

## Renewable Energy for Rural Economic Development Project

### **VILLAGE HYDRO/WIND/BIOMASS POST-INSTALLATION VERIFICATION (SUSTAINABILITY AUDIT) TERMS OF REFERENCE FOR CONSULTANT**

#### **1. The RERED Project**

The Government of Sri Lanka (GOSL), with the assistance of the World Bank and the Global Environment Facility (GEF) has established the Renewable Energy for Rural Economic Development (RERED) Project, which aims to foster rural economic development through private sector and community based development models. Project objectives include (a) provision of electricity access to households through solar home systems and independent mini-grids fed by micro hydros, wind and biomass generators, (b) electrification of small and micro rural enterprises through renewable energy resources and (c) addition of capacity through grid-connected renewable energy power plants.

GOSL has appointed DFCC Bank as the RERED Administrative Unit (AU). The RERED Project channels funds through participating credit institutions (PCI) to individual investments. Grant funds are also available from the GEF for selected technical assistance activities.

#### **2. The Need for Post-installation Verification**

All off-grid village hydro/wind/biomass systems installed under the RERED Project are required to conform to the most recent Village Hydro/Wind/Biomass Specifications on file with the AU. These Specifications are designed to ensure that the village hydro/wind/biomass system meets applicable standards for safety, reliability and longevity. Subsequent to commissioning, these systems are to be maintained by the Electricity Consumer Societies (ECS) in conformity with the Specifications. Proper maintenance of the system depends on the competence of the ECS members on technical, financial and management aspects.

Therefore it is necessary to carry out Post Installation Verifications after 3-4Years to evaluate the sustainability of the subproject. This exercise would identify problems faced by the ECS, issues threatening longevity of the subproject, quality and condition of the physical assets and to recognize training needs for the ECS during the post-installation period. Further, if the subproject has failed within this time period, identification and addressing root causes will ensure sustainability of future subprojects.

Village Hydro/Wind/Biomass Post-installation Verifications are carried out by contracting the services of a qualified Consultant from a list maintained by the AU. The AU engages these Consultants (Chartered Engineers with relevant experience) and administers funds to cover the costs of this consulting service.

#### **3. Objective**

The objectives of this assignment are:

- To identify the operational status of the project, verify condition of the physical assets and to collect key details on the current operation
- To ascertain whether the ECS is capable of maintaining the sub-project, and to assess the technical knowledge, financial management and administration capabilities of the ECS and provide on-site training and advice as applicable
- How the subproject developer and the equipment supplier have provided post completion supervision, maintenance and guidance to the VECS.
- Identify the level of sustainability and issues threatening the longevity of the subproject

#### **4. Tasks of the Consultant**

When engaged by the AU the Consultant will carry out the following:

- Collect the relevant documents from the AU and visit the village hydro/wind/biomass installation and make a field assessment of the subproject.

- Discuss system performance with the ECS members and collect key data regarding the present operation.
- Identify problems faced by the ECS and provide on-site training and advice with regard to operation and maintenance, safety issues, financial management and general administration procedures and training needs as applicable.
- Identify areas of weakness that need close monitoring, including non-technical aspects.
- Submit the completed Village Hydro/Wind/Biomass Post-installation Verification Form to the AU, which will include the consultants' comments and observations on the subproject.

The report will conclude with the following declaration:

I ....., presently registered as a Chartered Engineer with IESL/.....hereby declare that I have established the status of operation of the project, and its' physical assets as reported in this form by carrying out an inspection of the project assets and through discussions with the persons who are mentioned on cage no. 10.

Signature:

Date:

Annex:

1. Post Installation Verification Form

*Post Installation Verification TOR 21.07.08.doc*