

To: Offerors

Date: August 19, 2021

From: Procurement and Partnerships Team, INVEST Project; Implemented by DAI Global LLC

Subject: Request for Proposals (RFP) INVEST-094: Colombia E4P Blended Finance Solution

Due: **1:00PM EDT on September 14, 2021**

Dear Offerors:

Enclosed is a Request for Proposals (RFP) to support the implementation of DAI's [INVEST](#) project funded by the United States Agency for International Development (USAID). [DAI](#) invites firms to submit a proposal for work to be funded by USAID under the Colombia Energy for Peace Buy-in.

- I. **RFP Process and deadlines:** This solicitation will result in the award of one Indefinite Quantity Contract (IQC) with an embedded task order and an anticipated follow on task order. The **combined ceiling of the awarded IQC** is expected to be between \$1,000,000 and \$1,500,000, with approximately \$300,000 - \$400,000 of that total funding allocated for Task Order One.
 - a. Submission of Questions – Questions must be submitted no later than **1:00PM EDT on August 26, 2021** via email at INVEST_Procurement@dai.com. DAI will respond to these questions in approximately two (2) business days.
 - b. Bidders Teleconference – DAI anticipates hosting a Bidders Teleconference at **11:00AM EDT on August 31, 2021**. The teleconference will address the submitted questions and provide the opportunity for follow-up questions to ensure clarity around the proposal requirements. Details will follow closer to the date.
 - c. Submission of Proposals – Proposals must be submitted no later than **1:00PM EDT on September 14, 2021** via email to INVEST_Procurement@dai.com, copying Katherine_Tilahun@dai.com and Matthew_Mitchell@dai.com. The subject line of the email should be your organization name, followed by “Submission under RFP INVEST-094: Colombia E4P Blended Finance.” Please certify in your submission email a validity period of 60 days for the price(s) provided and include your organization’s DUNS number. Please limit file submissions to 10 megabytes or less.

- II. **Composition of Proposal:** Your organization’s proposal should comprise the following submission documents. The Technical Proposal and Cost Proposal should be prepared as separate files for independent evaluation, as follows below. Technical proposals should be submitted as a presentation no longer than 10 slides. Submissions in PowerPoint or in PDF are acceptable, although PDF is preferred along with an accompanying PowerPoint document. Please provide a copy of your cost proposal in Excel format.

Part 1 – Technical Proposal

Please limit your technical proposal to no more than ten (10) slides. The technical proposal is composed of the following four (4) sections:

1. **Technical Approach to Task Order 1 (Assessment and Recommendation)** – Offerors will detail their approach to fulfilling the accompanying Statement of Objectives (SOO). The approach will clearly indicate how the proposed deliverables and milestones will be completed. Offerors should outline how they would assess options to finance the E4P mini-grids and productivity hubs across multiple sites, and how they would select an optimal solution, taking into account possibilities to maximize efficiencies, reduce costs, and enable USAID to contribute catalytic capital. It should also include the offeror’s approach to design a structure that would mitigate risk, attract private investment and ensure long-term sustainability.
2. **Technical Approach to Task Order 2 (Vehicle Setup, Fundraising and Close)** – Offerors will detail their approach to fulfilling the accompanying Statement of Objectives (SOO). The approach will clearly indicate how the proposed deliverables and milestones will be completed. Offerors should outline their approach for setting up a vehicle to finance mini-grids and productivity hubs and how it would be governed and managed, which takes into account possibilities for deploying USAID catalytic capital, and their strategy for engaging private sector actors and raising capital for the vehicle.
2. **Institutional Capacity** – Offerors should provide details about the experience, expertise, or capacity of their firm to recommend the proposed approach and complete the work as described. This should also include past performance information for Colombia and/or similar past projects. Offerors should outline their experience designing and/or setting up investment vehicles, as well as their experience with asset management, blended finance structures, and fundraising. Offerors’ existing networks as pertinent to this work should also be included.
3. **Management Plan/Staffing Structure** – Offerors will furnish the CVs for the proposed staff members which they will assign to the activity, highlighting any relevant experience aligned with the activities outlined in the SOO, including investment experience, experience in Colombia and in the energy sector. Offerors should include in their proposed team the number of individuals that they deem appropriate to complete the anticipated activities, and that possess the wide range of required experience outlined below. Offerors shall indicate who will act as leader and point of contact for the work. Offerors should also propose an expected implementation timeline and schedule of deliverables that is aligned with the requirements of the SOO. Offerors are permitted to engage in partnering arrangements that will aid in providing best value to USAID. If a partnering arrangement is being proposed, please describe the nature of the arrangement, the division of labor among the partners, and the appropriate management controls to ensure successful delivery.

In addition to the above, please include the following. These inputs will not be counted as part of the 10-slide limit and the format may be PDF or Word:

- One (1) to two (2) case study examples or qualifications statements of past performance relevant to this activity (limited to two (2) pages per example)
- CV(s) of any individuals proposed in the staffing plan to conduct this activity (limited to two (2) pages per individual)

A cover slide will be considered a non-counting slide, should offerors choose to include one. No additional annexes or documentation are requested at this time.

Part 2 – Cost Proposal

The contract type for the presumptive task order will be an IQC subcontract that will allow for issuing of Firm Fixed Price task orders, awarded as a subcontract by DAI Global, LLC. **Please**

include your total proposed fixed price for Task Order 1 along with details for specific deliverable pricing. At this procurement stage, the pricing for Task Order 1 should be final.

For Task Order 2, please provide one illustrative budget for each of the following scenarios: 1) setting up and fundraising for a new special purpose vehicle to finance mini-grid and productivity hubs; 2) setting up and fundraising for a bank loan facility to finance mini-grid and productivity hubs. Please provide narrative explanation of key assumptions related to Task Order 2 pricing in terms of the financial vehicle structure. The proposed illustrative pricing for Task Order 2 will serve as an indication of how the Offeror will structure and price its work under subsequent Task Orders. During implementation, INVEST will release a Request for Task Order Proposal for Task Order 2 to the IQC holder awarded through this procurement. INVEST will compare the proposed pricing for Task Order 2 at the RFTOP stage against the pricing proposed during this competitive phase.

Offerors should also include a cost breakdown of the hourly rates for proposed personnel, if applicable, with a build-up to their total proposed price or include substantiating price reasonableness documentation/justification. Offerors can use the attached cost/budget template for guidance, but are not required to use it, as long as the cost proposal captures the necessary elements (i.e. deliverables table with breakdown of how the deliverable totals were calculated). Please limit file submissions to 10 megabytes or less.

III. Evaluation of Proposal: DAI will use best value determination for the award of this Request for Proposals. A best value determination means that, in DAI's estimation, the selected offer will provide the greatest overall benefit to USAID Colombia in response to the requirements stated in this RFP. Proposals will be evaluated against a stated number of factors, including the overall proposed approach, past performance, specific qualifications in the identified sectors and other evidence substantiating the bidder's ability to deliver, and budget and time frame considerations.

1. **Technical Proposal:** The Technical Proposal will be scored and evaluated separately from the cost proposal. Technical panel reviewers will evaluate offerors on the following factors, consistent with the offerors' technical proposal.
 - a. **Technical Approach (40 points)** - Points for this section will be awarded based on the information presented in the technical approach. Points will be awarded to firms describing their thoughtful approach to addressing the statement of objectives. The offeror will be scored based on its presentation of a clear approach which reflects the requirements of this specific activity and incorporates the offeror's unique competencies.
 - i. **Task Order 1:** Offerors will be evaluated on their proposed criteria and approach to analyze the financial viability of the E4P portfolio, assess possibilities within the Colombian market and propose creative, efficient, cost-effective and sustainable blended finance solutions for financing mini-grid and productivity hub development. Points will be awarded to offerors that can demonstrate how they would design aggregated solutions that mitigate risk and control costs for financing the mini-grids and productivity hubs, and potential approaches that could be employed to efficiently enable USAID's catalytic contribution and attract other sources of capital.
 - ii. **Task Order 2:** Offerors will be evaluated on their proposed approach to structure and launch an investment vehicle to finance mini-grids and productivity hubs, as well as their strategy for engaging private sector actors

and raising capital for the vehicle. Points will be awarded to offerors that can demonstrate a thoughtful investment strategy and approach that can attract diverse investors and ensure a well- managed and governed sustainable investment vehicle that deploys capital and manages investments in the sustainable mini-grids and productivity hubs. Offerors should also outline how they would work with USAID to ensure the Mission can channel their resources in a timely, effective and compliant manner.

- b. **Institutional Capacity (30 points)** - Points for this section will be based on information presented in the corresponding section. Preference will be given to firms that have past performance in timely and successful delivery of similar services and/or relevant experience in Colombia and/or renewable energy projects. Offerors should demonstrate past credentials in similar assignments involving financing for off-grid renewable energy. Preference will be given to offerors with demonstrated experience in the Colombian market, experience structuring investment vehicles and raising capital, and deep networks with local and international investors, as well as other relevant private sector partners, such as energy companies. Emphasis will be placed on offerors that can demonstrate past experience with blended finance structures and concessional capital, particularly with USAID.
 - c. **Management Plan/Staffing Structure (30 points)** – Points for this section will be based on the qualifications of proposed staff, in line with the criteria outlined in the previous section, along with the number and location of individuals that offerors deem appropriate to complete the anticipated activities and that possess the range of required experience outlined above, including expertise in financial analysis, investment vehicle design and management, particularly for renewable energy, experience working in Colombia, and the ability to produce quality deliverables in English and Spanish. Points will also be based on the demonstrated efficacy of the management plan including the proposed implementation timeline and schedule of deliverables that is aligned with the requirements of the SOO. If the offeror is submitting a proposal along with partners, the proposal will also evaluate the added technical value of each proposed partner.
2. **Price Proposal:** Cost will be evaluated separately from the technical approach, with due consideration for price reasonableness and allowability consistent with US government cost principles. Evaluation for this section will be dependent upon all information presented by the Offeror in their deliverable table and supporting cost information, as well as its alignment with the proposed technical approach.

IV. Offeror’s Agreement with Terms and Conditions: Please visit the [INVEST Procurement Forecast](#) website for RFP Terms and Conditions.

The completion of all RFP requirements in accordance with the instructions in this RFP and submission to DAI of the technical and price proposals will constitute an offer and indicate the Offeror’s agreement to the terms and conditions in this RFP and any attachments hereto. DAI is not required to accept and/or evaluate proposals that do not conform to the instructions of the RFP, and additionally, DAI may reject all proposals and not award a subcontract for this RFP. DAI reserves the right to award a subcontract without discussion and/or negotiation; however, DAI also reserves the right to conduct discussions and/or negotiations, which among other things may require an Offeror(s) to revise its proposal (technical and/or price). By submitting an offer, Offerors agree to comply with the general terms and conditions for an award, including Representations and Certifications compliance. Offerors must provide full, accurate, and complete information in response to this solicitation. By submitting an offer, Offerors certify that they have not/will not attempt to bribe or make any payment to DAI employees in return for

preference. Issuance of this RFP in no way obligates DAI to award a subcontract, nor does it commit DAI to pay any costs incurred by the Offeror in preparing and submitting the proposal. DAI reserves the right to award a subcontract to one organization or to issue multiple awards to different organizations based on the results of our evaluation.

V. Reference Documents

The executive summary of the site selection report is attached. The complete site selection report is available upon request. This document is proprietary in nature. Therefore, in order to receive it, each individual from the requesting organization must fill out and send to the INVEST_Procurement@dai.com mailbox a signed NDA (Non-Disclosure and Conflict of Interest) document attached to the solicitation email. Additional documents to be generated as part of the design of the mini-grids and productivity hubs will be shared during implementation with the subcontractor.

Thank you,

DAI INVEST Procurement and Partnerships Team
INVEST_Procurement@dai.com

The INVEST Project: Mobilizing Private Investment for Development
USAID/Colombia Energy for Peace
Statement of Objectives for RFP INVEST-094: Blended Finance Solution

1. Introduction

The United States Agency for International Development (USAID) recognizes that as the world's development challenges become more complex, many can only be solved through market-based solutions. USAID's Private Sector Engagement team is working to expand collaboration with the private sector and pioneering approaches that catalyze investments into emerging markets.

Increasingly, private investors and businesses are looking at emerging markets for new opportunities. However, investing in these markets is complex, and USAID has an important role to play in mobilizing investment into high-impact areas. Encouraging these investments requires new forms of collaboration. In September of 2017 through a contract awarded to DAI, USAID set up the INVEST mechanism to build and engage a network of partner organizations with valuable investment and finance expertise, including those that have not worked extensively with USAID in the past.

[INVEST](#) enables USAID Missions, Bureaus, and Independent Offices to quickly access niche expertise from this diverse network of partner organizations. These partners work alongside USAID to deliver customized financing solutions that address investment constraints, mobilize additional private capital, and produce development results for a variety of sectors and geographies. INVEST pairs innovative technical approaches with streamlined and user-friendly procurement and subcontracting processes. These simplified processes level the playing field, ensuring that USAID can work with the best firm for the job, regardless of that firm's size, locality, or previous experience with government contracting.

2. Colombia Energy for Peace Activity

USAID/Colombia is supporting the post peace accord era in strategic regions and communities (known by the Spanish acronym PDET for Programa de Desarrollo con Enfoque Territorial) by introducing abundant, reliable, low cost, and sustainable renewable energy in key locations that are strategic for the peace process, to increase local producers' productivity, incomes, ability to pay for energy and well-being. Supporting implementation of the peace accords and leveraging private sector engagement and investment in this manner supports Colombia's development. Support for producers in the PDET communities' access to energy to promote economic growth, improved incomes and well-being will begin with the evaluation and selection of production clusters that can benefit significantly from the introduction of stable, low cost, clean electricity. A foundational element of the Energy for Peace program is the minimization of design, procurement, and financing costs through aggregation and standardization, with a view to generating rates of return that are sufficient to attract private capital to the PDET regions.

Through INVEST, USAID/Colombia seeks to utilize a catalytic financial structure to unlock the potential of private capital to plan, build, and operate sustainable energy generation projects for peace in the prioritized PDET sites in rural Colombia. These projects were selected from a universe of several PDET candidate sites which have been identified by USAID together with Colombia's Agencia para la Renovación del Territorio (ART), the Ministry of Mines and Energy, the Agency for Electrification of Non-Interconnected Rural Areas (IPSE) and the Fondo Colombia en Paz of the Office of the President. USAID Colombia is aiming to engage private energy companies and to mobilize capital for the development and implementation of cost-efficient and financially sustainable solar energy mini-grids with battery storage, to support growth of productivity, incomes and social stability in support of the peace process.

The activity began with an Opportunity Assessment that analyzed 40 potential PDETs, and has identified 10 viable sites for implementation. Following site prioritization, INVEST engaged a qualified technical partner to produce the preliminary designs, develop business models and conduct financial analysis for the solar mini-grids and productivity hubs at each selected site. INVEST now seeks a partner to identify, assess and recommend the best option for the blended finance solution for the mini-grids and productivity hubs, including how USAID can contribute catalytic capital¹; as well as to design, structure, fundraise and close the blended finance solution to enable the mini-grids and productivity hubs to be launched over the coming year.

3. Activity Structure and Subcontractor Responsibilities

The partner selected to assess and create the blended finance solution for INVEST Colombian Energy for Peace will be expected to conduct the following work, in consultation with the INVEST Colombia Energy for Peace team, over two phases (corresponding to two Task Orders).

In Phase I, the tasks include:

- Identify and assess potential options for financing the mini-grids and productivity hubs. INVEST Colombia Energy for Peace is open to evaluating a wide range of proposals. For example, options to consider may include creating a new, or leveraging an existing, special purpose vehicle, investment fund, trust fund, or utilizing a bank lending facility, among others. (One or multiple blended finance solutions for constructing and operating the mini-grids and productivity hubs may be considered; a single vehicle to finance the ten sites could minimize financing costs. The minimization of financial costs will be a principal consideration). The assessment should also provide information on relevant international and domestic investors that have interest in rural electrification with solar mini-grids in the pertinent geography, with a discussion on these investors' activity in the market, past transaction history, potential interest in investing in the INVEST Colombia Energy for Peace projects, etc. It should also consider the ownership and governance structure and management of the blended finance solution, potential model for investing in the mini-grids, as well as any technical expertise required to achieve the INVEST Colombian Energy for Peace objectives, including (but not limited to) standardization, aggregation and quality control for efficiently raising and deploying capital for the construction, operation and maintenance of the mini-grids and productivity hubs to ensure high quality, sustainable and affordable energy for productive uses in the target communities.
- Based on the assessment, recommend the best option(s) for the blended finance solution(s) for USAID to deploy in financing the Energy for Peace portfolio of 10 mini-grids and productivity hubs. This recommendation should be based on a clear set of defined criteria and include consideration of how USAID can contribute and place its catalytic capital with other sources of private and donor capital for financing the mini-grid portfolio, the interest of other sources of capital for the mini-grids and productivity hubs, the characteristics that the blended finance vehicle should have in order to easily accept USAID and private capital, potential for scaling to include more sites over time, the recommended steps and timeline required to structure, raise and deploy the requisite capital for each of the mini-grids and productivity hubs, how to optimize consolidated contracting to minimize costs, engagement with private energy companies for operations and maintenance, and other relevant factors.

¹ The contractor should consider carefully the USAID set of rules and regulations governing the use of funds, specifically those that relate to the donation of Mission funds to external special investment vehicles and funds designed to invite and combine with private capital that seeks returns on investment.

- Develop a comprehensive strategy and timeline for the creation, registration, and set-up of the blended finance vehicle(s), including assistance on legal work, fund administration, and compliance with relevant regulatory bodies.
- Outline the strategy for marketing to and raising capital from international and domestic investors, engage with banks, multilateral agencies, DFIs, donors, and Government of Colombia, as well as local and regional government bodies as appropriate, impact investors, energy companies and other potential sources of capital to gather their input and interest in the blended finance vehicle.
- Within the identified portfolio of 10 sites, provide an investment thesis that ties to a master plan as well as a summary for each site pertaining to specific site advantages and challenges that may help or impede private or donor investment, and how the different advantages or concerns may be addressed to facilitate investment. Discuss potential grouping of sites to either mitigate obstacles to investment or further leverage synergies within certain mini-grids. The subcontractor should draw from and build upon the information collected and synthesized by other INVEST partners as part of the E4P Opportunity Assessment and designs, which will be made available to the selected offeror during implementation.
- Identify the amount and structure of capital to be raised for the vehicle(s), taking into consideration the business plans and financial analysis conducted by the INVEST Colombia Energy for Peace partner designing the portfolio of mini-grids and productivity hubs. Determine target return levels for investors, taking into account USAID catalytic capital contributions and other available subsidies and risk mitigation tools that can be used to improve financial performance. Demonstrate how this capital will be deployed to finance the mini-grids and productivity hubs, and how the projected fees and returns can support a long-term team to manage the blended finance solution and investors' desired rate of return.
- Identify the budget and timeline necessary for each of the major steps.

In Phase 2, anticipated tasks include:

Based on USAID review and acceptance of the recommended solution(s), the second phase should be to structure and fundraise for the blended finance solution so that it is able to finance the mini-grids and productivity hubs that are projected to be launched in 2022. The exact nature of this phase will depend on the blended finance solution(s) recommended, but may include the following:

- Identify and secure a manager for the blended finance solution(s)
- Establish the legal structure and ensure requisite registration is in place for the blended finance solution(s)
- Perform road shows to market the blended finance solution(s)
- Identify sources of finance and negotiate participation in the blended finance vehicle(s)
- Close on capital commitments
- Ensure agreements are in place for financing mini-grid and productivity hub licensing, procurement and construction

4. Deliverables and Milestones

Through a set of predefined deliverables, the Program will support the formation, marketing and fundraising of this vehicle as a result of the support provided. All deliverables should be submitted to

INVEST, unless otherwise specified during implementation. Below is a list of illustrative deliverables considering a combined timeline of approximately 14 months, with up to 4-5 months allocated to the completion of the Phase 1.

Phase I

- Assessment, recommendation and ranking of the best option(s) for the proposed blended finance solution(s) for USAID to place catalytic capital and leverage private investment to finance the Energy for Peace portfolio of 10 mini-grids and productivity hubs.
- Strategy and timeline for setup of the blended finance vehicle(s) and key criteria for the design and implementation of these, including the USAID catalytic capital contribution, considering USAID rules and regulations.
- Strategy and timeline for marketing of the investment opportunity in the Energy for Peace portfolio to international and domestic investors and/or donors, using the proposed blended finance solution.
- Budget and timeline to structure, market the investment opportunity, close and begin financing the mini-grids and productivity hubs.

Phase II

- Formation of investment team
- Securing counsel and administrator for the proposed blended finance solution
- Registration with regulatory body
- Prospectus or placement memorandum, pitch decks and initial pipeline of investments (utilizing the designs and business cases to be developed by INVEST Colombia Energy for Peace)
- Framework for USAID's catalytic capital contribution
- Closing of capital commitments target (bidders may propose to separate this into multiple payments)
- Confirmation of initial investments into mini-grids and productivity hubs

The aforementioned deliverables should be produced in English. Select documents should also be translated into Spanish as necessary. Offerors should propose any other deliverables deemed pertinent, with expected deadlines.

5. Role of INVEST Project

INVEST Colombia Energy for Peace will work closely with the selected subcontractor during all stages of this work. DAI will subcontract the selected subcontractor directly and provide review and oversight throughout the life of the activity in accordance with INVEST's lean management approach. The E4P Country Lead will also work closely with the subcontractor in all activities. The INVEST team will administer periodic check-ins, reporting, deliverable review prior to client presentation and approval, and manage an ongoing monitoring, evaluation and learning framework.

- **Subcontractor Onboarding:** INVEST will provide the successful offeror(s) with all necessary context, and work with the successful offeror(s) to develop work plan(s)
- **Project Implementation:** The selected subcontractor(s) will implement the work as prescribed by the work plan(s). INVEST will provide management support and ensure periodic check-ins/reporting
- **Ongoing Monitoring, Evaluation, and Learning:** INVEST will define indicators in subcontract, collect and review M&E data from subcontractors for requisite reporting to USAID and will conduct data quality assessments as necessary.

6. Contract Type

INVEST anticipates issuing an Indefinite Quantity Contract with Firm Fixed Price task orders. The first task order will be issued along with the IQC, and subsequent task order(s) will follow once the initial analysis has occurred.

7. Reference Documents

The executive summary of the site selection report is attached. The complete site selection report is available upon request. This document is proprietary in nature. Therefore, in order to receive it, each individual from the requesting organization must fill out and send to the INVEST_Procurement@dai.com mailbox a signed NDA (Non-Disclosure and Conflict of Interest) document attached to the solicitation email. Additional documents to be generated as part of the design of the mini-grids and productivity hubs will be shared during implementation with the subcontractor.

8. Duration and Place of Performance

This engagement is expected to commence in October 2021 and is expected to last between 10 – 14 months, with Phase 1 expected to conclude by February 2022. Work can take place remotely, with potential travel to Bogota, Colombia.



ISLA GORGONA- PHOTO TETRA TECH TEAM

USAID INVEST: COLOMBIA ENERGY FOR PEACE (E4P)

Site Prioritization and Supporting Assessment Findings and Conclusions – Executive Summary

June 25, 2021

DISCLAIMER: THE VIEWS EXPRESSED IN THIS PUBLICATION DO NOT NECESSARILY REFLECT THE VIEWS OF THE UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID) OR THE UNITED STATES GOVERNMENT.

SITE PRIORITIZATION AND SUPPORTING ASSESSMENT FINDINGS AND CONCLUSIONS

Prepared for:

USAID INVEST Project – Implemented by DAI
7600 Wisconsin Avenue, Suite 200
Bethesda, MD 20814

Prepared by:

Tetra Tech
1320 North Courthouse, Suite 600
Arlington, VA 22201
www.tetrattech.com

USAID Contract AID-OAA-C-17-00090 / I004182-IQC-20S-18755-00

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EXECUTIVE SUMMARY

Energy for Peace (E4P) aims to provide dependable, low-cost, and sustainable renewable energy to increase productivity, output, and incomes in up to ten communities with significant production clusters. This report presents the results and recommendations of the process to identify, evaluate, and prioritize candidate sites with viable conditions to implement solar mini-grids and associated productivity hubs.

USAID, the Territorial Renewal Agency (ART, for its acronym in Spanish), and the Energy Solutions Planning and Promotion Institute (IPSE) of the Ministry of Mines and Energy (MME) initially preselected 16 candidate sites. The Tetra Tech team evaluated these sites and found that many did not meet the minimum conditions to achieve USAID's objectives. For example, many of the initial sites are now planned for interconnection to the national grid in the near term. Under USAID's direction, the team identified other sites that could be developed with other USAID programs in Colombia or other national or international organizations working in the PDET areas that USAID prioritized. Tetra Tech evaluated over 40 candidate sites, ranking them based on a set of qualitative and quantitative criteria including location, generation system size, and estimated investment costs resulting from the assessment of baseline conditions and in particular, the potential growth of productivity, quality and incomes that should result from the new access to clean energy.

Of the 40 sites, the following ten have the highest potential and we recommend that all of them proceed to the preliminary mini-grid and productivity hub design stage (Task Order 2).

Table 1- Site selection results, sizes, and investment estimates

Project Name	Municipality	PV Size kWp	Battery Size kWh	Levelized Cost of Energy \$/kWh	CAPEX USD	kWh/year	Tons CO ₂ e/year
Punta Bonita	Buenaventura, Valle	409	1,265	0.56	1,424,780	222,519	215.0
Santafé	Cartagena del Chairá, Caquetá	369	1,083	0.52	1,381,089	229,103	221.3
Santana Ramos	Puerto Rico, Caquetá	332	1,578	0.61	1,804,783	241,813	233.6
Gorgona Island	Guapi, Cauca	96	275	0.81	400,977	54,334	52.5
Cluster Bahía Málaga	Buenaventura, Valle	427	1,167	0.44	1,437,015	188,975	182.5
Cluster Unguía/Acandí	Unguía/Acandí, Chocó	933	2,857	0.59	3,072,274	529,411	511.4
Cluster Siberia/El Chimborazo	Santa Marta, Magdalena	71	132	0.51	171,756	72,186	69.7
Cluster Pueblo Arhuaco	Santa Marta, Magdalena	35	20	0.40	64,305	28,780	27.8
Cluster Alta Guajira	Uribia Guajira	449	1,189	0.35	1,803,806	112,986	109.1
Providencia Island / Spa	San Andrés y Providencia	30	-	0.63	22,880	35,431	34.2
Subtotal		3,152	9,567		11,583,666	1,715,537	1,657
Providencia, ECOPEL ¹	Providencia	2,138	2,500		3,780,000	2,901,880	2,803
Total		5,290	12,067		15,363,666	4,617,417	4,460

¹ As part of Hurricane Iota recovery, the Government of Colombia designated an additional solar site on Providencia Island. For more details, see "The Providencia Island Case," p. 4.

The information collected during the field visits created a solid understanding of current productive activities and infrastructure, community organizations and producer associations, and permitted estimation of potential growth of production and incomes from new access to energy. The second task order will identify energy utility companies that could be engaged as potential partners to operate the grids. It will also focus on agencies within the Government of Colombia (GOC), foundations, or private sector corporations that might be interested in funding the construction of the productivity hubs and local stakeholders that could operate them. An important component of the second task will be to conduct an appraisal of the best options for the productivity hub business model, partnerships, and ownership structure at each PDET site.

BACKGROUND AND CONCEPT

E4P is supporting USAID/Colombia's strategic engagement with GOC's energy priorities by providing dependable, low-cost, and sustainable renewable energy to selected production clusters in key PDET regions. In remote, war-torn regions without access to energy, this activity seeks to improve productivity, incomes, communications, and community well-being, which are fundamental for the transition to peace. By displacing diesel as the baseline fuel for off-grid PDET communities with clean solar systems, this project will support Colombia's NDC by reducing rural CO₂ emissions significantly.

The E4P conceptual framework builds on previous experiences and lessons learned from other off-grid efforts in Colombia, notably the \$18 million USAID Colombia Clean Energy Program (CCEP) implemented from 2012 to 2017.² One of CCEP's tasks focused on expanding access to renewable energy in off-grid and unserved areas by deploying renewable energy projects, including small hydroelectric plants, photovoltaic (PV) solar systems, and hybrid systems (solar PV and diesel). These projects were carried out as social interventions in indigenous, farming, and Afro-Colombian communities based on the principles guiding that program.

In total, CCEP implemented 17 renewable energy projects in ten provinces of Colombia. Three years later, a USAID program evaluation found that most of the community-led renewable energy projects were not generating the levels of energy or income for which they were planned and when they were handed over to communities for operation. Of the 17, only 12 percent function as planned, 18 percent do not function at all, and 70 percent function only partly and were deemed economically unsustainable. The evaluation found several challenges that impacted project performance and sustainability; USAID has applied these lessons to E4P activity design:

- Technology and design are not sufficient; deploying financially sustainable business models is necessary for long-term operations.
- Training the communities to operate the power plants and then transferring operational responsibilities to them is insufficient; experienced operating companies can provide sound administration, allowing the communities to focus on their chosen productive activities.
- Experienced investors and operators seek communities and projects with potential for electricity demand growth, profitability, and risk mitigation.

² Task 1- Enabling environment and capacity-building for renewable energy and energy efficiency; Task 2- Expanding access to renewable energy in off-grid and unserved areas; Task 3 Energy efficiency and renewable energy investment promotion.

Since CCEP, key conditions have changed in favor of off-grid rural renewable energy investments. First, the costs of solar generation technology and equipment have fallen dramatically. Second, today's business environment supports private renewable energy projects in off-grid areas. The national regulator (CREG) has also taken steps to improve service remuneration schemes and deployed subsidies for solar energy projects designed to reduce user tariffs and improve financial sustainability. Third, new regulations permit operating companies from anywhere in Colombia to establish operations in rural zones, bringing proven expertise and capacity to these remote regions. Finally, there are more funds available to finance off-grid renewable projects, such as the FAZNI, FAER, FENOGE, Regalias, and other funds.

Sustainability from Standardization and Aggregation Models

E4P is focusing on economic efficiencies in its development and planning stages so that financial and operating conditions will be competitive for all the sites included in the portfolio. These efficiencies are intended to ensure sufficient profitability to attract private investors and energy partners interested in providing operations and maintenance throughout the expected lives of the projects.

To achieve this goal, E4P is applying the principles and lessons learned from the USAID Clean Energy Investment Accelerator (CEIA), which promoted the use of solar PV energy in Colombia's industrial and commercial sectors. Using standard technology across sites and an aggregation model to provide economies of scale, the competitive bidding process with first-level suppliers reduced capital expenditure by 24 percent compared with the market prices reported by Colombia's Mining and Energy Planning Unit.

The second task order of E4P will structure financially sustainable business models, apply these standardization and aggregation models, adopt the new subsidies for off-grid solar investments, and seek experienced energy operators to join the projects. When combined with USAID's catalytic capital, these elements will be fundamental for cost optimization, profitability, and risk reduction, which are necessary to attract private investment to the PDET regions.

Building on these lessons and favorable conditions, E4P

intends to leverage private capital to co-invest in the portfolio of PDET solar generation projects. USAID will deploy catalytic capital along with proven standardization and aggregation techniques (see box) to lower perceived financial risks and increase the profitability of private investors. INVEST will support USAID to establish an innovative blended finance vehicle to leverage private capital, both domestic and international, and to engage private operators.

The initial phase of the E4P activity is structured around two task orders. Task Order 1 is:

- Focused on productivity clusters that can benefit from the introduction of electricity or the improvement of existing, inadequate electricity supply systems;
- Identifying and assessing over 40 sites and selecting the ten most viable for sustainable solar energy projects; and
- Evaluating each site's production clusters and selecting those with the greatest potential to drive economic growth, incomes, and capacity to pay once access to the new renewable energy becomes available.

Under Task Order 2, the Tetra Tech team will prepare preliminary designs and investment-grade economic analysis for the selected sites and associated productivity hubs. It will identify potential utility partners and stakeholders who are interested in:

- Co-investing with USAID,
- Operating and maintaining the generation projects, and
- Leading and mobilizing co-investment to build, operate, and maintain the generation projects.

SITE ANALYSIS APPROACH

This report describes how all the information was collected and processed based on a structured approach with an extended consultative process. This process established criteria to define sites with high potential using site surveys, analysis of productivity growth potential, and site visits to understand production, governance, and social conditions. The team used a mini-grid-focused data processing and analysis platform, Odyssey, to carry out a comparative analysis of the sites.

THE PROVIDENCIA ISLAND CASE

In November 2020, Category 5 Hurricane Iota hit Providencia Island, demolishing the majority of homes and businesses and destroying roads and power lines. The flooding and wind damage left the Raizal community and its nature tourism-based economy without power. Old diesel plants have since come online to provide power, but importing the fossil fuel from Cartagena is extremely costly and produces significant CO₂ and collateral pollutant emissions.

The GOC launched an aggressive recovery plan for the island, but combined with the effects of the COVID-19 pandemic, its resources are scarce. Colombia turned to the international community for help with the recovery and reconstruction process and humanitarian aid to address this climate-related disaster. The President of Colombia announced the implementation of a new solar PV plant to supply clean energy to the island and help it transition away from fossil fuel-based generation. In response, USAID is supporting the design and implementation of the plant under E4P, as well as leading the Master Plan for recovery and efficient integration of Providencia Island's electricity infrastructure. The reconstruction effort is expected to assist the recovery of Providencia Island's nature tourism economy and support the preservation of the UNESCO-recognized Seaflower Biosphere Reserve. The Master Plan may result in a simple, efficient and replicable solution for isolated mini grids both on islands and rural PDETs. As a result, Providencia Island is included in the proposed site selection portfolio despite not being a priority PDET site.

KEY CONCLUSIONS AND RECOMMENDATIONS

Focused on the productive clusters, the selected priority sites represent a potential portfolio estimated at 5.2 MWp of installed capacity representing more than \$15 million in potential investment. The total portfolio could cut emissions by 4,022 tons of CO₂e annually, mostly by reducing diesel fuel consumption. These power capacity and investment can be expanded through upcoming activities discussed below.

We estimate that total annual benefits from access to low-cost, reliable clean energy exceed \$4.2 million in improved productivity and output (compared to the baseline). Communities can expect additional benefits from improvements to social infrastructure in education and health facilities. In addition, this 24-hour energy access could generate complementary economic activities—in both businesses and homes—due to enhanced commerce and new businesses.

Another important outcome will be the distribution of benefits between genders and across ethnic groups, as the portfolio includes:

- Two Afro-Colombian communities on the Pacific Coast,
- Two indigenous communities on the Atlantic Coast (Wayuu and Arhuaco), and

- Various women’s associations working with piangua and coffee.

Based on our complete site analysis and assessment of benefits, we recommend that USAID consider all ten sites for preliminary designs for the mini-grids and productivity hubs under Task Order 2.

Finally, we also recommend considering alternatives to increase the E4P portfolio size for the final phase by taking the following actions, which are fully explained in the last chapter of this report.

- Action 1: Expand beyond productive clusters to include households and commerce.
- Action 2: Include secondary and neighboring satellite sites near prioritized sites.
- Action 3: Identify projects being led by electric companies through upcoming survey

USAID INVEST Project

Non Disclosure/Conflict of Interest Form

The below company and representative intend to submit an expression of interest in response to Request for Request for Proposals (RFP) INVEST-094 in support of USAID/Colombia (Colombia Energy for Peace) and hereby requests access to the supplemental documentation:

- Company Name:
- Representative:
- Title:
- Email (to be used to access document folders on Google Drive):

I hereby agree to the following:

1. I will use the documents and all information therein other than information otherwise available without restriction, for proposal preparation purposes only. I will safeguard the documents and will not and have not disclosed them, or any information contained in them (other than information otherwise available without restriction), except as directed or approved by the INVEST Procurement Officer or his/her designee.
2. I will ensure that any authorized restrictive legends placed on the proposals by prospective contractors, will not be applied to any reproduction, or abstract of information, made by me.
3. Upon submitting a response to RFP INVEST-094, I will destroy and/or delete all documents received, and any abstracts thereof, initially furnished to me by the USAID INVEST project.
4. Unless authorized by the INVEST Procurement Officer in advance in writing I will not and have not, -- whether before, during, or after the concept/proposal preparation process -- contacted representatives from USAID/Colombia concerning any aspect of the supplemental documentation or information found therein.
5. I have carefully reviewed my employment (past, present and under consideration) and financial interests, as well as those of my household family members. Based on this review, I certify, to the best of my knowledge and belief as of the date indicated below, that I either **(1) have no actual or potential conflict of interest, personal or organizational, related to this procurement.** I understand that I will also be under a continuing obligation to disclose, and act as instructed concerning, such conflicts discovered at any time prior to the completion of the evaluation.

Name:

Signature:

Title:

Date: