



## SEPI Project Profile: Thai/Burma border area, Karen State



October 2008

### Project Overview:

SunEnergy Power International, Border Green Energy Team, and Green Empowerment have been working together to provide solar systems for clinics since about 2000. Last year, we provided systems for IDP (Internally Displaced Persons) camps and a referral hospital.

This year, our main work was to provide solar systems to energize the electrical equipment used at the Free Burma Rangers (FBR) training facility. This training camp includes medical training and treatment facilities, a training building for human rights and leadership skills, and a central computer/communications center. Each of the facilities requires energy for laptop, projector, DVD presentations, as well as lighting. (The training sessions continue several hours after dark.) The management hub includes as many as 10 energy efficient laptop computers, satellite communication dishes and phones, and printing capabilities for support.

The energy provided by this project greatly enhances the ability of Free Burma Rangers to provide the type of training that is needed, and allow the students to practice the skills that they learn before heading back to their various ethnic areas. In addition to our work at the FBR facility, we made various stops to continue training and re-supply for previous projects

The project was made possible by generous individual donors to SunEnergy Power International, Knightsbridge International, and the Good Works Foundation and McCargar Foundations through Green Empowerment. As part of our Partnership with Knightsbridge, Jim Simcoke made his annual delivery of medical equipment and supplies, tailor chosen to meet the needs of Free Burma Rangers, delivering them personally to Thailand.

**Location:** Thai/Burma border area, Karen State

**Partners:** SunEnergy Power International (SEPI), teamed up with its local partner, Border Green Energy Team (BGET) to plan, design, and implement the project.

**Scope of Project:** On this recent project, we provided solar systems and training to power the critical loads at the Free Burma Rangers (FBR) medical and human rights/leadership facility. We were also able to include a re-supply and training for past clinic projects, as well as the training of about 40 technicians,

**System description:** FBR training facility included (24) 130W solar panels (12 systems of 2 panels each). The 6 DC systems included Morningstar Pro-Star charge controllers, DC pigtailed, (3) 80 Ah deep cycles, wiring, and junction boxes. The 6 AC systems had all of the above plus a Morningstar 300 watt sine wave inverter.



## Free Burma Rangers:

The Free Burma Rangers (FBR) is a multi-ethnic humanitarian service movement. They bring help, hope and love to people in the war zones of Burma. Ethnic pro-democracy groups send teams to be trained, supplied, and sent into the areas under attack to provide emergency medical assistance and human rights documentation. FBR now has its main training core group, plus 50 trained teams that cycle through the training facility. Each team is comprised of 4 to 6 members, and come from all of the various ethnic areas.



The FBR has trained over 110 multi-ethnic relief teams and there are 43 full time teams active in the Karen, Karenni, Shan, Arakan, and Lahu areas of Burma. Seven more teams have been formed recently in the Chin area on the Indian border. The teams have conducted over 350 humanitarian missions of 1-2 months into the war zones of Burma. On average between 1,000-2,000 patients are treated per mission with 2,000 more people helped in some way. Since 1997, the teams have treated over 360,000 patients and helped over 700,000 people.

## Project Execution:

The project started back in June/July of 2008 when the equipment was ordered, based on assessment and design work done at the end of 2007 during our last project in Burma. Since every piece of equipment has to be hand carried into the training site over a period of several days (and several mountains), everything had to be thought out quite carefully, packaged for portage and staged.

Our team came together in October to implement the project, starting with a 4-day journey into the area. Part of the team stopped at last year's project to complete a training and re-supply effort, while the balance of the team proceeded directly to the project site.

Once the entire team was assembled at the site, we added members of FBR teams to our group so that the final implementation team consisted of at least one member from each of the ethnic areas. This is so that they can go back to their home areas with the general knowledge of how to work on solar systems that have been installed there previously.



The loads at the facility required (24) 130W solar panels. However, rather than building one large system and distributing the power, we installed (12) 2-panel systems. In the case of the central communications center, many of these systems are in the same room, but we have found that this design leads to much greater reliability and redundancy of equipment where otherwise, the failure of one piece of equipment would shut down the entire operation.

The project was completed in just over a week, and no trips had to be made to the local hardware store (a 4 days' walk away!) We are all looking forward to the next project, planned for early 2009!!

