their Bids online through PPRA E-PADS 2.0 as well as original Bids must be submitted in hard forms to I&P Section, PMD Headquarters office, Islamabad

Deputy Chief Admin Officer
Pakistan Meteorological Department
H-8/2, Islamabad
Ph. 051-9250286

**NATIONAL SEISMIC MONITORING CENTRE (NSMC), ISLAMABAD
HIRING OF SERVICES OF SATELLITE COMMUNICATION FOR CHINESE-
DEPLOYED SEISMIC STATIONS**

Pakistan Meteorological Department (PMD)

1. Introduction and Background: -

A meeting between Chinese experts and Pakistan Meteorological Department (PMD) regarding the performance and operational status of ten Chinese-deployed seismic stations. During the meeting, the Chinese experts expressed strong reservations regarding the reliability and continuity of the existing communication arrangements, particularly 4G and conventional Internet connectivity.

Reliable communication is a critical component of a real-time seismic monitoring network. The seismic stations continuously acquire waveform data which must reach the National Seismic Monitoring Centre (NSMC) without prolonged interruptions. Communication outages, especially at remote and mountainous stations, can result in loss of real-time observations and reduce the overall continuity and effectiveness of the national seismic monitoring network.

2. Proposed Communication Solution: -

It is proposed that the existing 4G/Internet communication arrangements at the ten Chinese-deployed seismic stations be shifted to dedicated Satellite based communication. The proposed stations are Chitral, Skardu, Gilgit, Pattan, Cherat, Tarbela, Peshawar, Lahore, Jhelum, Islamabad and Central Station.

3. Technical Requirements: -

Item	Requirement / Arrangement
Satellite communication hardware	To be provided by Service Provider on rental basis
Number of stations	11 stations
Data Rate per station	40kbps including overheads

4. Purpose: -

- Provide a more reliable and dedicated communication path for continuous real-time transmission of seismic data.
- Reduce data outages associated with unstable 4G/mobile and conventional Internet connectivity, particularly at remote stations.
- Improve continuity and availability of the national seismic monitoring network.
- Address the concerns raised by the Chinese experts regarding the performance and reliability of the existing communication arrangements.
- Facilitate timely transmission of seismic data to NSMC for earthquake detection, analysis, catalogue generation and dissemination.

5. Recommendation / Way Forward: -

In view of the above, approval is proposed for shifting the ten identified Chinese-deployed seismic stations from the existing 4G/Internet communication system to dedicated SATELLITE COMMUNICATION. The SATELLITE COMMUNICATION hardware may be obtained from the Service Provider on rental basis, with a required bandwidth of 512 KHz . The implementation may be taken up on priority basis to ensure uninterrupted real-time seismic data communication.

6. Expected Outcomes: -

- Improved availability and continuity of real-time seismic waveform data.
- Reduced dependence on local mobile-network and conventional Internet conditions.
- More consistent communication performance across remote and urban seismic stations.
- Faster identification of communication failures and improved restoration coordination.
- Enhanced operational reliability of the national seismic monitoring network.

ELEVEN STATIONS AND GEOGRAPHICAL LOCATIONS

The following station list is presented for the proposed SATELLITE COMMUNICATION deployment. Coordinates for Chitral, Skardu, Pattan and Tarbela are available in published seismic-network documentation; Cherat and Lahore are also supported by published PMD/seismic references. Coordinates shown for Gilgit, Peshawar, Jhelum and Islamabad should be verified against the current PMD/NSMC station inventory and the actual SATELLITE COMMUNICATION installation points before final procurement/installation.

Sr.	Station	Code	Latitude	Longitude
1	Chitral	CHTL	35.9220° N	71.8440° E
2	Skardu	SKRD	35.3276° N	75.5293° E
3	Gilgit	GLGT	35.9317° N*	74.2340° E*
4	Pattan	PATN	35.1091° N	73.0079° E
5	Cherat	CHRT	33.8163° N	71.8756° E
6	Tarbela	TBLA	34.0590° N	72.6978° E
7	Peshawar	PESH	34.0259° N*	71.5601° E*
8	Lahore	LAHR	31.5802° N	74.3294° E
9	Jhelum	LAHR	32.9241° N*	73.7217° E*
10	Islamabad	ISBA	33.7412° N*	73.0624° E*
11	Central Station	ISBD	33.6838° N*	7.0628° E*

Geographical and Operational Significance

- The stations provide geographical coverage from the northern mountainous regions (Chitral, Skardu, Gilgit and Pattan) through the north-western and central regions (Cherat, Tarbela and Peshawar) to the Punjab and federal-capital areas (Lahore, Jhelum and Islamabad).
- Reliable communications at the northern and remote stations are particularly important because interruptions in terrestrial/mobile connectivity can directly affect the continuity of real-time waveform transmission.
- A common SATELLITE COMMUNICATION arrangement for all eleven stations would provide a more uniform communication architecture and facilitate centralized monitoring and troubleshooting by NSMC.

ANNEX-II: IMPLEMENTATION, COMMUNICATION ARCHITECTURE

1. Proposed Communication Architecture

Each seismic station will transmit real-time seismic waveform data through a dedicated SATELLITE COMMUNICATION terminal to the service provider's satellite network and onward to the designated PMD/NSMC receiving infrastructure. The proposed arrangement is intended to provide a dedicated and more dependable alternative to the existing 4G/Internet links.

Seismic Station	SATELLITE COMMUNICATION Terminal	Satellite Network	PMD/NSMC Gateway	Real-Time Processing
Seismometer / Digitizer	Dedicated SATELLITE COMMUNICATION	Satellite Link	PMD/NSMC Network	Monitoring & Analysis

2. Proposed Implementation Plan

Stage	Activity
Site verification	Confirm exact station coordinates, power availability, physical space, antenna location and line-of-sight requirements at each site.
Service-provider survey	Service Provider to conduct SATELLITE COMMUNICATION feasibility/site survey and finalize antenna, modem and related equipment requirements.
Installation	Install SATELLITE COMMUNICATION terminals and configure communication equipment at all ten stations. Hardware including civil work should be responsibility of service provider and on rental basis.
Network integration	Configure routing, IP addressing and secure connectivity between remote stations and the NSMC receiving/processing environment.
Testing & acceptance	Carry out data-flow, latency, packet-loss, link-stability and 24-hour continuous waveform transmission tests.
Operational handover	After successful testing, place the links into operational service and maintain an agreed fault-reporting and restoration mechanism.

ANNEX-III: TECHNICAL EVALUATION CRITERIA (70% Weightage)

Sr. No.	Technical Evaluation Criteria	Details / Minimum Requirement and Marking Basis	Total Marks	Compliance Yes / No
1	Relevant Experience	Experience in deployment, operation and maintenance of satellite communication networks, preferably for remote or mission-critical sites. Relevant experience with tangible proof of projects: 15 marks No relevant experience: 0 marks	15	
2	Technical Solution, Architecture, Bandwidth & Data Capacity	Detailed technical design covering satellite network, terminals, modem, antenna, gateway, routing/IP connectivity and integration with PMD/NSMC. Must provide 512 kHz bandwidth and minimum 40 kbps data rate per station, with future scalability. Compliant solution: 20 marks non-compliant: 0 marks	20	
3	Link Availability & Reliability	Guaranteed service availability with redundancy/backup arrangements, link monitoring, fault detection and measures to minimize outages. Compliant: 15 marks non-compliant: 0 marks	15	
4	Latency, Packet Loss, Performance, Security & Network Integration	Acceptable latency, packet-loss control and link stability for continuous real-time seismic waveform transmission. Secure connectivity, proper IP/routing configuration and compatibility with PMD/NSMC. Compliant: 10 marks non-compliant: 0 marks	10	

5	Installation & Commissioning Plan	Clear site survey, installation, configuration, testing, commissioning and acceptance plan for all ten stations. Complete within stipulated time 90 days: 30 marks 120 days: 20 marks Above 120 days: 0 marks	30	
6	24/7 Monitoring & Technical Support	Affidavit in written Technical Support and Troubleshoot within 24 hours24/7 monitoring, fault reporting, technical support and defined restoration/escalation mechanism. Compliant: 10 marks non-compliant: 0 marks	10	
TOTAL TECHNICAL MARKS			100	
FINANCIAL EVALUATION CRITERIA (30% WEIGHTAGE)				
Sr. No.	Details / Minimum Requirement and Marking Basis		Total Marks	Marks Obtained
1	Overall Annual Turnover with Bank Statement 100 million and above 35 marks 50 to 100 million 20 marks Below 50 million 0 marks		35	
2	Financial Quote Lowest quote = 65 marks Second lowest = inverse formula (lowest quoted price x 65 / price quoted)		65	
Total Financial Marks			100	

Note: Compliance shall be supported with documentary evidence, technical literature, previous experience certificates and implementation methodology. Technical qualification is subject to satisfactory compliance, site survey, testing and acceptance by PMD/NSMC.

Terms & Conditions:

1. **Earnest money/ Bid Security** 500,000/- in the shape of CDR/ Bank Draft/Pay order in favour of D.G Met. Services must be submitted with the offer.
2. Bidders must submit copies of their registration of Sales Tax and Income Tax.
3. Eligibility Criteria: Participating firm must be, fully experienced and registered with Govt. Authorities (FBR etc.).
4. Bidder must submit on stamp paper
 - (i) That there are no pending liabilities in respect of the bidder/ firm against any government/semi-government department/ organization
 - (ii) That the bidder has not been black listed by any government/ semi-government department/ organization. Legal documents can be asked by the buyer, if required.
5. **BID VALIDITY:** Bids shall remain valid for a period of at least **120 days** after the date of opening of financial proposals.

In exceptional circumstances, prior to expiry of the original bid validity period, the Buyer may request that the bidders extend the period of validity for a specified additional period. The request and the responses there to shall be made in writing or by electronic mode. A bidder will not be required or permitted to modify its bid, but will be required to extend the validity of its bid security for the period of the extension.
6. **Prices must be quoted in Pak Rupees only including all applicable Govt. of Pakistan taxes & GST.**
7. **The successful bidders will furnish performance guarantee in the shape of CDR/Pay Order/Bank Draft/ Bank Guarantee @ 10% of his work order in favour of D.G. PMD till the completion of the work/ Contract period.**
8. The last date for the submission of tender is 29th September, 2026 at 10.30 Hours PST and will be opened on the same day at 1100 hours PST in the presence of bidders or their representatives.
9. The Procuring Agency reserves the right to cancel the bidding process at any stage without assigning any reason.
10. Taxes will be deducted as per Government rules.
11. The payment against supply of items will be made through crossed cheque(s) in Pak Rupees by the Department to the supplier after satisfactory supply of goods and technical report submitted by the Technical Committee.
12. Any bid found in deviation / violation / without earnest money would liable to be rejected.
13. Bidding documents having detailed specifications are available free of cost at the website <https://weather.gov.pk>, PPRA EPADS <https://pa.epads.gov.pk> as well as <https://epms.ppra.gov.pk>.