

REQUEST FOR PROPOSALS (RFP): Energy Efficiency and Renewable Energy in Food Processing for Nigeria and Uganda.

1. Project Background:

The [Partners in Food Solutions \(PFS\)](#), [SNV Netherlands Development Organisation](#) and the [Global Alliance for Improved Nutrition \(GAIN\)](#) is issuing this Request for Proposal (RFP). PFS will be the administrative lead organisation for this RFP.

Globally, food systems contribute to 30% of greenhouse gas emissions (GHG) and account for 15% of fossil fuel use¹. Food processing plays a crucial role in nutrition security by adding value through fortification, extending the shelf life of perishable nutritious foods, reducing food losses and waste, and enhancing convenience in nutritious value chains. However, 40% of the fossil fuels used in food systems are consumed during processing². To mitigate this, transitioning to cleaner, renewable energy sources is vital to decouple food prices from fossil fuel dependency and promote sustainable, affordable nutrition.

Additionally, rising energy costs in food processing significantly affect operational expenses, business sustainability, and food prices. As energy prices soar and environmental concerns grow, adopting energy-efficient systems and renewable energy sources, such as solar power, becomes a critical solution. Nigeria and Uganda with their vibrant nutritious and fortified food processing sectors, present opportunities to improve energy efficiency and reduce costs through solar power integration.

This study will evaluate energy consumption patterns of food processors, identify opportunities for efficiency improvements, and assess the feasibility and cost savings of integrating renewable energy in food processing in Nigeria and Uganda.

2. Objective of the Consultancy

The primary goal of this consultancy is to conduct an in-depth study of energy consumption in nutritious food processing companies in Nigeria and Uganda. The consultant will examine current energy usage, identify opportunities for renewable energy integration, estimate potential energy savings, and perform cost-benefit analyses. These assessments will address the climate, nutrition, and economic implications of adopting renewable energy solutions.

3. Scope of Work

The consultant will undertake the following tasks:

- Conduct a literature review of energy audits in food processing across Africa and the two target countries. Summarize the average energy consumption (kWh/kg or MT) for various processed food groups. Evaluate the current energy consumption patterns, identifying inefficiencies and opportunities for improvement.
- Design and administer an online energy survey targeting food processors in the countries of interest.
- Perform onsite energy audits for selected food processing companies across various value chains, including fortified staples, edible oils, cereals, dairy, nuts and seeds, fruits, and vegetables.
- Validate and enhance the PFS-developed approach to estimating energy consumption for food processing technology for specific food products including fortified staples and edible oils, cereals, dairy, nuts & seeds, fruits and vegetables, herbs & spices, poultry (eggs, feed & meat), beans and legumes, and starchy roots & tubers
- Evaluate existing and potential energy solutions tailored to nutritious food processors, particularly small- to medium-scale operations.

¹Global Alliance for the Future of Food. (2022). *Untapped Opportunities for Climate Action: An Assessment of Food Systems in Nationally Determined Contributions (NDCs)*. Global Alliance for the Future of Food.

²Global Alliance for the Future of Food. (2022). *Untapped Opportunities for Climate Action: An Assessment of Food Systems in Nationally Determined Contributions (NDCs)*. Global Alliance for the Future of Food

- Assess the feasibility of integrating alternative energy solutions into the food processing sector, covering technical, financial, and operational aspects. Identify barriers and enablers for renewable energy adoption in the food processing sector including regulatory and market factors.
- Develop energy-saving strategies tailored to the food processing sector, incorporating solar power and other renewable energy sources.
- Provide detailed cost-benefit analyses, business models, and final cost estimates for each renewable energy solution identified.
- Recommend interventions and incentives to promote the adoption of renewable energy and energy efficiency measures within the food processing sector.

4. Key Deliverables

The consultant will be expected to deliver:

- Inception report detailing the survey methodology, key stakeholders, and data collection plan.
- Interim report with preliminary findings, key trends, and energy efficiency opportunities.
- Final report which includes:
 - o Comprehensive analysis of current and potential energy consumption in the food processing sector.
 - o Cost-benefit analysis and feasibility assessment for energy efficiency improvement and renewable energy integration.
 - o Recommendations for solar power adoption and energy savings strategies.
 - o Identification of policy and regulatory measures to support energy efficiency and renewable energy adoption.

5. Timeline

The consultancy is expected to take 2-3 months, with the following milestones:

Activity	Deliverable	Deadline
Submit Proposal	Consultant Proposal	February 14th
Review Proposals and Shortlist Consultants	Interview with shortlisted consultants	February 21st
Project Kickoff Call and Contracting	Signed contract and project initiation	February 28th
Submit Inception Report and Methodology	Inception report detailing work plan, methodology, and timelines	March 7th
Submit Draft Report and Key Findings	<ul style="list-style-type: none"> - Draft report - Literature review outcomes - Survey results - Energy audit findings - Validated methodology 	April 10th
Final Submission of Deliverables	Comprehensive final report and all required outputs	April 30 th

6. Required Expertise

The ideal consultant or group of consultants should have:

- A minimum of 7 years of experience in energy efficiency assessments and renewable energy integration, particularly in the food processing sectors.
- Proven experience conducting onsite energy audits and feasibility studies for renewable energy in developing countries.
- Strong understanding of the energy markets in Nigeria and Uganda. Bonus if the consultant has experience in the agrifood sector.
- Familiarity with financial modelling and cost-benefit analyses related to energy projects.
- Excellent analytical, report-writing, and communication skills.

7. Submission Details

Interested consultants or consulting firms should submit the following:

- A brief proposal (maximum of 6 pages) outlining the approach and methodology for conducting this assignment.
- CVs of key personnel involved in the project.
- A budget breakdown including consultancy fees, travel expenses, and any other associated costs.
- Examples of relevant previous work, including references.
- Timeline for completion of the consultancy.

Completed proposals should be submitted via email to Vivian Maduekeh, PFS Program Director, at vivian@partnersinfoodsolutions.com no later than **17:00 GMT on February 14, 2025**. Please include the title “RFP - Energy Study” in the subject line.

Proposals must be submitted on the official letterhead of the lead organization or firm and signed by an authorized representative or principal of the lead organization.

8. Evaluation Criteria

The selection will be based on:

- Technical expertise and experience in similar projects.
- Understanding of the scope and proposed methodology.
- Cost-effectiveness and value for money.
- Track record of working in Nigeria, Uganda, or other similar markets.

9. Budget: The budget for this project is USD 50,000 inclusive of all taxes and fees.