



Request for Proposals (RFP): Installation of Off-Grid Solar Power Systems at Various Laboratory Facilities throughout Ethiopia

RFP Issue Date: *October 1, 2021*

All Bids Due Date: *November 1, 2021*

Submissions due via email to:

Sarah Young, Specialist, Global Health,
sarah.young@aphl.org

The development of, and the projects anticipated in, this RFP are supported by Cooperative Agreement Number NU2GGH001993 under the U.S. Centers for Disease Control and Prevention (CDC). The contents of this RFP are solely the responsibility of the authors and neither represent the official view of CDC nor reflect CDC's endorsement of a product or procedure.

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Summary

The Association of Public Health Laboratories (APHL), in collaboration with the Ethiopian Public Health Institute (EPHI) and the United States Centers for Disease Control and Prevention (CDC) anticipates undertaking various solar power projects at laboratories across Ethiopia. APHL expects to have solar power equipment installed at three laboratories during the year on a relatively aggressive time schedule.

The solar power projects will take place at various labs as described in [Appendix A](#). APHL encourages any party who can successfully provide the requested goods and services to submit a proposal for consideration.

Background

APHL is a nonprofit organization that works to safeguard the public's health by strengthening public health laboratories (PHLs) in the United States and globally. APHL is organized under the laws of the United States of America's District of Columbia with its headquarters office at 8515 Georgia Avenue, Suite 700, Silver Spring MD, 20910. APHL is recognized as tax exempt in the United States under Section 501(c)(3) of the U.S. Internal Revenue Code and its work on behalf of PHLs spans more than 60 years.

Under the Cooperative Agreement (NU2GGH001993) with the Centers for Disease Control and Prevention, APHL will manage the construction of solar panel projects in various laboratory locations in Ethiopia.

Anticipated RFP Schedule

Applications are due to the individual(s) specified in the [Final RFP Response](#) section of this RFP by 5:00 pm East Africa Time (EAT) on **November 1, 2021**. APHL anticipates the following schedule for the entire competitive bidding process:

Date	Event
October 1, 2021	APHL Issues RFP
October 10, 2021	Applicants set up sites visits in consultation with APHL
November 1, 2021	All Bids due to APHL by 5:00 PM EAT

If APHL makes any modification to this anticipated schedule, it will post the change to APHL's procurement website: www.aphl.org/rfp.

Nature of Awards

Overall Description

APHL will select one or more applicant(s) to provide the design and installation of solar system components based on its evaluation of received proposals. Applicants must bid on **all** three (3) individual sites as listed in [Appendix A-Site Surveys](#). The successful applicant(s) will receive a contract from APHL that sets out the scope of work, project completion timeline, budget, payment terms, invoicing requirements, and legal terms associated with the project.

APHL will select one or more applicant(s) from those receiving the highest evaluation score from the [Evaluation Team](#) based upon APHL's determination of who is able to complete the work most efficiently and economically.

Specific Information

1. Applicants must designate and supply all components, materials, and labor necessary to construct and install the individual off-grid solar system requirements based upon the anticipated connected load, additional 25% capacity and power consumption described in the site surveys.
2. Awardees will be responsible designing an off-grid solar system utilizing the basic component specifications found in [Appendix E](#).
3. APHL anticipates that awardees will mount all photo-voltaic panels on the laboratory roof and will be responsible to reinforce these structures to provide the required stability.
4. If the awardee determined that the roof is incapable of supporting the weight associated with the solar array installation or there is an insufficient room on the available roof to mount the arrays, alternative ground mount installations shall be priced and offered by the applicant. A perimeter fence with all needed appurtenances to ensure reasonable security measures surrounding such installation shall be submitted as an additional cost with along with supporting details and specifications.

Proposal Structure and Content

In order to submit a complete and acceptable proposal, an applicant must provide the information described in the following four sections:

- **Completion of the Installation Contract Cost Data Entry Worksheet Excel File**
 - An applicant must complete the *Installation Contract Cost Data Entry Worksheet Excel* spreadsheet, a copy of which is available on APHL's procurement website at www.aphl.org/rfp under the Installation of Off-Grid Solar Power Systems at Various Laboratory Facilities throughout Ethiopia RFP.
 - More instructions on the contents needed in this spreadsheet are in [Appendix B- Contract Cost Data Entry Worksheet](#).
 - **These data entry worksheets must accompany the proposal in their original Excel format in addition to any other requirements found herein.**

- **Completion of the Facilities Survey and Components Design Worksheet Excel File**
 - An applicant must also complete a copy of the *Completion of the Facilities Survey and Components Design Worksheet Excel* spreadsheet, available on APHL's procurement website at www.aphl.org/rfp under the Installation of Off-Grid Solar Power Systems at Various Laboratory Facilities throughout Ethiopia RFP.
 - More instructions on the contents needed for this second spreadsheet are in [Appendix C- Facilities Survey and Components Design Worksheet](#).
 - In this Excel spreadsheet, an applicant must list the type and quantities of all components needed to construct and install the individual solar system requirements based on the expected power consumption as described in [Appendix A- Site Surveys](#).
 - This Excel spreadsheet provides the roof type for each site. The applicant is responsible for evaluating and reinforcing the roof structures where solar arrays are to be mounted.
 - In the event the structure is unable to be reinforced adequately, the applicant will ground mount the solar arrays in an approved area closest to the battery/control room and include all costs for such installation including security fencing and other responsible protection measures.

- **Submission of a Proposal Narrative**
 - *****An applicant must put all documents listed below in a single PDF file.*****
 - An applicant must include a company profile that provides (i) the physical and postal address for its headquarters office and (ii) the name, title, office/ mobile phone numbers and email address for the person responsible for managing the installation.
 - An applicant must provide the names and contact information of at least three companies or organizations for whom the applicant has completed solar installation projects like those requested in the proposal. APHL strongly prefers references from those located in the U.S. or Ethiopia.
 - An applicant must provide a description of the company that includes (i) a discussion of key staff members' qualifications and experience, (ii) proof of the applicant's capacity to implement projects of comparable complexity, and (iii) total

- number of full-time solar system installers on company payroll.
- o An applicant must submit a copy of the applicant's certificate of company registration and evidence of good standing.
- o Each applicant must provide a copy of the applicant's (i) three most recent monthly bank statements or (ii) most recent audited financial statements.
- o The proposal narrative must include a statement that all prices are valid for 45 days after RFP Deadline
- o The proposal narrative must also include a full description of all warranties. The applicant will provide a minimum one-year warranty on all labor and materials provided under this contract. The warranty will commence upon the issuance of a certificate of completion from APHL. APHL will note any extension of this one-year minimum in the applicant's evaluation in a favorable light.
- o The narrative must include a description and price per unit of each component used in the construction of the solar system.
- o [Appendix E– Components to be used in Designing Each System](#)
 - Include System Design materials: Provide specifications and pricing for all materials and components to include but not limited to all necessary solar and other devices required to achieve the intended design requirements listed under the site surveys.
- o The proposal must provide a recommended maintenance schedule and a complete training program for the operational personnel. APHL requires an applicant to provide one site visit six (6) months after the starting of the project to certify that the system is functioning as designed.
- o The narrative must include but is not limited to all information regarding the technical specifications of each solar equipment component, such as the direct current (DC)C voltage of the solar system, the capacity of the charge controller, the capacity of the inverter, the number and rating of the PV panels, or any other accessories that will support the installations (e.g., fuses, MCCBs, tamper/theft-proof frame for the PV panels, cabling, etc.)
- o The applicant must provide a detailed and complete critical path method (CPM) schedule that will identify all steps throughout the contracted process from the procurement and manufacturing process and receiving the solar components at their depot located in Addis Ababa, Ethiopia to the commissioning of the system. This will include installing the solar components and all lighting and branch circuitry to energize the project site, providing the commissioning of each system and training of designated personnel on the operation and maintenance of the systems for each site.
- o Provide proof that the applicant has all required licensure needed to construct the project within Ethiopia and pursuant to its regulations.
- o Applicant must submit bids for all sites listed in [Appendix A- Site Surveys](#) to be considered for a contract award.
 - Applicants should include any additional discounts for aggregate pricing if APHL issues all three contracts to a single successful applicant.

- **Budget**

- o The applicant must provide a budget reflecting its total price, which includes costs for services, materials and labor broken down by project site. The applicant may have provided this information in earlier sections but must include this information in a stand- alone budget. If awarded a contract, the applicant's total compensation will be based on the on the total price provided in the budget. The applicant will provide the following in their budget:
 - Total cost of all components, materials, or devices necessary to complete the projects. **Please refer to [Appendix D](#) and [Appendix E](#)**– Components to be used in Designing Each System for additional details.
 - Total cost of all labor to complete the projects.
 - Total cost of all travel and related expenses to complete the projects.
 - Total cost of all logistics charges and import duties, if required, to transport from the point of purchase to the project site.
 - Cost of all fees, taxes, and permits required to complete the projects.
 - Cost of any preparation, materials or labor needed to secure, install, and reinforce the additional weight of the solar arrays and other system components within or upon the allocated spaces and structures at each project site. This includes proper ventilation and security of the battery/control rooms, if required.
 - Cost of training site on site personnel in basic system use and maintenance.

Project Duration

Installation project will start as soon as APHL receives a ratified contract back from an awardee. APHL requires all installation projects to be completed by the selected contractors no later than September 16, 2022

Response Submittal

Pre-Award Site Visits and Proposal Development

Site visits are not mandatory but expressly encouraged to familiarize the applicants with any issues they need to consider while performing the contracted work in accordance with the specifications and requirements. This includes evaluation of the roof structure upon which the solar arrays are to be mounted. Applicants who are interested in conducting site visits to selected labs should email Sarah Young, Specialist, Global Health (sarah.young@aphl.org) for possible scheduling. In lieu of a site visit, the applicant can find details about each site in [Appendix A- Site Surveys](#).

If the applicant determines that the roof structure is unsuitable to support the additional

weight of the solar arrays, the applicant should consider reinforcing the existing roof structure in such a manner that will support the additional weight or provide an alternate ground mounted design. The applicant costs should include additional costs to reinforce the roof in the “*Installation Contract Cost Data Entry Worksheet*” under Column O in the “**Locally Purchased Site Materials**”. The applicant should reflect any additional labor within Column L under the heading “**Labor**”.

Final RFP Response

APHL must receive a complete proposal by no later than 5:00 PM EAT on (Date). Applicants may send proposals via email to Sarah Young sarah.young@aphl.org copying Maria Casanova Landron, maria.landron@aphl.org. Applicants should use “Proposal for Ethiopia Solar Power Installation” in the email subject line.

Applicants may send hard copies via certified, registered, or express mail providing the postal service or trackable mail delivery services provided by DHL, FedEx, UPS, other established delivery service providers or hand-delivery to the following address:

c/o Sarah Young
 Association of Public Health Laboratories
 8515 Georgia Ave, Ste 700
 Silver Spring, MD 20910

APHL will send an email acknowledging the receipt of your application. If you do not receive an acknowledgement within 48 hours, please email the points of contact above to confirm receipt.

APHL may terminate or modify the RFP process at any time during the response period. All changes to the RFP will be posted to the APHL’s procurement website, www.aphl.org/rfp.

Evaluation of Proposals

Initial Review

APHL staff members or consultants under contract with APHL will conduct a review of all proposals for completeness. APHL reserves the right to ask applicants to supplement incomplete proposals and consider them for evaluation even if supplements are received after the RFP deadline. APHL will also have the right to reject and not consider any incomplete proposal that does not fulfill the requirements set out in Proposal Structure and Content above.

Evaluation Team

The evaluation team will consist of the following individuals:

Sarah Young, Specialist, APHL (US) staff member
 Maria Landron, Senior Specialist, APHL (US) staff member
 Sherrie Staley, Deputy Director, APHL (US) staff member

Tim Traynor, APHL consultant

Conflict of Interest

APHL will ask potential reviewers to complete and sign APHL's [Conflict of Interest Disclosure Statement](#) to disclose any real or perceived conflict of interest prior to the start of the evaluation process. Reviewers will affirm that they have no conflict of interest that would preclude an unbiased and objective review of the proposals received. APHL will not select reviewers with a perceived or potential conflict of interest.

Evaluation Process

The evaluation team will select one awardee for each project site. APHL will evaluate proposals based on the following factors: overall price, CPM schedule, size of the installation team, design plan, and other factors. APHL will give most weight to the price and the CPM schedule. APHL may also disqualify applicants whose price reflects lack of technical expertise to complete the project.

APHL will conduct the entire review via a combination of email communication between the evaluation team, teleconferences and/or webinar evaluation sessions.

APHL will award a contract to each applicant who receives the highest overall score for the respective site.

Supplemental Proposal Information

The evaluation team may request follow up interviews with applicants and/or supplemental information on an applicant's proposal. Once the evaluation team has the additional material from the interviews and supplemental information, the team will evaluate whether this material alters the relative ranking of any individual applicant. If the consensus of the evaluation team is that the new material merits adjusting the applicant rankings, the team will do so.

Questions from Applicants

Applicants may ask APHL questions and clarifications regarding the RFP to Sarah Young at sarah.young@aphl.org. APHL will post questions and answers on its procurement website at www.aphl.org/rfp. APHL will not disclose the name of the applicant submitting a question.

Applicant Past Performance and Integrity Assessment

APHL reserves the right to tour an applicant's facilities (in-person or virtually) and reach out to an awardee's references. APHL may choose to disqualify an applicant if APHL receives or observes information regarding questionable business practices or if the applicant is barred from contracting with the United States government.

Post-Evaluation Procedures

APHL staff will notify the selected applicant(s) by November 19, 2021 and will post the name of the awardee(s) to APHL's procurement website, www.aphl.org/rfp on the same day. Unsuccessful applicants will receive notification of these results by email within 30 days of the date the name of the winning applicant is posted. All applicants will be entitled to utilize APHL's RFP Appeals Process to formulate a protest regarding alleged irregularities or improprieties during the procurement process. Specific details of this policy are located on the procurement website, www.aphl.org/rfp.

Conditions of Award Acceptance

The eligible applicants must be able to contract directly with APHL. APHL will give the awardee a reasonable amount of time to accept APHL's contract, which includes all terms and conditions. If APHL and the awardee cannot finalize a contract in the allowed time, APHL may re-issue the award to the next in-line applicant or re-evaluate losing bids.

Disclaimer and Other General Matters

This RFP is neither an agreement nor an offer to enter into an agreement with any respondent. Once the application evaluation is complete, APHL may choose to enter a definitive contract with the selected RFP applicant(s).

APHL must ensure that the selected applicant is neither suspended nor debarred from receiving federal funds and that the applicant meets any other funding eligibility requirement imposed by the Cooperative Agreement. APHL's determination of whether the applicant is eligible to receive Cooperative Agreement funding will be definitive and may not be appealed. If APHL determines that the selected applicant is ineligible to receive Cooperative Agreement funding, APHL will nullify the contract or will cease negotiation of contract terms.

Each applicant will bear its own costs associated with or relating to the preparation and submission of its application and as otherwise noted throughout this RFP. These costs and expenses will remain with the applicant, and APHL will not be liable for these or for any other costs or other expenses incurred by the applicant in preparation or submission of its application, regardless of the conduct or outcome of the response period or the selection process.

Appendix A-Site Surveys

APHL has conducted a site survey of each site and offer important information about how equipment to be powered by the off-grid system is deployed and operated. Applicants should conduct their own site visits to familiarize themselves with all aspects of the facilities and their operations. This APHL site survey information is available on-line via the following links:

- [Site Surveys](#)
- [Asosa-Site Assessment](#)
- [Gambela Site Assessment](#)
- [Semera Site Assessment](#)

These files include individual APHL conducted site surveys along with Longitude/ Latitude information to locate the proper solar radiation capabilities. Each survey also contains information regarding the lab equipment and devices to be wired and connected to the off-grid solar system. There are numerous photos that show aspects of the site and interiors of the labs.

*** It is important to note that the applicant must rely upon its own site inspection and survey to assure that it has considered all aspect of the system installation and power requirements prior to submitting its proposal. The applicant will provide all labor and materials needed to execute the intended scope of work. Any omissions or discrepancies will be the final responsibility of the Applicant. ***

Appendix B-Contract Cost Data Entry Worksheet

This document titled “Installation Contract Cost Data Entry Worksheet” requests information regarding the applicant’s costs for logistics, labor, food and lodging, and site materials. This Worksheet is available at the following [link](#).

The applicant will utilize the site survey information from Appendix A including the total KW requirements at each location along with the required 25% additional capacity. The applicant must design and size the off-grid system accordingly.

- o Applicants must provide the following information in the Worksheet:
 - o *Logistic Cost*: the costs to deliver all components point of origin to the Applicant’s place of business based upon a daily rate in USD
 - o *Net Handling Cost*-automatically populates
 - o *Labor*: all labor costs to complete the installation of the solar system components and other required ancillary work detailed herein based upon a daily rate in USD
 - o *Food and Lodging Cost*: total number of person/days per site multiplied by per diem costs in USD
 - o *Locally Purchased Materials (total costs)*: there will be various materials which the applicant must provide to include but not limited to branch circuit cable, electrical outlets, lamps and light sockets, junction boxes, fans, and other appurtenances to accomplish the designated work (***** Applicant will provide a list of these items and their individual break-down in the Narrative section*****) and include their individual costs based upon a daily rate in USD
 - o *Total Contract Costs per Site*: the Worksheet will total the amount of all goods and services provided by the applicant in USD

APHL reserves the right to change any of the components listed in Appendix E in response to market conditions. All necessary adjustments to the Installation pricing will be entertained if such an exercise be necessary.

Appendix C-Facilities Survey and Components Design Worksheet

The applicant will identify components in the “Facilities Survey and Components Design Worksheet”. This Worksheet is available at the following [link](#). Please use the notes below to help guide the completion of this Worksheet.

Columns G– H: The applicant must provide individual kWp and proposed system size for each site based upon the information located in Columns D – F. Next the applicant will indicate in Column J the number and wattage of monocrystalline panels required at each site.

Columns J – N: Use the estimated kWhr to determine the appropriate number and capacities of the designated batteries.

Columns O – Y: Indicate the proper designation and number of the PV Array Combiner boxes Column Z: Use 8 KW inverter controllers to be used in combination for all systems.

Columns AA- AC: We indicate the type of roof found at each location.

- Please note-while the roof type is provided, the applicant is responsible for evaluating and reinforcing the roof structures where solar arrays are to be mounted. In the event the structure is unable to be reinforced adequately, the applicant will mount the solar arrays on the ground in an area closest to the battery/ control room designated by APHL.

Columns AD–AN: Please indicate quantities of other supplies needed to complete the design.

Appendix D-Typical Light Fixtures and Lamps

Applicant will provide light fixtures and lamps similar in light output as proposed by examples below. The overall intention of this specification is to limit the consumption of the interior facility lighting to 10 watts per fixture. Other fixture options may be entertained but the low wattage consumption is the objective.

Porcelain Sockets with 10 W LED lamps and Outdoor suitable for wet locations with 12 W LED flood lamps at 230 VAC, Medium Edison Base as required. Some examples below:

Leviton Lampholder Keyless, Porcelain Single Circuit
250 V



Appendix E – Components to be used in Designing Each System

Applicant – Please use the following minimum specifications to guide the selection of components necessary to design and construct the proposed off-grid solar systems to be sized according to the individual site requirements (See Appendix A- Site Surveys)

Solar Arrays – Monocrystalline, PERC, M10 half-cell units or equivalent with a minimum of 20% efficiency rating. Individual array wattage size to be determined by available roof mount space and competitive market pricing

All necessary Solar Brackets and Mounting Hardware required to accommodate concrete, asbestos, and metal tilt or flat roofs

MC4 Connectors with NEC 2008 compliant locking system

PV Array Combiner Boxes - IP66, IK10 and GWT 750°C, Class II, Ui/Ue: 1000VDC/1500VDC

Combination Inverter/ MPPT Controllers – 8 kw units to be used in parallel connection to achieve proper system capacity based upon individual site survey requirements found in Appendix A

Solar Batteries – LiFePO4 lithium type

All required cable needed to complete the project work, sized in accordance with the connected loads

All Distribution Panels as required with 100 A MCCB switches and sub breakers as required

All necessary copper busbars to accommodate system connections

Each facility will have additional lighting and control switching to replicate the existing lighting found within the various lab related spaces. The number of new light sockets with low wattage LED lamps ([Appendix D](#)) will match the total individual light fixtures found within the site surveys ([Appendix A](#)).

Provide individual power outlets, branch circuitry and overcurrent protection for all equipment listed in the survey with solar dedicated sockets, lighting and switching sized appropriately to the connected load. All outlets feeding the designated equipment are to be colored **RED** and clearly labeled ***“Connect Only Designated Equipment Approved for Solar Power Use!”***

Note: Alternative product sizes in addition to the above requirements may be offered based upon the meeting the specifications, competitive nature, and availability of the products.

Final Instructions to Applicants

All work must be done using best acceptable practices. Trunking, conduits and cabling supplying, outlets, switches, junction boxes, overhead/ outside lighting, panels, and other components must be installed within concealed spaces when possible. When mounting devices on the surface, care must be taken to achieve level and square orientation whenever physically possible. A minimum of one meter space shall be maintained in front of all distribution breaker boxes, solar equipment such as batteries and inverter/ controllers or devices requiring service to maintain the system integrity. All devices needing service mounted within the facilities shall be kept below two meters above finished grade whenever physically possible.

All work must be coordinated with APHL personnel and shall be conducted in such a way to minimize the disruption of the operations of the facility.

A CPM schedule including procurement, shipping, installation, and other facets of the project approved by APHL at the time of contract award must be kept and updated weekly without exception.

Prepare a recommended maintenance schedule along with per trip cost to be submitted with this proposal. This requirement may or may not be included in the final contract at the discretion of APHL.

A live interview will be conducted via video call with the applicant once their proposal has been submitted. You may contact APHL during the 30-day bidding period to ask questions or request clarifications to any aspect of the RFP. These requests shall be submitted in writing to Sarah Young, at sarah.young@aphl.org

In the event this RFP fails to require any aspect of the work or materials needed to construct the system as intended, it will be the obligation of the applicant to note this prior to executing the contract and include those omitted requisites with cost within its proposal. Anything not presented prior to contract execution will be the sole cost and responsibility of the applicant to provide.

***** All work must be completed and certified no later than September 16, 2022. *****