

**PAKISTAN METEOROLOGICAL DEPARTMENT
FLOOD FORECASTING DIVISION (FFD)
46-JAIL ROAD LAHORE**

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BIDDING DOCUMENT

No.A-1(2)/Tender/2025/

For

**“Repair/Replacement of Machinery and Equipment
at Flood Forecasting Division Lahore”**

Compliance: As per PPRA Rules



**GOVERNMENT OF PAKISTAN
PAKISTAN METEOROLOGICAL DEPARTMENT
FLOOD FORECASTING DIVISION
46-JAIL ROAD LAHORE**

TENDER NOTICE

**INVITATION OF BIDS FOR REPAIR OF MACHINERY AND EQUIPMENT OF,
FLOOD FORECASTING DIVISION LAHORE**

Flood Forecasting Division Lahore, a unit of Pakistan Meteorological Department invites sealed bids on F.O.R. basis from the firms/parties, registered with Income Tax and Sales Tax Departments and who are on Active Taxpayers List of Federal Board of Revenue for the repair/replacement of machinery & Equipment being used by Flood Forecasting Division of PMD, as per the following details:

Items	Repair/Replacement Details & Quantity	Estimated Cost
Data loggers, Temperature and humidity sensors, Wind speed sensors, Wind direction sensors, GSM modems, Tipping bucket rain gauges, solar panels 100W, Dual timer modules, Enclosure boxes for AWS, Lead Acid batteries, Lead Acid Tubular batteries, Inverters (pure sine wave)	As per detailed specification provided in the bidding documents.	PKR 4.5 million

Terms and Conditions:

1. All Bidding documents must be filled/uploaded/submitted on **EPADS** as well as original bids along with Bid security must be submitted in hard forms to 46-Jail Road, Flood Forecasting Division, Lahore.
2. Original Bid Security (2% of the estimated cost) in shape of Bank Draft / Pay Order/CDR in favor of Chief Meteorologist, FFD Lahore must be submitted to the office of Flood Forecasting Lahore before the closing date.
3. The quantity of the items can be increased/ decreased subject to funds availability.
4. Incomplete or late received offer will not be considered, closing date and time for Bid is **21st May, 2025** at 10:30 AM PST and opening date and time is **21st May, 2025** at 1100 AM PST.
5. The Procuring Agency reserves the right to cancel the bidding process at any stage without assigning any reason.
6. The successful bidders will furnish performance guarantee in the shape of CDR/Pay Order/Bank Draft @ 3% of his supply/work order in favour of Chief Meteorologist, FFD Lahore.
7. Method of Single Stage one Envelope Bidding Procedure under Rule 36(a) of Public Procurement Rules, 2004 will be used.
8. Bidding documents having detailed specifications are available free of cost at the website www.pmd.gov.pk PPRA EPADS www.eprocure.gov.pk as well as www.ppra.org.pk

Note: All Firms are directed to quote their Bids online through PPRA E-PADS as well as original Bids must be submitted in hard forms to 46-Jail Road, Flood Forecasting Division Lahore.

(Zaheer Ahmed Babar)
Chief Meteorologist
Ph:042-99200208

Bidding Documents

1. Invitation to Bids

Flood Forecasting Division (FFD) Lahore invites sealed bids from eligible and qualified firms for the repair/replacement of **machinery and Equipment** at FFD Lahore. The bidding process will be conducted through **EPADS** platform to ensure transparency and compliance with **PPRA rules**.

2. Scope of Work

The Scope of Work includes:

S No	Item Description	Approx. Qty	Required Repairs/ Replacements	Rate per unit	Total Cost
1	Data logger	8	Replacement as per Specifications given in Annexure-A		
2	Temperature & Humidity Sensor	7			
3	Wind Speed Sensor	7			
4	Wind Direction Sensor	7			
5	GSM Modem	7			
6	Tipping Bucket Rain gauge	7			
7	Solar panel 100 W 12V	8			
8	Dual timer Module	42			
9	Enclosure box for AWS Equipment	5			
10	Lead Acid Battery 175 AH	3			
11	Lead Acid Tubular battery 280 AH	4			
12	Inverter 1.5 KW Pure sine wave	3			
13	Inverter 4KW Pure sine wave	2			

3. GENERAL TERMS & CONDITIONS

1. Bidding Procedure:

- Single Stage-One Envelope Procedure as per PPRA Rule 36 (a).

2. Bid components

- **Technical Proposal (if applicable)**
- **Financial Proposal**
 - Itemized cost of repair (as per format provided above)
 - Bid price for each item/service must be inclusive of all taxes.

3. Eligibility Criteria:

Bidders must:

- Be Registered with FBR (Valid NTN & GST, PST (if applicable))
- Provide an affidavit of non-blacklisting

4. Bid Submission:

- All the firms are directed to quote their bids online through PPRA EPADS as well as original bids must be submitted in hard form along with **Earnest money** to the office of Chief Meteorologist, 46-Jail Road Flood Forecasting Division, Lahore
- Mark Envelope as: "Repair of furniture and fixture of 46-Jail Road FFD Lahore"

5. Bid Security (Earnest Money):

- Original 2% bid security of the estimated cost must be submitted as a Pay order/ Bank draft/Demand Draft in favor of Chief Meteorologist, FFD in Pakistani Currency.
- Bid without Earnest Money will be rejected.

6. Bid Validity:

- The bids shall remain valid for a period of two months (60 days) from the date of opening of the tender (Rule 28)
- If required, the procuring agency may request an extension in the validity period, subject to the written consent of the bidder.

7. Performance guarantee

- The successful bidders will furnish performance guarantee in the shape of CDR/Pay Order/Bank Draft @ 3% of his supply/work order in favour of Chief Meteorologist, FFD Lahore.

8. Delivery/Completion Schedule:

- The successful bidder shall deliver the items on F.O.R. basis to 46-Jail Road, FFD, Lahore, or complete the assigned work, within **10 days** from the issuance of the award of contract/work order/purchase order.
- A 1% penalty per day will apply for delays beyond the specific time.

9. Quantity Variation:

- The quantity may be increased or decreased at the discretion of the **procuring agency**, without any change in unit rates or other terms and conditions.

10.Brand Name:

- Only one brand name for each item to be mentioned (if applicable).

11.Taxes:

- Prices quoted must be inclusive of all applicable taxes.
- Taxes will be deducted at source as per governments rule

12.Integrity of Bids:

- Tenderers are required to submit genuine offers after fulfilling all requirements of the Tender Enquiry. In case of a fake offer or willful misrepresentation, the same shall be treated as gross misconduct and fraud. Such offers shall be rejected outright and may lead to blacklisting of the firm and/or forfeiture of the Earnest Money Deposit (EMD).

13.Rejection of Bids:

- The procuring agency reserves the right to reject any or all bid as per PPRA Rule 33.

(Zaheer Ahmed Babar)
Chief Meteorologist
Ph:042-99200208

Annexure-A
(Technical Specifications as per requirement)

Item Name
Data logger
Specifications <ul style="list-style-type: none">• Automatically collects, stores, and transmits weather data from connected sensors.• Compatible with existing sensors: wind speed, wind direction, temperature-humidity, barometric pressure, and tipping bucket rain gauge.• Based on SQM4-K70-W microcontroller or approved equivalent, featuring real-time clock (RTC) and sufficient I/O interfaces for sensor connectivity.• Supports communication via GSM/4G/LTE, with optional Wi-Fi and Ethernet connectivity.• Provides sensor interface options including RS232, RS485, and SDI-12.• Configurable data logging intervals and local data storage.• Optional USB and Memory card slot available for extended storage, local configuration and data download.• Built in Memory storage: Minimum 1 month Data Storage• Supports standard communication protocols: FTP, MQTT, HTTPS, and TCP.• API access available for integration with third-party platforms and existing dashboards.• Powered by 12VDC input, with support for solar panels and battery backup; low-power operation preferred.• Enclosed in a durable acrylic casing, suitable for semi-outdoor use; resistant to dust and insects; supports wall or mast mounting• Replacement Warranty: 06 months
Temperature and Humidity sensor
Specifications <ul style="list-style-type: none">• Combined temperature and relative humidity sensor suitable for meteorological applications.• Sensor type: RTD (Resistance Temperature Detector) with high accuracy and long-term stability.• Equipped with protective brass probe featuring air pores for adequate ventilation and rapid response time.• RTD element housed in a sleeve for enhanced durability and environmental protection.• Measurement Range (Temperature): -40°C to +60°C or better.• Measurement Range (Humidity): 0% to 100% RH, non-condensing.• Output Signal: As per system compatibility.• Compatible with the existing data logger unit and AWS configuration.• Enclosure: Brass body, corrosion-resistant, suitable for outdoor deployment.• Mounting: Suitable for integration in standard meteorological radiation shields or exposure stands• Replacement Warranty: 06 months

Wind Direction sensor

Specifications

- Wind direction sensor suitable for meteorological and environmental monitoring applications.
- Constructed from lightweight and durable aluminum,
- Resolution: 22.5°
- Measurement Range: 0° to 360° (full-circle coverage).
- Starting Threshold: ≤ 0.5 m/s wind speed.
- Output Signal: as per existing data logger compatibility.
- Supply Voltage: 12V-36V DC
- Bearing Type: Low-friction, corrosion-resistant, for stable performance and longevity.
Fully compatible with the data logger system used in the existing AWS setup.
- Replacement Warranty: 06 months

Wind Speed Sensor

Specifications

- Wind speed sensor designed for meteorological use and continuous outdoor operation.
- Made of lightweight aluminum, providing durability and corrosion resistance in harsh weather conditions.
- Measurement Range: 0 to 75 m/s or better.
- Starting Threshold: ≤ 0.5 m/s
- Output Signal: 0-5V pulse type output, compatible with existing data logger systems.
- Supply Voltage: 9–24 V DC
- Bearing Type: Sealed stainless steel or equivalent for low friction and long operational life.
- Mounting: Suitable for pole or mast installation; adjustable for correct alignment.
- Fully compatible with the data logger unit used in the existing AWS system.
- Replacement Warranty: 06 months

GSM Modem

Specifications

- GSM modem for remote data transmission from the Automatic Weather Station (AWS) to the central server.
- Model: Mikore 1720 or approved equivalent.
- Integrated with a customized circuit to ensure compatibility with the existing data logger system.
- Equipped with an external antenna for improved signal strength and reliable connectivity in remote or low-signal areas.
- Includes RS-232 port (DB9 or similar) for serial communication, diagnostics, or configuration.
- Supports GSM/2G/3G/4G bands based on regional network availability.
- Communication protocols supported: TCP/IP, FTP, MQTT, HTTPS (depending on modem firmware).
- Replacement Warranty: 06 months

Rain Gauge

Specifications

- Tipping bucket rain gauge for accurate measurement of precipitation in automated weather station applications.
- Constructed with a customized aluminum body, lightweight, corrosion-resistant, and suitable for long-term outdoor deployment.
- Rain collector funnel diameter: 5 inches (127 mm), designed to meet standard rainfall catchment specifications.
- Measurement Principle: Dual-bucket mechanism with magnetic switch activation upon each tip.
- Rainfall Resolution: 0.2 mm.
- Output Signal: Compatible with existing data logger system.
- Filtering: Includes mesh or debris screen in the funnel to prevent clogging.
- Maintenance: Easy-access design for cleaning and inspection.
- Replacement Warranty: 06 months

Solar photovoltaic panel 100 Watt

Specifications

- Solar photovoltaic (PV) panel for powering the Automatic Weather Station (AWS) and associated electronics.
- Rated Power Output: 100 Watts (nominal)
- Nominal Voltage: 12 Volts DC
- Cell Type: Monocrystalline
- Replacement Warranty: 06 months

Dual timer module with base

Specifications

- Dual timer relay module for scheduled power cycling of the data logger in AWS systems.
- Supports independent delay intervals of both ON and OFF durations
- Settings should be selectable (01 second to 99 hrs.) for both ON and OFF delay.
- Copper contact base or better
- LED Display
- Supply Voltage: 12V DC
- Power Consumption: ≤ 100 mA
- Replacement Warranty: 06 months

AWS Enclosure Box

Specifications

- Enclosure box for housing the data logger, power components, GSM modem, and related electronics of the Automatic Weather Station (AWS).
- Material: Iron, powder-coated or painted with high-quality, weather-resistant paint for corrosion protection and extended outdoor life.
- Dimensions: Height: 3 Feet, Width: 2 Feet, depth: 8 inch

Lead Acid Batteries

Specifications

- Sealed Lead-Acid Deep Cycle Battery
- Battery Capacity: 175 Ah (Ampere-hours)
- Nominal Voltage: 12 Volts DC
- Construction: **27 plates** with built-in electrolyte level/charge indicator ("**eye indicator**") for quick status check
- Replacement Warranty: 06 months

Tubular Lead Acid battery

Specification:

- Lead Acid Tubular Deep Cycle Battery
- Battery Capacity: 280 Ah (Ampere-hours)
- Nominal Voltage: 12 Volts DC
- Specs: 9 Plates/Cell, Approx. Weight: 75kg or more
- Replacement Warranty: 06 months

Inverter 1.5 KW

Specifications

- Single phase Inverter Capacity: 1.5 kW
- Waveform: Pure Sine Wave — safe for electronic appliances
- Input Voltage: 12V DC (Tubular or Lithium Battery Supported)
- Output Voltage: 220V \pm 5%, 50 Hz AC (Single Phase)
- LCD display with touch buttons
- Solar Input Supported by Large Plate 585W or more (MPPT Charge Controller, MPPT Range: 30-430 VDC)
- Warranty: 06 months

Inverter 4 KW

Specifications

- Single phase Inverter Capacity: 4 kW
- Waveform: Pure Sine Wave — safe for electronic appliances
- Input Voltage: 24V DC (Tubular or Lithium Battery Supported)
- Output Voltage: 220V \pm 5%, 50 Hz AC (Single Phase)
- LCD display with touch buttons
- Solar Input Supported by Large Plate 585W or more (MPPT Charge Controller, MPPT Range: 30-430 VDC)
- Warranty: 06 months