Request for Proposals: Procurement and deployment of a comprehensive city-owned low-cost sensor AQ monitoring network.

Introduction

The Clean Air Fund is seeking proposals from qualified organizations to procure and deploy a comprehensive low-cost sensor air quality (AQ) monitoring network for Nairobi City County. This project aims to assist the city establish its air quality monitoring network that forms infrastructure backbone for the city-owned air quality data management system and publicly accessible air quality data portal, enabling NCC to independently monitor and manage air quality within the city.

Background

Currently, air quality monitoring in Nairobi relies primarily on low-cost monitors operated by third parties. This creates a significant gap in air quality assessment due to the lack of a robust network of municipal sensors. The absence of a comprehensive, city-managed sensor network hinders the development of consistent, calibrated, and long-term data collection for particulate matter and other pollutants. This project aims to address this critical gap.

Project Goal

This project will enable Nairobi City County Government to establish its comprehensive air quality monitoring system. This system will provide the infrastructure backbone for developing a city-owned air quality data management system and publicly accessible air quality data portal.

Breathe Cities was launched in June 2023 as a partnership between Bloomberg Philanthropies, the Clean Air Fund, and C40 Cities to save lives, improve health, and reduce air pollution that is both harmful to public health and the climate.

Clean Air Fund

Launched in 2019, the Clean Air Fund is a philanthropic initiative with a mission to tackle air pollution around the world. Our aim is to help build and support a powerful global movement for clean air. We achieve this by bringing together funders, researchers, policy makers and campaigners working on a wide range of issues to find and scale solutions that will provide clean air for all.

More information about the Clean Air Fund can be found on our website: www.cleanairfund.org.

Scope of Work
The project has two key outcomes:
Outcome 1: Procurement and Deployment of Low-Cost AQ Monitoring Sensors

Outcome 1 Activities:
- Conduct a desk-based needs assessment, considering existing results from parallel low-cost sensor colocation and calibration project, and existing low-cost sensor network to determine sensor specifications that meet Nairobi's specific air quality monitoring requirements.
- Develop a comprehensive deployment plan for sensor placement, considering factors such as population density, industrial activity, vehicular routes and existing monitoring gaps.
- Craft detailed procurement guidelines for the acquisition of low-cost air quality sensors, ensuring cost-effectiveness and adherence to international quality standards, and in accordance with Clean Air Fund's sensor procurement guidelines (to be provided to successful bidder).
- Deploy the low-cost AQ monitoring sensors across designated locations in Nairobi, in close collaboration with Nairobi City County Government staff.
- Provide training to Nairobi City County Government staff on sensor deployment procedures, operation, and maintenance.
- Develop a comprehensive maintenance plan for the sensor network, enabling Nairobi City County Government staff to independently manage and maintain the equipment.

Outcome 2: Integration of City Air Quality Management Monitoring System
Outcome 2 Activities:
- Design and develop a city air quality management monitoring system that integrates data collected from the deployed low-cost sensor network.
- Establish protocols for regular air quality reporting based on the collected data.
- Implement a system for periodical monitoring, calibration, and maintenance of the deployed sensors.

Deliverables
The successful bidder will deliver the following:
1. Description of the proposed low-cost air quality sensor technology, including technical specifications and justification for selection.
2. Detailed deployment plan, site selection strategy and map of sensor locations.
3. Procurement guidelines for low-cost air quality sensors.
4. A fully deployed low-cost sensor network across Nairobi.
5. Training plan and training of Nairobi City County Government staff on sensor deployment and maintenance.
6. Comprehensive maintenance plan for the sensor network.
7. Proposed approach for integrating the sensor network with the city's air quality management system.
8. Plan for periodical monitoring, calibration, and maintenance of the sensor network, and agreement to this from Nairobi City County Government.

Selection Criteria
Proposals will be evaluated based on the following criteria:
- Demonstrated experience in deploying and managing air quality monitoring networks, particularly those utilizing low-cost sensors.
- Understanding of Nairobi's air quality challenges and ability to propose solutions tailored to the city's specific needs.
- Proposed methodology for sensor selection, deployment, data management, public data availability and system integration.
- Cost-effectiveness and competitiveness of the proposed financial plan.
- Qualifications and experience of the proposed project team.
- Proven track record in working collaboratively with government agencies.
- Experience working in Kenya and familiarity with the local context.

A selection committee comprised of representatives from Clean Air Fund and Nairobi City County Government will review all proposals. Shortlisted applicants may be invited for presentations and further discussions. The selection committee reserves the right to reject any or all proposals.

Submission Instructions
Interested firms are invited to submit a proposal that clearly addresses the requirements outlined in this RfP. Proposals should include the following:
- A cover letter expressing interest in the project.
- Company profile and relevant experience.
- Proposed project team and their qualifications.
- Detailed technical approach and methodology.
- Implementation timeline and budget breakdown.
- References from past projects.

Proposals should be limited to 10 pages, not including a cover page/letter and attachments. All applications must be submitted in Microsoft Word format with margins not less than one inch. Text type must be 11 point or larger.

Any questions on the RfP should be submitted via email to lakinyi@cleanairfund.org by COB 10 October 2024. The deadline for submission of proposals is COB on 21 October 2024. Proposals must be submitted via email to lakinyi@cleanairfund.org and cc vindasi@cleanairfund.org

Project Budget
Total project costs, including all applicable taxes and other 'hidden' costs should not exceed 150,000.00 US Dollars. All costs incurred in connection with the submission of this RfP are non-refundable by Clean Air Fund.

Activity Deadline

RfP published	20 September 2024
Deadline for questions	10 October 2024
Deadline for proposals	21 October 2024
Review of proposals and decision on preferred bidder	30 October 2024
Proposal finalisation and agreement	20 November 2024
Project start	1 January 2025
Project end	30 August 2026