

BIDDING DOCUMENT

For

**Supply, Delivery and installation of AWS in
Singhadarbar**

Sealed Quotation

Contract ID No: 4/DHM/073-74

Issued by:

Government of Nepal

Department of Hydrology and Meteorology

Naxal, Kathmandu

2017

Table of Contents

<u>Section I. Invitation for Sealed Quotation</u>	<u>2</u>
<u>Section III. Conditions of Contract</u>	<u>8</u>
<u>Section IV. Schedule of Requirements.....</u>	<u>13</u>
<u>Section V. Technical Specifications</u>	<u>14</u>
<u>Section VI. Sample Forms.....</u>	<u>16</u>

Section I. Invitation for Sealed Quotation

Government of Nepal
Ministry of population & Environment
Department of Hydrology and Meteorology
Invitation for Bids

Date of first Publication: 2073/11/9

Department of Hydrology and Meteorology (DHM) invites sealed bid from Government of Nepal registered and eligible bidders for the Procurement of following goods and services.

S. N.	Contract ID No.	Description of Works	Price of Bidding document (Non-refundable (NRs)) and Bid validity Period	Bid security amount (NRs), Bid Security Validity Period, Ac. No. and Name of Bank	Last Date and Time of Purchase	Last Date and Time of Submission	Date and Time of Bid opening
1	4/DHM / 073-74	Supply, Delivery and installation of AWS in Singhadarbar	1000/- and 45 days	40,000/- and 75 days AC No. 1100 203 000 000 and Rastriya Baniyya Bank, Thamel, Kathmandu, Nepal	2073/11/23 during office hour	2073/11/24 12:00 noon	2073/11/24 01:00 pm

- Bidding will be conducted through the National Competitive Bidding procedures as specified in the Public Procurement Act 2063 and Public Procurement regulation 2064. Eligible Bidders may obtain further information and inspect the bidding documents at the above office. +977 1 4433563 www.dhm.gov.np shivaamet@gmail.com,
- Eligible and interested Bidders are invited to submit their unit rate for the goods described as in bidding documents with a certified copy of Company Registration Certificate, PAN/VAT Certificate, and Tax Clearance (2072/73)/ and Self Declaration letter of not being blacklisted till to submit date.
- Bidding documents may be purchased from the above office by eligible Bidders on the submission of a written application accompanied by a letter of Authority from the firm to the address above along with the copy of Company/Firm registration certificate. The payment mode may be direct deposit or bank transfer to the Gov. **Revenue A/c Title No.14227** on Rastriya Baniyya Bank, Thamel, Kathmandu, Nepal or Bankers cheque payable to Department of Hydrology and Meteorology, Kathmandu, Nepal. **(Office Code No. 27-331-04, A/C No. ka-1-1-001)**
- Sealed bids must be submitted to the Procurement Unit of Department of Hydrology and Meteorology. Documents received after submission deadline shall not be accepted.
- Bids shall be opened in the presence of Bidder's representatives who choose to attend on the opening date given in above Table at the office of Department of Hydrology and Meteorology, P.O.Box 406, Nagpokhari, Naxal, Kathmandu, Nepal.
- If the last date of purchasing, submission and opening falls on a government holiday, then the next working day shall be considered the last day. In such a case the bid validity and bid security validity shall be recognized with effect from the original bid submission deadline.
- Bids should comply in all respects with the Instruction to Bidder included in the Bid Document. Non-compliance with these instructions shall result in disqualification.
- The Department of Hydrology and Meteorology reserves the right to accept or reject, wholly or partly any or all the bids without assigning reason, whatsoever.

Section II. Instructions to Bidder

- 1. Scope of Works** The Purchaser stated in the Invitation for Quotation invites bids for the supply and delivery of the goods as detailed in attached specifications, drawings and the bill of quantities provided herein. .
- 2. Eligible Bidder** This Invitation for Bids is open to all registered Suppliers with qualifications as described below:

 - a) Up to date Firm/Company Registration Certificate
 - b) VAT and PAN Registration Certificates
 - c) Tax Clearance Certificate of 2072/73
 - d) Power of Attorney
 - e) Other documents as needed
- 3. One Bid per Bidder** **Each Bidder shall submit only one quotation, A Bidder who submits more than one quotation shall cause all the quotations with the Bidder's participation to be disqualified.**
- 4. Content of Quotation Form** The Quotation Form comprise the documents listed below:

 1. Invitation for Sealed Quotations
 2. Instructions to Bidders
 3. General Conditions of Contract (GCC)
 4. Form of Agreement
 5. Sample Forms
 6. Schedule of Requirements
 7. Technical Specifications
- 5. Clarification** A prospective Supplier/Bidder may obtain clarification on the Quotation Form from the Purchaser stated in Invitation for Quotation.
- 6. Language of Quotation** All documents relating to the Quotation shall be in English or in Nepali.
- 7. Documents Comprising Quotation** The Quotation by the Bidder shall comprise the following:

 - a. Quotation and Price Schedules
 - b. Bid Security
 - c. Schedule of Requirements
 - d. Technical Specifications
- 8. Quotation Prices** The Bidder shall indicate on the appropriate Price Schedule the unit prices (where applicable) and total price of the goods to be supplied under the contract.

All duties, taxes and other levies payable by the Bidder under the contract shall be included in the rates, prices and total Bid Price submitted by the Bidder.

Price quoted by the Bidder shall remain fixed and valid until completion of the Contract Performance and will not be subject to variation in any account.

-
9. **Quotation Validity** The Quotation shall remain valid for the period of 45 days after opening of the quotation.
10. **Quotation Security** The Bidder shall furnish a Security in Nepali Rupees in the amount not less NRs. **40,000/-** (Nepali rupees **Forty thousand only**).The Bid Security shall remain valid for a period of 75 days after opening of the quotation.
The Security shall be in the form of cash voucher deposited in the Bank Account of the Employer specified in the notice for "Invitation for Quotation" or a bank guarantee from a bank acceptable to the Employer.
11. **Format and Signing of Quotations** The Quotation shall be typed or written in indelible ink and shall be signed by an authorized person. Any entries or amendments including alternations, additions or corrections made shall be initialled by the same authorized person.
12. **Sealing and Marking of Quotations** The Bidder shall submit his Quotation in sealed envelopes. The envelope shall be addressed to the Purchaser specified in the Invitation for Quotation and shall bear the name and identification number of the quotation.
13. **Deadline for Submission of Quotations** Quotations shall be delivered to the Purchaser at the address no later than the time and date as specified in the Invitation for Quotation.
14. **Late Quotation** Any Quotation received by the Purchaser after the deadline shall not be accepted and shall be returned unopened to the Bidder upon request.
15. **Modification And Withdrawal** Quotations once submitted shall not be withdrawn or modified.
16. **Bid Opening** The Purchaser shall open the Quotations in the presence of the Bidders' representatives who choose to attend at the time and in the place as specified in the Invitation for Quotation.
Place:- Meeting Hall, Department of Hydrology and Meteorology, Naxal
The Purchaser shall prepare and provide minutes of the opening including the information disclosed to those present.
17. **Process to be Confidential** Information relating to the examination, evaluation and comparison of Quotations and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process until the award to the successful Bidder has been announced. Any efforts by the Bidder to influence the Purchaser in the Quotation evaluation, comparison or contract award decisions may result in rejection of Bidder's quotation.
18. **Examination of** Prior to the detailed evaluation of Quotations, the Purchaser shall

Quotations	determine whether each Quotation (a) meets the eligibility criteria defined in Clause 2; (b) has been properly signed; (c) is accompanied by the required securities; and (d) is substantially responsive to the requirements of the Bidding documents.
19. Evaluation and Comparison of Quotations	<p>19.1 In evaluating the Quotations, the Purchaser shall determine for each Quotation the evaluated Bid Price by adjusting any corrections for errors. Quotations shall be checked by the Purchaser for any arithmetic errors. Errors shall be corrected by the Purchaser as follows:</p> <ul style="list-style-type: none"> a. where there is a discrepancy between the amounts in figures and in words, the amount in words shall govern; and b. where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted shall govern <p>19.2 If the Bidder does not accept the corrected amount, the Quotation shall be rejected and the Security pursuant to Clause 10 may be forfeited.</p>
20. Award of Contract	The Purchaser shall decide the award of the contract, within 15 days of the opening of the quotation, to the Bidder whose Quotation is within the approved estimate and who has offered the lowest evaluated Bid Price, provided that such Bidder has been determined to be eligible in accordance with the provisions of Clauses 2.
21. Purchaser's Right to Accept or Reject	The Purchaser reserves the right to accept or reject any Quotation or to cancel the bidding process and reject all Quotations, at any time prior to the award of the contract, without assigning any reasons whatsoever and without thereby incurring any liability to the affected Bidder or Bidders.
22. Notification of Award and Signing of Agreement	<p>22.1 The Bidder whose Quotation is accepted and all other participating bidders shall be notified of the award by the Purchaser. Within 7 days of receipt of the notification, the successful Bidder shall deliver the Performance Security pursuant to Clause 23 and sign the Agreement.</p> <p>22.3 Inability of the Bidder to make an Agreement within the above stated period shall result in cancellation of the Contract Award and forfeiture of the Bidder's Security, upon which the Contract shall then be awarded to the next successive successful Bidder.</p>
23. Performance Security	<p>23.1 Within fifteen (7) days of the receipt of notification of award from the Purchaser, the successful Bidder shall furnish the Performance Security in accordance with the GCC, using for that purpose the Performance Security Form included in Section VIII, Contract Forms, or another form acceptable to the Purchaser.</p> <ul style="list-style-type: none"> i) If bid price of the bidder selected for acceptance is up to 15 (fifteen) percent less than the approved cost estimate, the performance security amount shall be 5

(five) percent of the bid price.

ii) For the bid price less than 15 percent of the cost estimate, the performance security amount shall be determined as follows:

Performance Security Amount = [(0.85 x Cost Estimate - Bid Price) x 0.5] + 5% of Bid Price.

The Bid Price and Cost Estimate shall be inclusive of Value Added Tax.

Section III. Conditions of Contract

- 1. Definitions**
- 1.1 In this contract, the following terms shall be interpreted as indicated:
- a. "The Contract" means the agreement entered into between the Purchaser and the Supplier, as recorded in the Contract Form Signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein;
 - b. "The Contract Price" means the price payable to the Supplier under the contract for the full and proper performance of its contractual obligation;
 - c. "The Goods" means Equipment and related Accessories and spare-parts or any other materials which the Supplier is required to supply to the Purchaser under the contract;
 - d. "Services" means services ancillary to the supply of the goods such as transportation and insurance including the installation, commissioning and the operational and maintenance training of the supplied equipment.
 - e. "The Purchaser" means the procuring entity purchasing the goods;
 - f. "The Supplier" means the organization supplying the goods and services under this contract.
- 2. Technical Specification**
- 2.1 The goods supplied under this contract shall conform to the standards mentioned in the Technical Specification.
- 3. Patent Right**
- 3.1 The Supplier shall indemnify the Purchaser against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of goods or any part thereof in the Purchaser's country.
- 4. Performance Security**
- 4.1 Within seven days (7) of receipt of award of contract from the Purchaser the successful Bidder shall furnish the performance security in accordance with the Sub - Clause 4.3 of the Conditions of Contract in the Performance Security Form provided in the Bidding Documents.
- 4.2 Failure of the successful Supplier to comply with the requirement of Sub - clause 4.1 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the Purchaser may make the award to the next lowest Supplier or call for new sealed quotations.
- 4.3 If bid price of the bidder selected for acceptance is up to 15 (fifteen) percent less than the approved cost estimate, the performance security amount shall be 5 (five) percent of the bid price.
- ii) For the bid price less than 15 percent of the cost estimate, the performance security amount shall be determined as follows:
- Performance Security Amount = [(0.85 x Cost Estimate - Bid Price) x 0.5] + 5% of Bid Price.
- The Bid Price and Cost Estimate shall be inclusive of Value

-
- Added Tax.
- 4.4 The validity of Performance Security shall be one (1) year after the final installation and commissioning of the Goods and the issue of final acceptance certificate to the Suppliers. The Supplier shall promptly extend the validity suitably to cover agreed extension of the warranty period of the supplied goods.
- 4.5 The performance security shall be released within 28 days of completion of warranty period and upon submission of claim by the Supplier.
- 5. Inspection and Tests**
- 5.1 The Purchaser or its Representative shall have the right to inspect and/or test the goods to confirm their conformity to the Technical Specification and the quality of performance after the supply and delivery of good to the Purchaser's premises.
- 6. Packing**
- 6.1 The Supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transmit to their final destination as indicated in the contract.
- 6.2 The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage.
- 6.3 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided in accordance with international standard and practice.
- 7. Delivery of Goods**
- 7.1 Delivery of the goods shall be made by the Supplier in accordance with the terms specified by the Purchaser in its Schedule of Requirements.
- 7.2 The terms "EXW", "FOB", "CIF", "CIP" etc., shall be governed by the rules prescribed in the current edition of INCOTERMS published by the International Chamber of Commerce (ICC), Paris.
- 8. Insurance**
- 8.1 The goods supplied under the contract shall be fully insured in the currency of the Sealed Quotation price against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified.
- 8.2 Where delivery of the goods is required by the Purchaser on a CIF or CIP basis to a specified destination, the Supplier shall arrange and pay for insurance, naming the Purchaser as the beneficiary and the Supplier shall be required to meet all transport and storage expenses until delivery.
- 9. Warranty**
- 9.1 The Supplier warrants that all the goods supplied under the contract shall fully comply with the specification laid down in the contract.
- 9.2 The warranty shall remain valid for one year after the goods have been delivered to the final destination indicated in the contract, and accepted by the Purchaser after installation and commissioning of equipment by the Supplier.
- 9.3 The Purchaser shall promptly notify the Supplier in writing of

any claims arising under this warranty.

9.4 Upon receipt of such notice, the Supplier shall, with all reasonable speed, replace the defective goods without cost to the Purchaser. The Supplier will be entitled to remove, at its own risk and cost, the defective goods.

10. Payment

10.1 Payment shall be made in the currency in which the contract price has been stated in the Supplier's Sealed Quotation.

10.2 Payment of the goods supplied from within Nepal shall be made in Nepali Rupees after the delivery of goods to the satisfaction of the Purchaser.

10.3 Payment of the goods to be imported from abroad shall be made in the following manner:

Not applicable

11. Prices

11.1 Prices charged by the Supplier for goods delivered under the contract shall not vary from the prices quoted by the Supplier in its sealed quotation.

12. Changed Order

12.1 Where the Purchaser desires to make changes in **Schedule of Requirement**, it shall not exceed more than 15 percent.

13. Liquidated Damages

13.1 If the Supplier fails to deliver any or all of the goods within the time period specified in the contract, the Purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as liquidated damages, a sum equivalent to 0.05 percent of the contract price of delayed goods for each day of delay until actual delivery, up to a maximum deduction of 10 percent of the delayed goods' contract price. Once the maximum is reached, the Purchaser may consider termination of the contract.

14. Resolution of Disputes

14.1 If any dispute or difference of any kind whatsoever shall arise between the Purchaser and the Supplier in connection with or arising out of the Contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.

14.2 If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.

14.2.1 Any dispute or difference in respect of such a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract.

14.2.2 Arbitration proceedings shall be conducted in accordance with in accordance with the rules of Nepal Council of Arbitration (NEPCA).

-
- 14.3 Notwithstanding any reference to arbitration herein,
- a. the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
 - b. the Purchaser shall pay the Supplier any monies due the Supplier.
- 15. Governing Language** 15.1 The Governing Language shall be: Nepali or English
- 16. Applicable Law** 16.1 The applicable law shall be Laws of Nepal.
- 17. Notices** 17.1 Purchaser's address for notice purposes:
Name of Purchaser: Shiva Prasad Nepal, Senior Divisional Meteorologist/Head(Procurement Unit)
Department of Hydrology and Meteorology
P.O.Box:- 406
City:- Naxal, Kathmandu
District: Kathmandu
Country:- Nepal
Telephone: +977-1-4433563
Email:- shivaamet@gmail.com
- 17.2 Supplier's address for notice purposes:
- 18. Taxes and Duties** 18.1 The Supplier shall be entirely responsible for all taxes, duties, licence fees and other such levies imposed by the GON.
- 19. Operation, Maintenance and Spare-parts Manuals** 19.1 The successful Supplier shall supply 2 copies of manufacturer's operation, maintenance and spare-part manuals of the goods (Equipment).
- 20. Conduct of Suppliers** 20.1 The Supplier shall be responsible to fulfil his obligations as per the requirement of the Contract Agreement, Bidding documents, GoN's Procurement Act and Regulations.
- 20.2 The Supplier shall not carry out or cause to carry out the following acts with an intention to influence the implementation of the procurement process or the procurement agreement :
- a. give or propose improper inducement directly or indirectly,
 - b. distortion or misrepresentation of facts
 - c. engaging or being involved in corrupt or fraudulent practice
 - d. Interference in participation of other prospective bidders.
 - e. coercion or threatening directly or indirectly to impair or harm, any party or the property of the party involved in the procurement proceedings,
 - f. collusive practice among bidders before or after submission of bids for distribution of works among bidders or fixing artificial/uncompetitive bid price with an intention to deprive the Purchaser the benefit of open competitive bid price..
 - g. contacting the Purchaser with an intention to influence the Purchaser with regards to the bid or interference of any

kind in examination and evaluation of the bids during the period after opening of bids up to the notification of award of contract

**21.Blacklisting
Supplier**

- 21.1 Without prejudice to any right of the Purchaser under this Contract, the GoN, Public Procurement and Monitoring Office(PPMO) may blacklist a Supplier for his conduct up to three years on the following grounds and seriousness of the act committed by the supplier:
- a. if it is proved that the supplier committed acts pursuant to the Sub - clause 20.2,
 - b. if the supplier fails to sign an agreement pursuant to ITB Clause 22,
 - c. if it is proved later that the supplier had committed substantial defect in implementation of the contract or had not substantially fulfilled his obligations under the contract or the completed work is not of the specified quality as per the contract ,
 - d. if convicted by a court of law in a criminal offence which disqualifies the supplier from participating in the contract.
- 21.2 A Supplier declared blacklisted and ineligible by the GON shall be ineligible to bid for a contract during the period of time determined by PPMO.

Section IV. Schedule of Requirements

Name of Goods and related service to be carried out

1. List of goods and delivery schedule

The goods should be delivered to Department of Hydrology and Meteorology, Nagpokhari, Naxal

S.No.	Equipment	Unit	Quantity	Earliest delivery Date	Latest delivery Date	Bidders offered d date
1	Data Logger	no.	1	45 days	75 days	
2	Customized Display Board	no.	1	45 days	75 days	
3	Communication modules	no.	1	45 days	75 days	
4	Relative Humidity and air temperature sensor	no.	1	45 days	75 days	
5	Multi Plate Radiation Shield	no.	1	45 days	75 days	
6	wind speed and direction sensor	no.	1	45 days	75 days	
7	Lightning Surge Protector	no.	1	45 days	75 days	
8	Tipping Bucket Raingauge	no.	1	45 days	75 days	
9	Global Solar Radiation Sensor	no.	1	45 days	75 days	
10	Mounting & Leveling Fixture for Solar Radiation Sensor	no.	1	45 days	75 days	
11	Radio Modem	no.	2	45 days	75 days	
12	Solar Charge Controller	no.	1	45 days	75 days	
13	Solar Panel	no.	1	45 days	75 days	
14	VRLA Battery	no.	1	45 days	75 days	
15	Lightning Arrestor and Grounding Kit	no.	1	45 days	75 days	
16	Weatherproof Equipment Housing	no.	1	45 days	75 days	

2.List of related services and completion schedule

S.N.	Description of service	Quantity	Physical unit	Places where services shall be performed	Final completion date of services	Offered completion date
1	Installation of complete Data Logger, solar panel, communication module, cable and connectors, wind speed and direction sensor, wind mast (10m)(to be provided by (DHM), air temperature and relative humidity sensor, tipping bucket rain gauge, global solar radiation, Radio modem, maintenance free rechargeable battery, customized display board at singhadarbar and all remaining accessories. Data posting in meteorological database installed at NITC singhadarbar and visualization in web page	1	Set	Singhadarbar	85 days from date of contract	
2	Procure CDMA/GSM data transmission service including SIM/RUIM cards from Nepal Telecom Service Provider and Provide CDMA/RUIM Bandwidth for all the transmission system for one year	1	set	Singhadarbar	85 days from date of contract	

Section V. Technical Specifications

Department of Hydrology and Meteorology (DHM) is maintaining number of Precipitation, Climatological, Aero-Synoptic, Synoptic and Agro-meteorological stations to provide weather information for weather forecasting, Among those station we are functioning near about 32 Automatic weather station. Most of the station are Real time stations which transfer meteorological parameter value instantaneously.

In this fiscal year (073-74), DHM intends to procure and install an Automatic weather station at singhadarbar premises from its regular government budget.

Technical Specification details:

S. N.	Equipment	Unit	Specification	
			required	Offered
1.	Data Logger with Housing	no.	* 4Mb + 2Gb Flash Memory, * Interfaces: USB, RS232, RS485, SDI-12, Analog, * Web configurable	
2.	Customized Display Board	no.	* Digital Display, * Wireless Interfacing with the Automatic Weather Station, * Red segment display 4 inch height * 6 digit Date, 4 digit time, * 3 Digit Air Temperature, Max and Min Air Temperature, * 3 Digit Wind speed, 3 digit daily rainfall, 4 digit humidity and 4 digit irradiance, * Acrylic Water	

			proof casing, * Shelter and mast with sun protection cover	
3.	Communication modules	no.	* Dual SIM GPRS * Single RUM CDMA[TCM-CG-14] (2 X GSM + 1 CDMA)	
4.	Relative Humidity and air temperature sensor	no.	Temperature & Humidity Probe * Temp range: -100 to 200C, * Humidity range: 0 to 100%Rh, Temp accuracy: 0.1K, * Humidity accuracy: 0.5%Rh, * Includes Voltage Adapter for Connection to Datalogger	
5.	Multi Plate Radiation Shield	no.	Radiation Shield (0 to 16mm dia) [RMY-MPRS-41003] or equivalent	
6.	wind speed and direction sensor	no.	* Working principle: Ultrasonic, * Wind Speed: range: 0..90m/s, accuracy ± 0.2 m/s or $\pm 2\%$ RMS of reading whichever is greater (0..65m/s) else $\pm 5\%$ * Wind Direction: 0 to 359.9, accuracy $< 3^\circ$ RMSE > 1.0 m/s * Heating 20VA at 24VDC, * Protection type: IP66 * Interface: RS485 / SDI-12, * Operating temperature: -50 to 60°C	
7.	Lightning Surge Protector	no.	RS-485 & 12VDC * For the wind sensor [LSP-RS485-12]	
8.	Tipping Bucket Rain gauge	no.	Resolution 0.2mm, * 8" diameter, * Syphon: 0.4 mm capacity of rainfall (TB4-SDI12-0.2MM)	
9.	Global Solar Radiation Sensor	no.	* ISO Classification: Second Class * Sensitivity: 5 to 20 uv/w/m2 * Maximum Irradiance: 2000W/m2 * Response time (95%): 18s * Expected daily uncertainty: $< 10\%$	
10.	Mounting & Leveling Fixture for Solar Radiation sensor	no.	Aluminium, as per required	
11.	Radio Modem	no.	Power Long Range, * Very low power and long range * Distances up to 15Km for line of sight, * Interfaces: SDI-12 and RS485, * Frequency: 433Mhz or 868Mhz ISM band	
12.	Solar Charge Controller	no.	* SDI-12 Interface, * Three stage battery charging, * Real time battery voltage, charging current, load current, panel voltage, battery temperature, * Integrated temperature compensation, 12V * Negative grounding	
13.	Solar Panel	no.	* PV panel, * 50 Watt 12V, * Including stand	
14.	VRLA Battery	no.	* Maintenance Free, * 75 Ah 12 V, * Exide, * Weight 24Kg	
15.	Lightning Arrestor and Grounding Kit	no.	* 85 cm Copper Lightning rod, * 1.8 Copper grounding rod	

			* 4m Lightning cable, * 2m Earthing cable	
16.	Weatherproof Equipment Housing	no.	* Compact enclosure, * Dimension: 500mm x 700mm x250mm, * Volume: 94,00 dm3, * Net weight: 29.64Kg, * Protection categories: NEMA 4, IP 66, * Wall mount fixtures and lock	
17.	SIM	Set	Procure CDMA/GSM data transmission service including SIM/RUIM cards from Nepal Telecom Service Provider and Provide CDMA/RUIM Bandwidth for all the transmission system for one year	
18.	Installation and Comissioning	set.	Installation of complete Data Logger, solar panel, communication module, cable and connectors, wind speed and direction sensor, wind mast (10m)(to be provided by (DHM), air temperature and relative humidity sensor, tipping bucket rainguage, global solar radiation, Radio modem, maintenance free rechargeable battery, customized display board at singhadarbar and all remaining accessories. Data posting in meteorological database installed at NITC singhdarbar and visualization in web page	

▪ **Warranty**

The warranty period shall be two years starting from the successful completion of the operational test.

Concrete foundations:

Concrete pillar foundations for the AWS tower angle, anchor rod should be made in the volumetric mixing proportions as follows:

Concrete foundation: 1 (Cement): 2 (Sand): 4 (Metal)

Fine plastering: 4(Cement): 1 (Sand)

• **Data Transmission and Procurement of SIM cards**

Procure both CDMA and GSM data transmission services including RUIM/SIM cards from the telecom service providers and provide the service for all the transmission system for two year.

Post the real time data in DHM's meteorological database located in Singhdarbar in its standard compatible format and visualize data in real time at DHM website.

Data Communication System (modems):

- The communication modem should be **dual** (CDMA and GSM).
- GPRS packet communication modem system should be used for data transfer using GSM and PSDN should be used for data transfer using CDMA communication modem system.
- Communication system should be any of the Nepali GSM and CDMA networks (that may have service in the area of installation).
- The communication module should consist of redundant operation mode and it should switch over to best available network on real time.
- Complete end-to-end system, to transmit data from remote loggers to the Central database management system located in Singhdarbar at pre-programmed intervals, or alternately respond to Polls from central office.
- Power to the modem be supplied by the common system battery.
- Data server configuration.
- Service provider configuration.
- SMS and email for alerts
- Data should be sent using secured HTTP.
- Each unit of information should be separated by unique character.
- Should provide the status of balance of sim card to the database.

Maintenance and after sales service

The tenderer shall provide maintenance on all hardware and software items during the warranty period. All associated cost shall be part of contract price and bid price for evaluation.

The tenderer shall specify the frequency of preventive maintenance, and provide the preventive maintenance during the warranty period.

Emergency maintenance shall be performed as quickly as possible upon notification of a system outage and as specified in special condition of contract.

The tenderer shall provide six monthly maintenance reports during the course of the maintenance period.

On hand over of the complete system to DHM at the end of the maintenance period, the bidder shall supply a manual specifying all faults experienced by the system together with an account of how such faults have been rectified. The objective is DHM will learn from the lessons acquired during the maintenance period. The tenderer shall keep a complete maintenance log of all facilities provided under contract, including sensors and data logger. This maintenance log will be available online and will allow queries of problems/observations at given sites, as well as queries on the status of every piece of equipment that has a serial number.

The maximum downtime (defined as number of days for which an item of equipment is not usable because of inability of the tenderer to repair it) for any item is taken as 30 days. In case an item is not usable beyond the stipulated maximum downtime the tenderer will be required to replace equipment.

The tenderer shall offer a help desk function, which can be contacted by phone and/or electronic means during office hours.

After the warranty period the tenderer shall offer maintenance support as requested by DHM. The tenderer shall specify the cost of the maintenance support.

Environmental

All materials and equipment supplied under these specifications shall be suitable for being delivered, stored and operated under continental conditions with extreme changes of temperature between winter and summer and between day and night. It is the tenderer's responsibility that the offered equipment /

configuration be appropriate for climatic conditions in Nepal, in particular:

Outdoor equipment

- Temperature range: -30 °C to 50°C
- Humidity range: 0 to 100 %
- Maximum wind speed: 70 m/s

Indoor equipment

- Temperature range: 10 °C to 35 °C
- Humidity range: 0 to 90 % non-condensing

▪ Documentation

The tenderer shall submit full documentation, including user manuals and guidelines for operation and maintenance in English, for all equipment and software components supplied.

In addition a project-specific system operation manual has to be prepared, including Specific equipment layout;

- A procedural handbook;
- System block diagrams (logical connections);
- Wiring diagrams;
- Interface specifications, including communication protocols and configuration modes; and
- Software licenses.

The manual shall be provided both as hardcopy **2 copies** and on an appropriate electronic media.

The documents will also be transformed in to a web-based helpline.

The tenderer shall provide

1. Supply, install and commission the system
2. Arrange tests during the delivery (factory acceptance test, site acceptance test, operational test)
3. Provide a warranty for the system components for two years after a successful completion of the operational test (the final acceptance)
4. Update all software procured during the warranty period
5. Provide a guarantee that all system components being delivered will have a maintenance support for at least 12 years after the final acceptance
6. Supply detailed operation and maintenance manuals
7. Provide classroom and field training, including operation and maintenance procedures
8. Provide a complete training set in an electronic form.
9. Provide the country of origin for all major components and materials.
10. Provide solutions for the electric supply and telecommunications which are appropriate for the infrastructure in Nepal.

Responsibilities of DHM

DHM will be responsible for:

1. Selection of the installation sites
2. Assign staffs during installation and testing.
3. Expedite the process as required for other tasks.

Section VI. Sample Forms

1. Quotation and Price Schedules

Date:

To: *Department of Hydrology and Meteorology, Naxal, Kathmandu, Nepal*

Gentlemen and/or Ladies:

Having examined the Sealed Quotation (SQ) documents, we the undersigned, offer to “**Supply, Delivery and installation of AWS in Singhadarbar**” in conformity with the said SQ documents for the sum of *[total SQ amount in words and figures]* or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this SQ.

We undertake, if our SQ is accepted, to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements.

If our SQ is accepted, we will obtain the guarantee of a bank in a sum equivalent to Five (5) percent of the Contract Price for the due performance of the Contract, in the form prescribed by the Purchaser.

We agree to abide by this SQ for a Period of **45** days from the date fixed for SQ opening it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this SQ, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.

We understand that you are not bound to accept the lowest or any SQ you may receive.

Dated this _____ day of _____ 20_____.

[signature]

[in the capacity of]

Duly authorized to sign SQ for and on behalf of _____

Price Schedule for goods and related services

1. Price Schedule for goods

Name of Supplier _____ . _____ . Page . of ____

Item	Description	Country of Origin	Quantity	Unit price[1] EXW		Total price EXW (in NRs) (cols. 4x5)
				(in NRs)		
				In Figure	In Words	
1	2	3	4	5		4x5=6
1	Data Logger with Housing		1			
2	Customized Display Board		1			
3	Communication modules		1			
4	Relative Humidity and air temperature sensor		1			
5	Multi Plate Radiation Shield		1			
6	wind speed and direction sensor		1			
7	Lightning Surge Protector		1			
8	Tipping Bucket Rain gauge		1			
9	Global Solar Radiation Sensor		1			
10	Mounting & Leveling Fixture for Solar Radiation sensor		1			
11	Radio Modem		2			
12	Solar Charge Controller		1			
13	Solar Panel		1			
14	VRLA Battery		1			
15	Lightning Arrestor and Grounding Kit		1			
16	Weatherproof Equipment Housing		1			
	Sub Total					
	VAT 13%					
	Total (1)					

2. Price Schedule for related services

Item	Description	Country of Origin	Quantity	Unit price ¹ EXW		Total price EXW (in NRs) (cols. 4x5)
				(in NRs)		
				In Figure	In Words	
1	2	3	4	5		4x5=6
1	Installation of complete Data Logger, solar panel, communication module, cable and connectors, wind speed and direction sensor, wind mast (10m)(to be provided by (DHM), air temperature and relative humidity sensor, tipping bucket rainguage, global solar radiation, Radio modem, maintenance free rechargeable battery, customized display board at singhadarbar and all remaining accessories. Data posting in meteorological database installed at NITC singhadarbar and visualization in web page		1 set			
2	Procure CDMA/GSM data transmission service including SIM/RUIM cards from Nepal Telecom Service Provider and Provide CDMA/RUIM Bandwidth for all the transmission system for one year		1 set			
Sub Total						
VAT						
Total (2)						

¹ The price shall include all customs duties and sales and other taxes already paid or payable on the components and raw material used in the manufacture or assembly of the item or the customs duties and sales and other taxes paid on the previously imported item offered ex warehouse, ex showroom, or off-the-shelf. These factors should not be entered separately.

Summary of Price Schedule for Goods and Related Services

1	2	3	4
S.N.	Description	Price in words	Price in figures
1	Price of Goods		
2	Price of Related Services		
Total Bid price			

Total Price to final destination (In Word)

Signature of Bidder _____

Note: In case of discrepancy between unit price and total, the unit price shall prevail.

2. Bid Security

Date:

To: *Department of Hydrology and Meteorology, Naxal, Kathmandu, Nepal*

Whereas, *[name of Bidder]* (hereinafter called “the Bidder”) has submitted his Sealed Quotation (SQ) dated *[date of submission of SQ.]* for the **Supply, Delivery and installation of AWS in Singhadarbar** (hereinafter called “the Sealed Quotation”).

KNOW ALL PEOPLE by these presents that WE *[name of Bank]* of Nepal having our registered office at *[address of bank]* (hereinafter called “the Bank”) are bound unto *[name of the procuring entity]* (hereinafter called “the Purchaser”) in the sum of *[specify amount in figure and words]* for which payment well 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 of _____ 20____.

THE CONDITIONS of this obligation are:

- (1) If, the Bidder withdraws its SQ during the period of bid validity specified by the Bidder on the SQ Form; or
- (2) If the Bidder having been notified of the acceptance of its SQ by the Purchaser during the period of bid validity:
 - (a) Fails or refuses to execute the Contract Form, if required; or
 - (b) Fails or refuses to furnish the performance security, in accordance with the Instruction to Bidders;

we undertake to pay to the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser’s 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 of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to ninety (75) days from the date of opening of the Sealed Quotation, and any demand in respect thereof should reach the Bank not later than the above date.

[signature of the bank]

[common seal of the bank]

3. Form of Agreement

THIS AGREEMENT made the _____ day of _____ 20____ between *[name of Purchaser]* (hereinafter called “the Purchaser”) of the one part and *[name of Supplier]* of *[city and country of Supplier]* (hereinafter called “the Supplier”) of the other part:

WHEREAS the Purchaser invited Sealed Quotation for certain goods and ancillary services, viz., *[brief description of goods and services]* and has accepted a SQ. by the Supplier for the supply of those goods and services in the sum of *[contract price in words and figures]* (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - a. Quotation Form and the Price Schedule submitted by the Supplier;
 - b. The Schedule of Requirements;
 - c. The Technical Specifications;
 - d. The Conditions of Contract; and
 - e. The Purchaser’s Notification of Award.
3. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

On behalf of the Purchaser

On behalf of the Supplier

Name:

Name:

Designation:

Designation:

Sign:

Sign:

Seal:

Seal:

5. Performance Security

Date :

To: *Department of Hydrology and Meteorology, Naxal, Kathmandu, Nepal*

WHEREAS *[name of Supplier]* (hereinafter called “the Supplier”) has undertaken, in pursuance of Contract No. *[reference number of the contract]* dated _____ 20____ to **Supply, Delivery and installation of AWS in Singhadarbar** (hereinafter called “the Contract”).

AND WHEREAS it has been stipulated by you in the said Contract that the Supplier shall furnish you with a bank guarantee by a reputable bank for the sum specified therein as security for compliance with the Supplier’s performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Supplier a guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of *[amount of the guarantee in words and figures]*, and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the Contract and without cavil or argument, any sum or sums within the limits of *[amount of guarantee]* as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the _____ day of _____ 20_____.

Signature and seal of the Guarantors

[name of bank or financial institution]

[address]

[date]

6. Bank Guarantee for Advance Payment

To: *Department of Hydrology and Meteorology, Naxal, Kathmandu, Nepal*

[name of Contract]

Gentlemen and/or Ladies:

In accordance with the payment provision included in the Contract, which amends Clause 10 of the General Conditions of Contract to provide for advance payment, *[name and address of Supplier]* (hereinafter called “the Supplier”) shall deposit with the Purchaser a bank guarantee to guarantee its proper and faithful performance under the said Clause of the Contract in an amount of *[amount of guarantee in figures and words]*.

We, the *[bank or financial institution]*, as instructed by the Supplier, agree unconditionally and irrevocably to guarantee as primary obligator and not as surety merely, the payment to the Purchaser on its first demand without whatsoever right of objection on our part and without its first claim to the Supplier, in the amount not exceeding *[amount of guarantee in figures and words]*.

We further agree that no change or addition to or other modification of the terms of the Contract to be performed there under or of any of the Contract documents which may be made between the Purchaser and the Supplier, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition, or modification.

The validity period of the guarantee shall be 30 days beyond the period scheduled for repayment of the advance payment and the guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until the Purchaser receives full repayment of the same amount from the Supplier.

Yours truly,

Signature and seal of the Guarantors

[name of bank or financial institution]

[address]

[date]