



Micro-Hydro Energy for Post War Rehabilitation in Guatemala

Location

Chel, in Quiché, Guatemala

Problem

Lack of energy services in isolated war-torn rural community.

People

Rural poor community, with 440 households participating in the project.

Solution

Construction of a micro-hydro plant, and installation of a PV-powered satellite phone for communication and income generation.

Timeframe

1998-present

Results

Income generation from solar-powered satellite phone, fax and computer; progress toward construction of the 110kW microhydro plant; anticipation of improved quality of life for the 440 participating households.



Quiché region of Guatemala

Guatemala's 36-year civil war had severe repercussions in the northern part of the country, leaving rural communities isolated and desperately lacking water, energy and transportation services. The community of Chel, located in the northern region of Quiché, was one of the most affected areas. In April 1982, over 95 people in the Chel community were massacred. The community lived in fear, and immediate survival took priority over planning for the future.

Exiled leaders of the Chel community came across many micro-hydropower facilities operating throughout rural Guatemala as they fled the armed resistance, and concluded that small hydropower could present a solution to Chel's energy needs. The leaders set out to bring the technology back to Chel upon their return and resettlement, and in doing so contacted Fundación Solar. A partnership was established between the two to bring energy services to the community. With support from Winrock International, USAID, UNDP, GEF and the Ixil Project, feasibility studies began in 1998, and the construction of a 110kW micro-hydropower plant began in 2000,

The project presented both technical (due to its geographic isolation) and social challenges, due to deep ethnic, cultural and political divisions within the community and a lack of trust of outside organizations, a consequence of the war. Through Fundación Solar's transparency and open dialogue, trust and cooperation were achieved. The community, which at first couldn't imagine the quality of life improvements the project proposed, began to articulate their needs and development priorities. With support

from its partners, Fundación Solar provided critical technical support and social development in Chel. The community contributed enormous effort to the construction of the plant. The men spent hours carrying tubes and wires on their backs along the road they themselves had built for this purpose.

Because the nearest telephone was a 10-hour journey by foot and bus, Chel decided to purchase a solar-powered satellite telephone. Without sufficient capital to buy the phone outright, they made arrangements to buy the phone on credit, a first for the community.

Once installed, the telephone became a source of income, used by Chel and other nearby communities. Building on the success of this technology, the

community bought a fax machine, leveraged the donation of a computer from an international donor, and purchased a truck on credit for transporting construction materials into Chel.

Energy provided through installed solar electricity and anticipated through upcoming hydroelectric generation expected in March, 2004 has given the Chel community a vision of its future as a developed and income-generating region, through the production, distribution and sale of energy, and its resulting productive uses.

For the first time in 40 years, the community has been able to put aside their fears and work together for a common goal: bringing energy services to the community, and planning for their children and grandchildren.



Carrying plant construction materials