

Trip Report
Ejido Tanque de Dolores, San Luis Potosí, Mexico
February, 2004
Jason West

In February, I traveled with Henry Worhnschimmel, to the state of San Luis Potosi in the north of Mexico, where we purchased and installed the first five household solar electric systems to be supported through this renewable energy initiative. We traveled first to San Luis Potosi, where we purchased the equipment from a company that specializes in renewable energy, and then to Matehuala, where we met Adrian Cruz-Cazares, a collaborator in the Mexican Foundation for Rural Development. Then we traveled on dirt roads to the Ejido Tanque de Dolores, a collection of several small towns, some of which do not have any electricity.

- Jason West



The Banda-Moreno family with their new solar panel, (from left) Emilia (12), Ana Cristina (14) Asunción, Ignacia, Veronica (4), Maricela (15), and Marina (2, of the family next door). After working together with Asunción to install the solar electric system, I visited the home that evening and saw that the two oldest girls put the light to use right away to do their homework.



Melchiades López de Leon became a widow when her husband was struck by lightning. She cares for her 5 children, 3 nieces and nephews, and a 90-year old grandfather. The children range in age from 3 to 15, and I could not remember all of their names, much less get them all in the picture. The mother of the nieces and nephews works in Monterrey to support the whole family. Her brother is on the right, visiting from a nearby town. They live in a small four-room home. The grandfather hardly left his bed, but he let out a yell when the lights turned on.

The electric systems that we installed include the 35-Watt Kyocera panel shown, which comes with a 25-year warrantee. It also included a “deep-cycle” battery (much like a car battery but designed for use with the solar system), and three 13-Watt fluorescent lights. Working with the families, we installed all of the wiring, switches, and connections where the family can connect a radio or small television. The system will provide years of service with very small operational costs (only replacing the battery and light bulbs).

On most days, the battery stores enough electricity to run the lights for about three hours in the evening. This allows the families to eat dinner under lights and do chores. It also lets the kids do homework or read, and lets them run a small radio or television for music and news.

The total cost of each system is about \$570. Of that, the families paid \$130 (about 20%). All of the equipment was bought from an electrical company in San Luis Potosí.



Henry Wohrschimmel and Felipe Acosta-Hernandez. Henry is now a student in Switzerland, doing research in Mexico City – he helped me with the first two installations. Felipe is commissioner of the Ejido Tanque de Dolores, and Felipe and his family served as hosts for Henry and me. Felipe and Adrián Cruz-Cazares of the Mexican Foundation for Rural Development (FMDR) have helped me tremendously in organizing the project, including selecting the families to receive the equipment.



Antonia Bustos (with panel) lives here with her granddaughter Asalia (12, at far right). Her son Francisco and his family – Agapita, Francisco (7) and Marina (2) – live next door and do not yet have electricity, but will also benefit from this electric system. Antonia, a very kind and deeply religious woman, took great care to ensure the system was installed as she wanted. She fed me well and put me up for the night.

These families live about a mile from the electrical grid, but it is more cost-effective to give them solar electric systems than to pay for the electrical connection (even without the subsidy we provide), especially considering that the solar system has very low operational costs. Antonia said she had previously carried a car battery into town to be charged up to run her radio and small television. She stressed that the high costs of charging the battery (\$2.00 every two weeks), and of buying candles, are avoided with the solar electric system.

I hope to return with support for a solar electric system for Francisco's home.



The Ramirez-Bustos family: Agustín, Gloria Maria, Eduardo (5), and Iovanni (9). Iovanni insisted that he be photographed with his lion. They live in a very small three-room home with dirt floors (most homes in this region have concrete floors). They are shown in their kitchen, with the wood stove on the right.



Agustín Ramírez-Roque (right) and his wife Rebecca live in this home with two sons (not shown). Their son Agustín lives with his family next door and also received a solar electric system. They live in the town of Tecolote, which is about 15 miles from the nearest electrical connection. Of the 11 families in Tecolote, we installed two electric systems, leaving 7 still without electricity.



What I did on my Spring Break. In addition to learning how to install solar electric systems ourselves, we worked with the families to teach them how to do the wiring, as well as how to maintain their systems and solve any problems should they occur.



I was fortunate that my visit included February 14 – “the day of love and friendship”. In these communities, Feb. 14 is celebrated just like Christmas, including the same decorations. The celebration started with tamales and atole (hot chocolate) and ended with candles, prayers, and singing.



Regina Hernandez-Esparra and her son Juan Banda-Hernandez, under their new electric light. Ten solar electric systems were purchased last November as part of the first government subsidy program in this region. But this family could not afford the extra \$20 to pay for the installation, so it sat in a box in their home. When I visited a year earlier, I saw that this family was the poorest in the area, and I hoped I would have the opportunity to help them. Having installed the other systems, I was very happy to work with this family to install their system. The home has dirt floors and Regina cooks traditionally over an open fire.



Sunset in the desert.

Project finances – February 27, 2004

Since the inception of this project, we have raised a total of \$3180 in donations. Of this we spent a net of \$2230 on the five solar electric systems (including the 20% that the families contributed to the overall cost). We spent an additional \$30 on gasoline and tools, and I donated \$180 to our partners – the Mexican Foundation for Rural Development – to help cover their administrative costs. This leaves the project with \$740, which will be used for our next purchase of renewable energy technologies for families in this region of Mexico.

To date, I have paid for all of the administrative expenses of the project, including two trips to visit this community in Mexico. All donations received have directly supported the purchase of renewable energy technologies.

I would like to thank the many people who entrusted their donations to this project, and thank the many volunteers who have supported this project by offering their time. These are:

Our friends at the Mexican Foundation for Rural Development: Adrián Cruz-Cazares, Mauricio García de la Cadena, Citlali Fuentes, and Adriana Gonzalez.

In the Ejido Tanque de Dolores: Felipe Acosta and the Acosta-Jaramillo family.

And ... Julie March, Henry Worhnschimmel, Rebecca Dodder, Dalia Bali, Denisse Varela, Tania López, Guadalupe Tzintzun, Gustavo Sosa, and Michael Ross.