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Lighting, Cell Phones, Refrigeration and Tele-Education for Rural Sustainable Development



Laj Chimel women displaying photovoltaic panels.

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

With USAID funding, Local NGO Fundación Solar partnered with a local organization, called 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 benefits the community in multiple ways. Electric lighting replaced kerosene, thereby reducing indoor air pollution and related health problems. Electrification of the community health center allows for the refrigeration of critical vaccines and other medicines. The new distance-learning center, powered by solar energy, offers 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 50 solar home systems, Fundación Solar trained the community to support ongoing operation and maintenance.

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.

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

Fundación Solar also 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 USAID and 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.

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