

Request for Proposals (RFP) for Pico-Hydro Operation and Maintenance Manual in Rwanda Tender No. SOGER/E4I/2018/O&M

RFP deadline: 28 February 2018

1. Context and Background

The Scaling up Off-Grid Energy in Rwanda (SOGER) is a SIDA funded programme implemented by Energy 4 Impact with the objective to support the growth of a sustained off-grid renewable energy market in Rwanda, by helping the private sector to deliver energy access to unserved or underserved people in rural areas in a way that is inclusive of people living in poverty.

There are two components under SOGER programme, one of which is Pico-Hydro project development. The Pico-Hydro project aims to support the development of Pico-Hydro micro-utilities and provide sustainable electricity to rural communities in Rwanda.

Energy 4 Impact is an energy NGO registered in the United Kingdom with operations across Sub Saharan Africa. Energy 4 Impact's focus is on accelerating access to energy in rural and peri-urban areas, by providing the energy sector participants with technical, financial and operational advice to accelerate the growth of businesses that deliver access to clean energy.

Energy 4 Impact also assists renewable energy entrepreneurs and projects access capital, through a variety of programmes including: a SME-focused grant platform and associated technical assistance fund, business plan challenge competitions, and collaborations with credit supporters from local financial institutions providing loans to energy entrepreneurs.

To learn more on Energy 4 Impact and SOGER, visit our website:

<http://www.energy4impact.org/about/programmes>

2. Project Information

The Pico-Hydro package supports 30 energy projects in Rwanda with a range of output power from 11kW to 50kW. These projects are currently in the development phase and work is underway to commission them in phases. Under this package, all projects require a detailed Operation and Maintenance (O&M) Manual.

This detailed O&M Manual should cover all processes from the intake up to the point of connection of the power plant to ensure safe and sustainable electricity supply is provided to rural communities.

Energy 4 Impact is hence looking for a Consultant to compile this O&M Manual and guidelines and thereafter provide training to the Energy 4 Impact staff.

Scope of work

Objective

The objective of this O&M Manual is to effectively and efficiently support the life cycle of the facility by eliminating personnel accidents, damage of equipment/structures, unplanned shutdowns and realising life-cycle cost savings. The O&M Manual development should be general to all 30 Pico-Hydro power plants irrespective of their size.

Main content

The consultant will perform the following activities:

1. Provide general overview of Pico-Hydro in Rwanda
 - a. Community based Pico-Hydro projects – roles and relationship between the community and developers
 - b. Pico-Hydro management guidelines
 - c. Development of safety guidelines (including posters illustrating different scenarios likely to happen)
 - d. Development of disaster management guidelines
2. Develop guidelines for operation of off-grid Pico-Hydro Power plants
 - a. Waterway(s) operation guidelines
 - b. Turbine(s) operation guidelines
 - c. Synchronous generator operation guidelines
 - d. Ballast load operation guidelines
 - e. Limitations and protection guidelines
 - f. Development of Pico-Hydro power plant operation reports and record keeping guidelines including all necessary templates
 - g. Power plant controls and indicators covering power plant start and stop sequence, emergency shutdown, controls and safety indicators
3. Develop maintenance guidelines of off-grid Pico-Hydro Power plants which would include among others:
 - a. Type of maintenance
 - b. Reactive (run to failure)

- c. Reliability Centered Maintenance (RCM)
 - d. Effective Pico-Hydro Maintenance guidelines
 - d.1. Civil structures
 - d.2. Electromechanical equipment
 - e. Effective Pico-Hydro periodic inspection
 - f. Firefighting procedures
 - g. Development of maintenance and inspection programme/checklist
 - h. Development of maintenance and inspection programme/checklist for the distribution system
4. Propose a simplified operator selection & training procedure including
- a. Operator selection criteria
 - b. Roles of Operators
 - c. Defining and classifying Operation work
 - d. Basic operation procedures and check points
 - e. Operation in the event of emergency
 - f. Other types of operations
 - g. Patrols and Operator Patrol items

Deliverables

The consultant shall submit the following deliverables to Energy 4 Impact:

- Operation and Maintenance Manual and Guidelines in 30 hardcopies, both in English and Kinyarwanda
- Operation and Maintenance Manual and Guidelines uploaded on 30 CDs
- Printed toolkits on technical and safety standards for Pico-Hydro – Quantity to be confirmed based on number of scenarios
- Training of trainers on developed Operation and Maintenance Manual to be conducted at Energy 4 Impact Office, Kigali, Rwanda
- Presentation of the O&M Manual

3. Timeline

The timeframe for this assignment is 5 weeks

Activity	Time
Submission of proposals	15 th February 2018 - 28 th February 2018
Selection of contractor	1 st March 2018 - 10 th March 2018
Contract negotiations	11 th March 2018 - 15 th March 2018
Manual development and presentation of 1st draft to Energy 4 Impact	16 th April 2018 - 15 April 2018
Final version submission and presentation	16 th April 2018 - 20 th April 2018

The specific locations and sites will be provided.

The consultant will work in close collaboration with the Programme Manager of SOGER at Energy 4 Impact. Energy 4 Impact will provide the consultant with all available programme documents, oversee and monitor overall progress, ensuring that deliverables are completed to a high standard, and provide input and guidance on the final deliverables.

4. Contractor's Profile

The selected consultant for this O&M Manual will be an individual/company/organisation with the following experience and knowledge:

- Proven experience in developing O&M manuals and Guidelines for small and mini-hydro projects, preferably off-grid hydro based
- Experience in designing and operating Pico-Hydro off-grid related projects and community participation in such projects
- Understand gender and environmental aspects in social economic development of an area
- Team leaders should have relevant qualifications in the engineering, energy and safety
- Should have supporting credentials on previous O&M manuals developed
- The team should preferably be proficient in English, Kinyarwanda and French

5. Proposal Guidelines

The submitted proposal should have two components: Technical and Financial. The Financial component should be separate from the Technical component.

Technical Proposal

The Technical Proposal should not exceed 15 pages, excluding appendices. The proposal should be divided into the following sections:

- Section A: About the Contractor, Overall Objectives and Approach
- Section B: Related Previous Work and Studies
- Section C: Work plan, Methodology and Timeline
- Section D: Description of Study Team and Roles: include organisational and personnel qualifications as directly relevant to the scope of work
- Section E: CVs of Key Team Members: one-page maximum for each proposed team member, as well as key sub-contractors, assistants and/or project consultants should be submitted
- Section F: Credential and references for any previous work done on developing O&M manuals and guidelines.

Financial Proposal

The Financial Proposal should be submitted separately from the Technical Proposal. The financial cost should be itemised with descriptions of cost and provided in word/pdf and excel format.

6. Evaluation Criteria

Proposals received will not be reviewed until after the deadline for submission of proposals. Any submissions missing either the Technical component or Financial component will be disqualified. The Technical component of the proposals will be reviewed first. Proposals that have passed the Technical Evaluation will thereafter be subjected to a Financial Evaluation. The Financial component will not be reviewed until after the Technical Evaluation is finalised.

Technical Evaluation

The total possible score for the technical component will be a maximum 100 points. Technical proposals scoring above 70 points will be considered successful for the Financial Evaluation. The shortlisting criteria will be as shown in the table below.

Major Criteria	Details & Sub-Criteria	Possible Score
General Experience	<ul style="list-style-type: none"> Proven experience in developing O&M manuals and guidelines Experience in the energy sector especially in Off-grid hydro community based projects 	15
Technical Experience	<ul style="list-style-type: none"> Methodology used Experience in developing and maintaining databases Experience in developing record keeping tools 	30
Team	<ul style="list-style-type: none"> Each personnel mentioned in the proposal has a minimum of 4 years of expertise in the field that he/she shall be assigned. Overall the team has proficiency in English, Kinyarwanda and French The team has qualifications relevant to Operation and Maintenance of small/mini/pico hydro plants 	30
Credentials	<ul style="list-style-type: none"> The consultant has provided similar services to at least four firms before The consultant has provided reference for similar work conducted before The consultant has proposed a methodology to be used in developing the manual and guidelines 	25
Total Possible Technical Score		100

Financial Evaluation

Only those applications that will meet the minimum score requirements in the technical evaluation will be considered. The financial evaluation will be based on individual/all activities priced against market rate and competitors and what is financially included/excluded against the requirements outlined in this document.

Submission of Expressions of Interest

You are hereby requested to submit a technical and a financial proposal and confirm your availability to commence the work immediately after receiving the contract approval.

Proposals should be submitted by 28th February 2018 electronically to Victor.Hakuzwumuremyi@energy4impact.org and copied to innocent.ndayishimiye@energy4impact.org and should include the following title: **“Tender No. SOGER/E4I/2018/O&M” in the subject line.**