

Terms of References

For

Power Output and Household Verification Inspector for monitoring of Pico/Micro/Mini Hydro Plants

1. Introduction

Alternative Energy Promotion Center (AEPC) is a national executing agency of renewable energy programme and projects in Nepal under the Ministry of Population and Environment. With the mandate of policy and plan formulation, technology innovation, resource mobilization and coordination and quality assurance, the mission of AEPC is to make renewable energy a mainstream resource through increased access thereby, contributing for the improved living conditions of people in Nepal. AEPC is implementing a National Rural and Renewable Energy Programme (NRREP), a single programme modality for the promotion and dissemination of renewable energy technologies under various sub/components.

2. Background

AEPC is the Government of Nepal's (GoN) core agency for the implementations of RE technology in rural areas of Nepal. AEPC has been executing National Rural and Renewable Energy Programme (NRREP) and operated through 3 core components- Central Renewable Energy Fund (CREF), Technical and Productive Energy Use (PEU) with various sub-components/units under the Technical component. Community Electrification (CE) is one of the key sub components implementing pico/micro/mini hydro projects in demand driven as well as public private- partnership (PPP) approaches. The CE sub-component has target to install 25 MW of Mini / Micro Hydropower to provide electricity to 150,000 rural households during the program period. The Monitoring & Quality Assurance Unit (MQA) of NRREP is responsible to monitor and verify the project's Power Output & Household (POHV) connected by the completed projects. This monitoring process is considered as one of the major steps towards finalization and settlement of actual subsidy amount for each completed project. The nature of this particular task requires specific technical skills to monitor as well as engagement of huge number of man days to complete monitoring of projects completed last year scattered throughout the country. Therefore, AEPC/NRREP needs to outsource for the required skilled human resources, which is in practice from the past. It's a regular job of AEPC/NRREP each year. So, AEPC has been maintaining a pool of sufficient qualified technical resources for power output and household verification of pico/micro/mini-hydropower projects.

The POHV is always carried out during the months from November to May when minimum expected in the rivers/streams. The POHV is carried out normally after one year of plant operation or after testing and commissioning of the project. POHV tests which are mainly intended to determine the following aspects of the project- 1) ability of power plant to

generate the installed (design) capacity 2) continuity and reliability of the design discharge fixed during the feasibility study 3) actual power curve to show the permissible tolerance limit compared to designed power curve.

The selected inspectors will work as consultants for the AEPC; they will be assigned from time to time to visit pico-micro-mini hydropower plants to verify power output and household connection. ***This is not a regular employment offer.*** Inspectors will be responsible for carrying out power output measurement and household connection verification of pico-micro - mini hydro plants and submit the verification report to MQA unit for the further process.

3. Objectives of the Assignment

The overall objective of the preparation and publishing this term of reference is to invite potential candidate for the POHV activity and select the candidates for the assignments. The specific objective objectives however are to-

- Short list the most appropriate candidates following set methods
- Prepare a pool of sufficient qualified inspectors.
- Provide training to selected candidates

4. Scope of Works

The consultant will have to do the following works:

- The study electrical parameters of each Pico/Micro/Mini regarding the power output by using true RMS meter as well as multi-meter and others electrical equipments.
- Measurement of pressure head using digital pressure gauge meter.
- Measurement of flow in the river using standard methods adopted by AEPC.
- Verification of household that has been connected or benefited from the project following power output and household verification guideline of AEPC.
- Inspection of all civil works as well as electromechanical works of the projects as per prescribed methods.
- Preparation of verification report as defined by MQA unit of AEPC/NRREP.

5. Eligibility to apply for the consultant:

The candidate must have following educational and relevant work experience who wishes to apply for this consulting job.

- Minimum of Bachelor in Engineering in Electrical/Civil/Mechanical Engineering from the recognized academic institution.

The interested POHVIs who are already trained by AEPC and enlisted in the roster need also submit a letter of interest with updated CV & POHV training certificates. The persons, who are directly or indirectly affiliated with Mini/Micro/Pico hydro supplier/installer

companies, will not be eligible to apply. The applicants are required to submit self declaration for his/her non-affiliation to any installer/supplier companies who supplied equipment for or installed mini/micro/pico hydro project under AEPC.

Additional guiding notes:

1. The AEPC/NRREP will select inappropriate team leader from among the selected qualified engineers (BE) and an assistant from among another engineer who has different academic backgrounds.
2. This assignment demands intensive field visits in the remote areas of Nepal and skills to interact with communities and local institutions. The AEPC therefore encourages that applicant who is physically fit and willing to travel in the field.
3. Person directly or indirectly affiliated with Mini/Micro/Pico hydro supplier/installer companies will not be eligible to apply. The applicants are required to submit self declaration for his/her non-affiliation to any installer/supplier companies who supplied equipment for or installed mini/micro/pico hydro project under AEPC.

6. Consultant Selection Method

The AEPC/NRREP will evaluate the CVs and letter of intent for the short listing as per the set evaluation method by the evaluation committee. Eligible and required number of candidate will be contracted for further selection process. Following steps will be followed in chronological order for the selection.

1. Short listing of applicants through CV evaluation.
2. Interview of the short listed candidates.
3. Publish final list of selected candidates.
4. Contractual agreement between AEPC/NRREP and POVI as appropriate.
5. Provide training to successful candidates who haven't received the training of POVH.
6. Create pool of trained people to serve as consultant for POHV activity

7. Documents to be submitted

- Filled application form prepared by AEPC/NRREP.
- Updated CV
- Relevant Academic Certificates
- Nepal Engineering Council certificates.
- Related training certificates

Certificates are the means of verification of the experience for the evaluation process.

8. Post selection activity:

Short listed new candidates will be eligible for 4-5days technical training by the AEPC/NRREP immediately after the selection. Training will be held in Kathmandu. AEPC will bear the cost of training venue, lunch, Tea/snacks, field visit costs and stationeries. AEPC will not provide DSA, travelling cost or other logistic cost to participants.

Contact Detail:

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