



## Sustainable Rural Development through Solar Power and Telecommunications

### Location

Laj Chimel, in the Quiché region of Guatemala

### Problem

Lack of basic energy services in an isolated community of refugees recently returned to an area devastated by civil war.

### People

Rural exiled community, of which 18 families have returned and 20 more are expected.

### Solution

Collaboration with local NGO to bring energy services to community, based on community's identified prioritized demand and available resources.

### Timeframe

April-December, 2002

### Results

Lighting for home, school and clinic applications, allowing for higher education through distance learning and refrigeration of vaccines; community training and education; acquisition of a solar-powered cell phone for income generation; women incorporated into the Local Improvement Committee.



Quiché region of Guatemala

Laj Chimel is a small community located in the Cuchamateanes Sierra mountains, in one of Guatemala's poorest regions. Guatemala's civil war, lasting from 1960-1996, resulted in extreme isolation and lack of basic services in this community, and created a refugee population just now returning from exile.

At the onset of the project, 18 refugee families had returned to Laj Chimel, and were awaiting about 20 more. The community faced extreme poverty, relying on subsistence agriculture (corn and black beans), and lacked any income generating activities. Those who did not have land to cultivate worked in other towns as agricultural laborers. Laj Chimel is accessible by car along an existing road, but there is no bus service for the local community. They did not have access to grid-based electricity, or telecommunications.

With support from Winrock International, USAID, EGI, the Fundación Rigoberta Menchú Tum and Fundación Sol y Viento, Fundación Solar partnered with a local organization, the Local Improvement Committee (LIC), to identify energy needs in the community, ensure participation of women, and define the most cost effective renewable energy technology for the resources found in the region. Together they identified lighting and communication systems as the most important services, resulting in the installation of 50 solar

home systems for homes, schools and a clinic, and the purchase of a solar-powered cell phone.

Rural electrification in Laj Chimel has benefited the community in multiple ways. Electric lighting has replaced kerosene, thereby reducing indoor air pollution, and related health problems. Electrification of the community health center has allowed for the refrigeration of critical vaccines and other medicines. The establishment and electrification of a new distance-learning center with high school courses

allowed access to higher education in the community for the first time ever, through the operation of a VCR, television and classroom lighting.

In addition to installing the solar home systems, Fundación Solar trained the community to support ongoing operation and maintenance, and provided income generation training. Now members of Laj Chimel and surrounding communities use the cell phone on a pay-per-use basis, generating income for the community.

Thanks to Fundación Solar's efforts, women were incorporated into the Local Improvement Committee, which previously lacked female representation.

Fundación Solar continues to serve as a facilitator to assist the community in operating the solar home systems and with other technological issues, with support from its partners.



Laj Chimel women displaying PV panels