Solar Electric Light Fund bringing solar power to 44 villages in Benin's Kalalé district, 2007

Washington D. C. – January 2008 - The **Solar Electric Light Fund** (SELF) along with the Association pour le Developpement Economique, Social et Culturel de Kalalé (ADESCKA) and other local partners have proposed to facilitate the solar electrification of all **44 agricultural villages** in the **Kalalé District**, Borgou Department, Benin. The project addresses the development priority area of agricultural development, although it also supports **health**, **education**, general **economic development** and **community infrastructure.**

The economy of the Kalalé District, as in most rural districts, is mainly based on agriculture with more than 95% of the population involved with farming. Despite its great potential, agricultural production in Kalalé remains weak and easily influenced by natural conditions. Rainfall is the sole source of water supply for crop production , which is limited to only a six month rainy season each year.

ADESCKA in its community development and poverty reduction programs considers the development of **Small Scale Irrigation (SSI)** as one of the major intervention areas to boost agricultural production in the district. In particular, irrigation is needed to grow crops during the dry season both for creating new family income from lucrative garden crops and for augmenting meager diets during this season when people lack the nutrition provided by fresh vegetables.

A major impediment to developing irrigation programs has been the **lack of an energy source to transport water**. Water is typically collected through laborious time consuming manual methods for general family use. The much larger volume of water needed for crop irrigation can only be provided by mechanical means. Pumps driven by fuel-burning motors have proven to be unaffordable by most families and unsustainable in terms of maintenance and upkeep.

Solar powered pumps are economical, reliable and easy to sustain. Solar pumps enable the use of water sources ranging from surface water to deep wells. When coupled with the latest technologies in efficient small-scale irrigation, solar electricity has the power to dramatically increase agricultural production and family well-being in the following ways:

- Help poor farmers overcome rainfall and water constraints by providing a sustainable supply of water for cultivation and livestock.
- Provide increased food security to poor communities by irrigating crops during the previously unproductive dry season.
- Fresh food grown in the dry season will contribute to the alleviation of poor nutrition.
- Increased production will provide a source of household income through the sale of surplus food, especially for women who are generally in charge of vegetable production.
- The introduction of efficient SSI technology and methods will help build agricultural capacity in the District and in the Republic at large.

In recognition that the sectors of health, education, communication, security and village commerce all work together with agriculture to improve life in a farming community, solar energy will also be used to provide general support to villages in the following ways:

Community Infrastructure and Support
The project will provide energy to address the public needs of health, education, water supply, security and communications. Healthy, educated farmers in touch with outside resources make more effective farmers.

Economic Growth
The project will support general micro-enterprise development and the formation of a local solar industry to support the project and to place future solar electrification in the private sector.

Family Support for Health, Education & Home Industry
A demonstration program will enable a small number of individual families to purchase PV home lighting systems in an affordable manner. A demonstration of this technology will build interest, confidence and demand for a future phase of solar home electrification.

Sustainability and Capacity Building
In addition to the installation of solar equipment, the project focuses on creating the systems and local capacity for sustaining the project. Local partners will be trained in PV installation and maintenance and in the creation of the financial and organizational systems needed for sustainability.

Commercial support
Activities such as micro-financing and business development training will support and sustain the agricultural and economic growth components of the project.

In addition to the direct benefits to the 100,000 residents of Kalalé District, this project will form a replicable model that can be used throughout Benin. This endeavor may be a pilot project for a nationwide Government program of rural solar electrification coupled with efficient SSI. A nationwide program creates a scale capable of creating the industries of PV module assembly, battery regulator assembly and deep-cycle battery manufacture. There is a growing need for these industries in West Africa but they currently do not exist in the region.

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