Department of Hydrology and Meteorology
Building Resilience to Climate-Related Hazards Project

Supply, Delivery, Installation & Commissioning of Lightning Detection Network

Contract ID No: PPCR/DHM/G/ICB-24

Addendum-1

In accordance with the ITB Clause 8 of the Bid Document for the **Supply, Delivery, Installation and Commissioning of Lightning Location Network** against Contract ID No: PPCR/DHM/G/ICB-24, following amendments has been made in the Bid Document.

(i) Section-2: Bid Data Sheet, C. Preparation of Bids, ITB 18.1 (page 31) shall read as:

"The bid validity period shall be 120 days"

(ii) Section-2: Bid Data Sheet, D. Submission and Opening of Bids, ITB 22.1 (page 32) shall read as:

"The deadline for bid submission is:
Date: November 24, 2015
Time: 12.00 noon (Nepal Standard Time, NST)"

(iii) Section-2: Bid Data Sheet, D. Submission and Opening of Bids, ITB 25.1 (page 32) shall read as:

"The bid opening shall take place at:

Street Address: Department of Hydrology and Meteorology
Building Resilience to Climate Related Hazards Project,
Procurement Unit, Nagpokhari, Naxal, Kathmandu.
Date: November 24, 2015
Time: 2 p.m. (NST)

(iv) Section-2: Bid Data Sheet, E. Evaluation and Comparison of Bids, ITB 32.1 (page 33) shall read as:

"The date for the exchange rate shall be: 28 days prior to the deadline for original submission of Bids"

(v) Section 7: Schedule of Requirements, 3. Technical Specifications, Heading-1: Introduction, after Para 1 one para has been added which (page 72) shall read as-

Based on the previous examinations of the properties of the local thunderstorms and the country with very high variability in topography (i.e., a mix of high and low elevation areas, valleys) as well as the infrastructural properties of the country, a network with a relatively low sensor density utilizing Low and Very Low Frequencies (LV/VLF) is desired, yet reaching the minimum performance requirements (see Section 3). This

requirement makes possible a cost effective network, yet fulfilling the requirements of the main data user (DHM) and its customers.

(vi) Section 7: Schedule of Requirements, 3. Technical Specifications, Heading-1: Introduction, Para 3 (page 72) shall read as-

The bidder [1] *is instructed to select an optimal (minimum) number of sensors and combination of airports to fulfill the required minimum quality criteria, as specified in the technical specifications for lightning flash Location Accuracy (LA) and Detection Efficiency (DE).* ***For the purposes of the evaluation of the bids,*** *these quality indicators shall be calculated* ***at least*** *over a regular grid network with a grid size of 0.2° x 0.2°;* ***additionally, supplementary grid(s) with for example higher resolution can also be provided.***

(vii) Section 7: Schedule of Requirements, 3. Technical Specifications, Heading-2: General Requirement, Sub-Heading -2.1 System Level Requirements in last Para 13 (page 75) shall read as-

Provide solutions for the electric supply ***with solar power backup system and continuous data transmission through*** *telecommunications* ***(GSM, CDMA)*** *which are appropriate for the infrastructure in Nepal.* *The overall time period from the execution of the contract to the final acceptance is twelve months.*	*YES* ☐ */ NO* ☐

(viii) Section 7: Schedule of Requirements, 3. Technical Specifications, Heading-2: General Requirement, Sub-Heading -2.4 Manufacture, delivery and installation row 3rd (page 76) shall read as-

The bidder shall furnish details and standard drawings of equipment mounting arrangements and installation to the employer's supervisors. The bidder shall also provide detailed instructions regarding the requirements the power supply ***with solar backup system*** *as well as recommendations for security arrangements needed for systems and sensors installed in open areas (e.g., fencing, locks, etc.).*	*YES* ☐ */ NO* ☐

(ix) Section 5: Schedule of Requirements, 3. Technical Specifications, Heading-2 General Requirement, Sub-heading -2.8 Environmental 2nd and 3rd row (page 78) shall read as-

Outdoor equipment - *Temperature range:* ***-20°C to 50°C*** - *Humidity range: 0 to 100 %* - *UV exposure: UVI Range up to* ***20*** - *Maximum wind speed: 65 m/s*	*YES* ☐ */ NO* ☐

[1] 'Bidder' in this section VII Schedule of Requirements mean 'bidder or supplier' as appropriate

Indoor equipment - *Temperature range: **-10°C to 45°C*** - *Humidity range: 0 to 90 % non-condensing*	*YES* ☐ */ NO* ☐

(x) Section 5: Schedule of Requirements, 3. Technical Specifications, Heading-2 General Requirement, Sub-heading -2.10 Maintenance and after sales service para (6) (page 80) shall read as-

*The maximum downtime (defined as number of days for which an item of equipment is not usable because of inability of the bidder to repair it) for any item is taken as **10 days**. In case an item is not usable beyond the stipulated maximum downtime the bidder will be required to replace equipment.*	*YES* ☐ */ NO* ☐

(xi) Section 5: Schedule of Requirements, 3. Technical Specifications, Heading-3 Technical Requirements in following Serial nos. (page 81 & 82) shall read as-

4.	Median peak current estimation error should be less than **10%** *Means of verification: At least **two (2)** peer-reviewed publications justifying the peak current estimation accuracy.*	YES ☐ / NO ☐ Annex.
8.	Have the capability to be integrated into existing national, regional, and global Lightning detection Networks (Nationwide lightning location System) through the sharing of raw sensor data. *Means of verification: Document(s) indicating the different* **ways to share raw sensor data.**	YES ☐ / NO ☐ Annex.
9.	Operate with sensors that have zero dead time so that sensor can continuously detect incoming signals even if they arrive almost simultaneously. *Means of verification: Document(s) **justifying** the ability and method for continuous measurements.*	YES ☐ / NO ☐ Annex.
10.	Supported by projections of scientific papers, and refereed third party papers **justifying** the system reliability and performance for the contents of the above items where applicable. *Means of verification: At least **two (2)** peer reviewed publications **justifying the reliability and performance.***	YES ☐ / NO ☐ Annex.
11.	Shall provide results from validation studies from reputable third parties for location accuracy, detection efficiency, and peak current estimation accuracy using real-time data. *Means of verification: At least **two (2)** peer reviewed publications **justifying the results of validation studies.***	YES ☐ / NO ☐ Annex.
12.	Supported by a ready-made visualization tool. *Means of verification: Document(s) showing the availability and*	YES ☐ / NO ☐