Statement of Work PAOP Productive Use of Energy (PUE) Support

<table>
<thead>
<tr>
<th>Commodity/Service Required:</th>
<th>Productive Use of Energy Support</th>
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<tbody>
<tr>
<td>Type of Procurement:</td>
<td>Individual Consultant Agreement</td>
</tr>
<tr>
<td>Type of Contract:</td>
<td>Fixed-cost contract</td>
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<tr>
<td>Contract Funding:</td>
<td>United States Agency for International Development (USAID)</td>
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<tr>
<td>This Procurement Supports:</td>
<td>Power Africa Off-grid Project (PAOP)</td>
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<tr>
<td>Submit Proposal and Quotation to:</td>
<td><a href="mailto:paoppurchase@powerafrica-offgrid.org">paoppurchase@powerafrica-offgrid.org</a></td>
</tr>
<tr>
<td>Date Proposal and Quotation Due:</td>
<td>01 May 2020</td>
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<tr>
<td>Approximate Date Purchase Order/ Agreement Issued to Successful Bidder(s):</td>
<td>TBC</td>
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ABOUT THE POWER AFRICA OFF-GRID PROJECT
The USAID-funded Power Africa Off-grid Project (‘PAOP’) provides technical assistance and targeted grant funding to support the development of Africa’s off-grid solar home system (SHS) and mini-grid sectors. Through a team of resident technical advisors across East and West Africa, PAOP works with companies, investors, and governments to advance the role of the private sector in extending energy access.

By offering broad-based market intelligence to investors/financiers to inform financial product design, advising governments on establishing supportive policy frameworks, and providing hands-on support to companies, PAOP is helping to build the off-grid market to accelerate private sector-led energy access. Specific focus areas:

BACKGROUND

ACTIVITY DESCRIPTION FOR PRODUCTIVE USE ASSESSMENT IN GHANA
PAOP is providing support to many off-grid private sector organizations in Ghana, including vendors, financial institutions, and other companies that work along the agriculture value chain. PAOP seeks to provide support to professional organizations to increase the number of productive uses of energy sales. There are several productive use sub-sectors where solar power can immediately add value and build income. Solar irrigation is one of the most promising sub sectors in Ghana, as well as refrigeration and agro-processing of crops. Although Ghana has experienced several irrigation projects initiated by donors such as the World Bank, IFAD, AfDB and USAID, the private sector could be involved, especially when it comes to extending the product portfolio of existing developers to productive uses of energy, and for the financing of smallholder farmers by MFIs and other financial institutions.

Because Ghana has a relatively higher electrification rate than the regional average, particular emphasis should be placed on remote rural areas, and especially on rural communities residing in the small island of Lake Volta, as the most economical solutions for them will be mini-grid or solar home systems.

Off-grid solar systems can add value within the agriculture sectors in Ghana, as well as boosting the primary economic sectors in the country. Many productive use applications are beginning to emerge in rural Ghana, notably, solar irrigated pumps, agro-processing, aquaculture, mobile phone charging, and refrigeration. However, off-grid companies in Ghana require more information on the opportunities for off-grid solutions in the productive use sector as well as stakeholders involved in.

OBJECTIVES
A productive use of energy (PUE) assessment will provide information to off-grid companies, the Government of Ghana, and development partners on the opportunities that exist for such technologies. The assessment will cover the following areas:
1. Assessment of all off-grid PUE technologies currently being used in Ghana as well as the stakeholders implementing them, market strategies to address off-grid areas and barriers encountered.
2. An assessment of the potential opportunities for new PUE technologies in Ghana, as well as potential organizations that could be involved in helping scale up the use of these systems, in particular current off-grid solar companies and agricultural support programs and agro-processing companies, cooperatives and associations.

3. A mapping of different PUE technologies used at different segment of some value chains

4. Demand side assessment of potential beneficiaries of PUE technologies, i.e organizations in rural areas, small hold farmers, agriculture cooperatives.

5. Mapping of supporting services including programs from MFI's/banks and other financial institutions, Donors related programs, Public led programs,

6. The identification of current barriers to the development of PUE such as unclear land tenure rights, rural household’s poverty levels.

**PRODUCT/OUTPUT**

1. An indicative workplan and timeline of the study
2. Preliminary report including transcripts of consultations with stakeholders.
3. Productive Use Assessment Report which includes:
   a. Mapping of all PUE technologies currently being used/sold in Ghana
   b. Mapping of all stakeholders working in productive use value chain in Ghana
      i. i.e. current off-grid solar companies and agricultural support programs and agro-processing companies, cooperatives, and associations
   c. Analysis of gaps and barriers to the adoption of PUE technologies
   d. Draft roadmap to pilot and scale PUE technologies

**Timeline**

The targeted start and end date of this SOW is between May - June 2020, not exceeding a total number of 20 working days.

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<tr>
<th>No.</th>
<th>Deliverable</th>
<th>Reporting deadline</th>
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<tbody>
<tr>
<td>1.</td>
<td>Preliminary report including transcripts of consultations</td>
<td>By June 11th 2020</td>
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<tr>
<td>2.</td>
<td>Final productive use assessment report</td>
<td>By June 18th 2020</td>
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<tr>
<td>3.</td>
<td>Power Point presentation of the results and strategy to pilot</td>
<td>By June 30th 2020</td>
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**Indicative level of efforts:**

Level of efforts – 20 working days (8 hours = 1 working day)
- Desk study: 5 working days
- In-Country Meetings: 10 working days
- Analysis and report writing: 5 working days

**Required Qualifications and Documents**

- Updated CV indicating proven experience including consulting experience in the public and private sectors.
- Short (5-7 pages) description of the applicant’s ability to provide the support requested.
- Three examples of past performance (no more than six pages total).
- Detailed budget including estimated level of effort.
- Advanced university degree in energy, development, economics, agriculture, or any related field.
- At least three years’ experience working in the agriculture/energy sector(s), specifically in Ghana
- Involvement in complex assignments with similar scope and focus
- Excellent knowledge of the energy sector and agriculture value chains as they pertain to Ghana (renewable energy and energy efficiency)
- Strong problem solving, communication, research, and analytical writing skills.

All Applications should be submitted to paopprocurement@powerafrica-offgrid.org no later than 01 May 2020.