

AMBITIOUS CITY PROMISES

Engaging citizens. Driving climate action.

Terms of Reference for Service Provider: Outdoor Continuous Air Quality Monitoring Instrument for CauGiay District, Hanoi (Vietnam)

IKI Ambitious City Promises project

As of 16 September 2020

1. About the Ambitious City Promises Project

The Ambitious City Promises: Commitments for low-carbon urban development in Southeast Asian large cities is a 3.5-year international project being implemented by ICLEI-Local Governments for Sustainability with support from the International Climate Initiative (IKI) of the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU).

The project aims to support selected large cities in Indonesia, the Philippines, and Vietnam to establish strong greenhouse gas (GHG) reduction commitments, local climate action plans directed by concrete targets, enhanced multi-stakeholder engagement and integrated strategies. “City Promises” (city’s Local Climate Change Action Plan) shall be developed in three model cities and their implementation shall be outlined and initiated. Throughout the project period, each local government will design locally-appropriate targets and action plans on the basis of their development framework and priorities.

Taking into consideration the results of project activities, a small-scale infrastructure pilot demonstration project shall be implemented by the ACP project in Hanoi. The pilot project shall establish a cooperation and awareness-raising center on climate actions and environmental protection for local communities. The predetermined pilot project site shall be upgraded through a co-designing approach with the local community. It will serve as a space for learning about different low emission development solutions which will be demonstrated by the installation of infrastructure measures such as playground built with recycled materials, rooftop solar panels, real-time air quality monitoring instrument, waste segregation system, among others.

Improving air quality conditions in Hanoi City is one of the priorities of the city government. As such, several measures to address this problem such as banning beehive stoves and promoting active mobility have been put in place. In order to sustain and deliver more effective actions, the city government is also improving its mechanisms in obtaining air quality data to better inform its policies and programs.

Therefore, the project seeks to hire a qualified **local service provider of air quality monitoring instruments** that shall aid in monitoring the compliance of air quality conditions in the project site according to applicable national regulations.

The proposed pilot project site is located at **No. 45 Nghia Tan, Nghia Tan Ward - CauGiay District - Hanoi**. The project site houses a ward office which also functions as a community center, a football field and green spaces, and a small playground.

2. Terms of Reference for the Service Provider

The project requires the services of a local service provider of air quality monitoring instruments to undertake a detailed assessment, procurement of unit components and other materials, set up and installation, testing and commissioning, and capacity building training for personnel-in-charge of operations and maintenance of an **outdoor continuous air quality monitoring instrument**.

2.1. Scope of Work

The following activities will need to be undertaken in order to help meet the objectives of the project.

Detailed assessment	• With the support of a city official, determine the installation location that is most representative of PM emissions. The site selection must take into consideration factors such as flow disturbances and varying PM stratification. • Submit detailed recommendation of unit installation based on the results of the assessment for the review and approval by ICLEI and city government.
Procurement of unit components and other materials	• Procurement of outdoor continuous air quality monitoring system capable of measuring PM 10, PM 2.5, SO₂, NO_x, O₃, and/or CO and capable of producing results in units of the applicable national standards. • Procurement of necessary accessories to the system. • See Annex I for additional details of expected specifications.
Set up and installation	• Install the outdoor continuous air quality monitoring instrument based on the final and approved specifications. • Perform initial installation and calibration procedures to confirm acceptability and reliability of the system. • Ensure that that instrument and its data logger are able to collect and record all

	normal emission levels and deviation. • Ensure that the instrument and its data logger are properly programmed to accept and transmit status signals (e.g. flags for internal calibrations, suspect data, maintenance periods) and have the capacity to share with the information system of the ward and DONRE. • Perform continuous sampling • Confirm that the averaging time, average number of measurements, minimum data availability, and averaging procedure conform with applicable national standards.
Testing and commissioning	• Conduct performance test procedures such as the following and as required by applicable national standards and regulations. ○ Maintain the sample at an adequate temperature to prevent moisture condensation in the sample line before performing an analysis of the particulate matter. ○ Conduct a seven-day zero and upscale drift test before correlation testing. When any performance check exceeds daily specifications, implement adjustments and perform necessary maintenance to ensure reliable operation. • Submit a detailed report of performance testing procedures executed, findings, and guarantee of reliable operation of the instrument. • The contractor also assumes liability for a 2-year warranty period for the instrument's components and overall performance after successful testing and commissioning.
Capacity building training for personnel-in-charge	• Conduct capacity building training for personnel (ward officers) in charge of the operation and maintenance of the instrument as well as on data analysis and usage. • Develop and handover operations manual for personnel-in-charge. • Establish coordination mechanisms (i.e. focal persons) to facilitate on-site and remote assistance in the operation and troubleshooting of the instrument after completing the installation and testing period.

2.2. Deliverables and time frames

A maximum of **four (4) months** is estimated to complete the deliverables as stated below. The service provider shall provide a minimum of one-year warranty period which shall cover removal, replacement, or repair of the outdoor continuous air quality monitoring instrument and its individual components and accessories.

Deliverables	Indicative Timeline
Detailed recommendation of outdoor continuous air quality monitoring instrument	October 2020 (1 week)
Procurement of unit components and other accessories, set up and installation	October 2020 (2 weeks)
Testing and commissioning	October to November 2020 (2 weeks)
Continuing operations and performance monitoring	November to December 2020 (4 weeks)
Development and turnover of operations manual and delivery of capacity building training for personnel-in-charge of operations and maintenance	November 2020 (1 week)

3. Service provider eligibility

The successful service provider must provide evidence of the following:

- Eligible bidder shall be an air quality monitoring instrument supplier and/or manufacturer duly registered in Vietnam and conforms to relevant national/international standards of the product.
- Eligible bidder shall provide necessary documentation of accreditation from relevant government authorities for the installation of air quality monitoring instruments in Vietnam.
- Eligible bidder shall have completed supply, installation, testing, commissioning, and handing over of an outdoor air quality monitoring instrument in a single order and has been operational for at least 2 years till the date of application for this project.
- Use of environment-friendly, cost-effective, and genuine equipment and materials from reputable companies.
- A team of professional and experienced technicians, dedicated to helping customers.
- Select specialized equipment for outdoor continuous air quality monitoring instruments in accordance with technical specifications, compatible with each other to help the system operate optimally and sustainably over time.
- Safe construction solutions as well as considers overall aesthetics in the design and construction.

Additionally, advantageous criteria for prospective service providers include:

- Prior work experience in Hanoi City
- Prior work with ICLEI-Local Governments for Sustainability
- Flexibility and a shared vision for the project outcome are essential since the work will be undertaken in close cooperation with project team members and officials of the city government of Hanoi.

4. Proposal requirements and general conditions

The following information must be provided in the proposal:

- The bidder shall possess a valid national registration certification for the said firm.
- The bidder shall submit VAT registration, up-to-date TIN certificate and all relevant financial and registration documents declared by the relevant authorities of the Government of Vietnam for the organization to operate in Vietnam.
- In case of an authorized dealer, additionally, authorization letter from manufacturing company along with other documents as mentioned in the eligibility criteria.
- A portfolio of similar projects previously undertaken including information on the Beneficiary, Nature of Installation, Contract Value, Date of Commencement, Date of Commissioning, Contact Details.
- Details of tools and accessories available with the bidder.
- A detailed CV of technical personnel whom the bidder shall engage for this project.
- A detailed technical proposal and quotation taking into consideration the minimum requirements outlined in the ToR.
- The bidder shall produce original documents for cross verification as and when requested by ICLEI Southeast Asia.
- All documents mentioned above as well as technical and price bid documents shall be signed by the bidder.

The following conditions shall apply to this project contract:

- The service provider may not subcontract other parties to assist them.
- The quotation shall be inclusive of all costs including taxes associated with the project. For the purposes of evaluation, the financial bid should be prepared in Vietnamese Dong (VND). Furthermore, the service provider shall adhere to the following requirements:
 - The price quoted shall be fixed and firm and not be subjected to any escalation or variation. The price should be inclusive of all transportation and installation charges including all required material to successfully complete tasks, duties & taxes, and insurance.
 - Bill of materials for the outdoor continuous air quality monitoring instrument as indicated should be provided along with the price bid.
 - ICLEI Southeast Asia reserves the right to add/delete to the final size and components of the instrument at the unit rate quoted by the bidder.
 - All or any accessories/consumables/items required for satisfactory commissioning of work shall be deemed to be included in the contract and shall be provided by the bidder without extra charges.
- It should be noted that the project is being implemented by ICLEI in partnership with the City Government of Hanoi. Hence, instructions to bidders

will be given by ICLEI Southeast Asia in consultation with officials of the City Government of Hanoi.

- Once the system is installed, commissioned, and operated successfully for 1 month, this will be handed over to CauGiay District of Hanoi City as the beneficiary of the system.
- Bidders shall submit bids that satisfy every condition outlined in this ToR, failing which the tender is liable to be rejected.

5. Closing date for submission of proposals

Kindly submit your proposal and supporting documents in English via e-mail to **Mr. Alfredo Bernarte Jr.** <al.bernarte@iclei.org> and **Ms. Hoang Thi Huong Giang** <giang.hoang@iclei.org> before **04:000 PM (Vietnamese hours) on 16 October 2020**. For any queries related to submission, please contact via the e-mail address above or ICLEI Southeast Asia Secretariat at **+843 99 033 866**. The service provider is expected to commence work in **26 October 2020**.

Annex I. Expected Specifications of the Outdoor Continuous Air Quality Monitoring Instrument

- Capable of measuring and providing a continuous record of actual PM 10, PM 2.5, SO₂, NO_x, O₃, and/or CO concentrations using pollutant analyzer measurements and a conversion equation, graph, or computer program to produce results in µg/m³ consistent with applicable national regulations and standards.
- Capable of accepting and recording electronic signals from all monitors associated with the instrument that can be correlated to PM concentrations.
- Capable of performing zero and upscale drift checks automatically.
- Capable of performing automatic diagnostic checks and flagging status signals to the data recorder.
- Weatherproof and locked enclosure
- Integrated power switch -- main, off, battery
- Communications: WiFi 802.11 b/g/n, band 2.4 Ghz
- Cloud monitoring, management, and support for configuration, calibration, diagnostics, real-time data visualization, SMS and email alerts, third-party sensor measurements, data reporting with auto data export, instrument network management
- Pole and wall mount brackets
- Hard and soft copy (USB stick) of user manual, calibration certificate