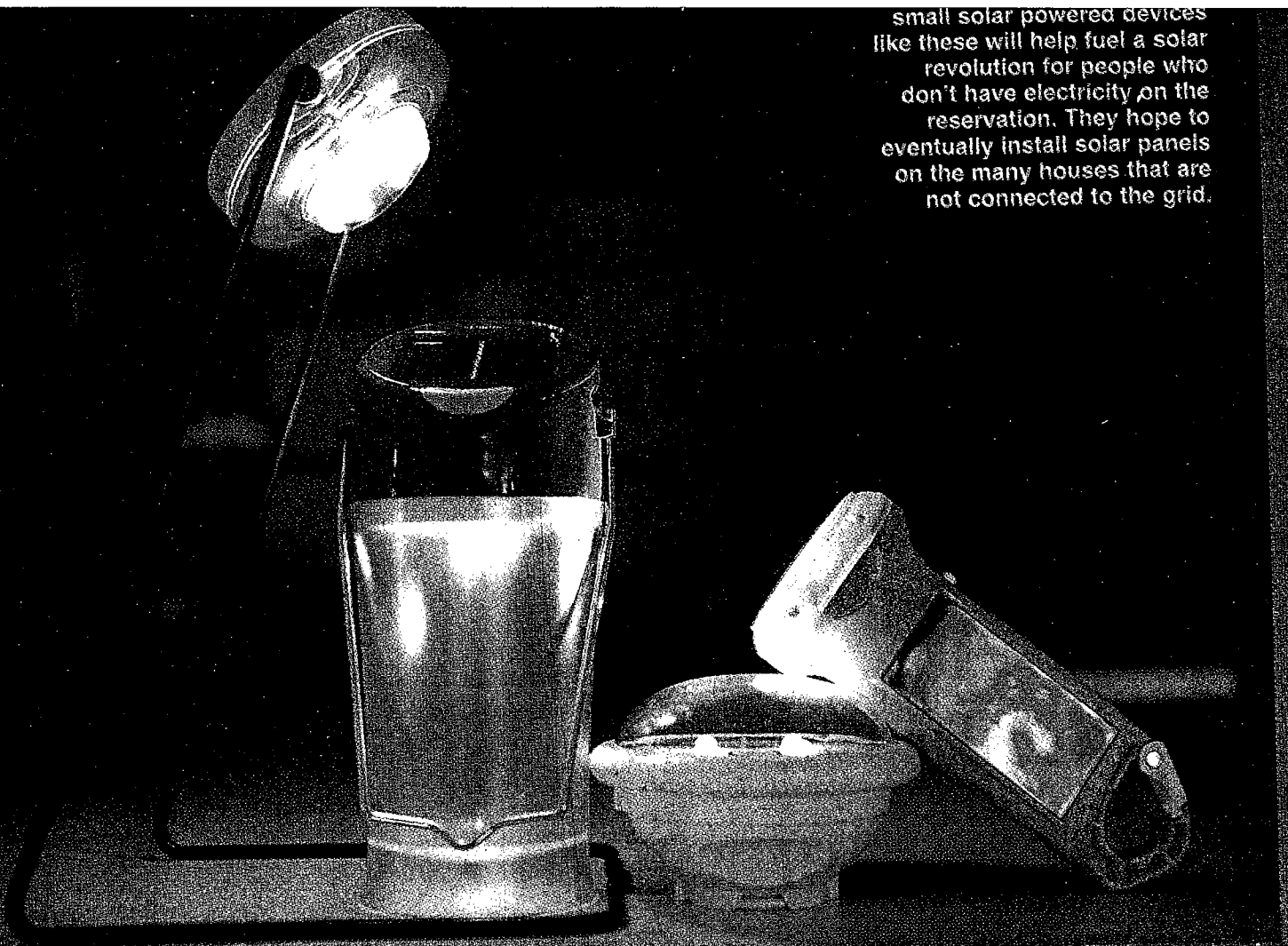


small solar powered devices like these will help fuel a solar revolution for people who don't have electricity on the reservation. They hope to eventually install solar panels on the many houses that are not connected to the grid.



Brian L. Cassidy/PhotoDisc, Inc.

LIGHTING *the* DARK

Navajo solar project hopes to bring power to the people

By Michael Sullivan
Staff writer

THOREAU — Isabel Largo lives with her husband, Floyd, and two children in a snug, modern home just on the edge of the community of Thoreau. Just two miles down New Mexico Highway 371 are two cafes, two convenience stores, two car washes and several other businesses. They are all dependent upon water and electricity. So why does the Largo family have to haul water, use someone else's refrigerator and depend upon kerosene lanterns for lighting?

They cannot afford to pay \$16,000 to run a connection from the Continental Divide Electric Company distribution line a quarter-mile away, across the highway.

"We didn't know there wouldn't be electricity," Isabel Largo said.

Their home site, a couple hundred yards off the highway, at the base of A'daa' hozhoni' Butte, was given to the family by her husband's aunt, and their modest home was built five years

ago. That has been five years without electricity and water. Their children, Lucas and Leniah, have had to do homework by flashlight or lantern light in the kitchen during that time and to go to friends' homes to use a computer for homework. A wooden outhouse stands at the edge of their driveway. Without a steady, reliable source of electricity they cannot connect to a nearby waterline.

There are thousands of people on the Navajo Nation who are in the same position, which is why Melton Martinez is waging a campaign to at least bring enough electricity to these homes to provide lighting.

Martinez said he knows of many other Navajo families who have been waiting many years for electrical hookups, usually because they cannot afford the expense. In some cases, the homes are located far from distribution lines.

Several considerations are involved in determining the cost, David Miller, district manager for Continental Divide in

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Gallup, said. Location, terrain, soil composition and direction are all factored in. He was unable to confirm the cost of running a line to the Largo residence, but said the \$16,000 figure might be accurate.

Martinez arranged a visit to the Largo home Tuesday with workers from the chapter house and two men from Denver who are promoting the lighting project.

"This family is a priority because of the kids," explained Community Health Resource Coordinator Anita David. "They need a fridge."

They may have to wait a while longer for a refrigerator, but at least they can look forward to electric lighting.

"Start small and do something basic," advised Doug Vilsack of Denver.

Fifteen people gathered later that day at the chapter house to hear Martinez and Vilsack explain the Navajo Solar Light Project. It's a modest start to an ambitious effort to electrify homes off the grid and possibly bring energy independence to the Navajo Nation.

Portable solar panels, small enough to hang in a window, can generate enough electricity to run a lamp for up to four hours, Vilsack said. That may not sound like much, but it eliminates the need to use a kerosene lantern or candles to provide enough illumination to read or do homework. The cost, depending upon the system, will range from \$20 to \$50. Plus, electricity is safer than candles and healthier than breathing kerosene fumes, Vilsack added.

Ella Kasuse is connected to the power grid but looks forward to the day when she can reduce her electric bill, which can run up to \$272 a month, she told Vilsack.

"This isn't going to run a refrigerator," Vilsack said, holding up a solar panel that folds tightly like a road atlas, "but at least it's a start. It's a first step."

Responding to Vilsack's comment about a first step, Chapter Secretary Virginia Yazzie said she thought the meeting was to discuss a pilot project and is definitely ready to move to "Step 10."

Martinez envisions a day when more-powerful solar systems can provide all the juice needed to run refrigerators, TVs, computers, and to pump water. Ideally, these systems can be manufactured locally and installed and serviced by Navajo technicians.

"We want to bring this to people at a low price," he said.

Navajo Nation Vice President Ben Shelly, who attended the informational meeting, goes ever further.

"We want to make electricity and market it," Shelly said after the meeting. His goal, if elected president in November, is to establish solar and wind farms throughout the Navajo Nation and to make portable solar systems available and affordable to every home.

"It's a win-win situation. I'm going to pursue that," he promised.

Council Delegate Edmund Yazzie also liked what he heard at the meeting.

"It sounds promising," he said afterward. "We've got to start somewhere."

Vilsack, an attorney with a Denver law firm, is on a sabbatical to promote his passion for bringing safe, inexpensive lighting to Native peoples through a nonprofit organization he is involved with — Elephant Energy. He was inspired to do this several years ago while living in Namibia. It began there with solar-powered flashlights and has gradually

expanded to desk lamps and hanging lights. He travels at his own expense, with his partner in the enterprise — Christian Alexander. Alexander is a student at the University of Colorado Law School. They connected with Martinez last April in Denver, during a conference on alternative energy for Native American tribes, sponsored by the U.S. Department of Energy.

Martinez has been promoting the concept for the past two years and acquiring resolutions of support from all the nation's chapter houses. Prior to the Thoreau visit, they had made presentations at Pinedale, Baca and Mariano Lake. The technology, purchased by Vilsack through a \$4,500 grant, which also partially covers his expenses, is left at each chapter house for further inspection by residents and possible later purchase.

"The reason that I do this is it makes a lot of sense," he said.

Martinez has his own reasons:

As director of an organization called Eastern Navajo Uranium Workers, he is dedicated to ridding his nation of both coal-fired and nuclear power plants. He once lived near an open-pit uranium mine and worked briefly as a truck driver, hauling uranium ore. He is well aware of the negative impact on the environment from uranium and coal mining.

"We have to find some kind of alternative energy than uranium," he said.

A numbers game

Exactly how many Navajo homes are without electricity? This is where it gets confusing. Martinez estimates 18,000 homes but concedes that no one really knows for certain. He also estimates that there are

300 homes in the Thoreau Chapter without electricity, but chapter officials cannot confirm that number. Neither can they say for certain even how many people live within chapter boundaries, although there are 1,044 registered voters, according to Community Coordinator Kathy Lee.

Lee and Anita David point out that the building complex around the chapter house, which includes a Head Start school, senior center and an incident command center, runs up an electric bill of \$3,000 a month. A solar setup would greatly impact the chapter's budget. They are solidly behind Martinez's program, even though what is needed may be far down the road.

These numbers must be pinned down for the project to go much further, Vilsack said.

"I think more information needs to be collected," he told the gathering. "And people need to be more pushy (about articulating their needs)."

Vilsack and Alexander ended their visit in Window Rock before returning to Denver, where they will remain in contact with Martinez.

The three-hour drive over from Dikön, Ariz., for the meeting was worth it for Anna Frazier, like Martinez a member of Dine CARE.

"Our goal is to transition the Navajo Nation to renewable energy," she said. "Coal is not going to be around forever."

Asked why so many Navajo choose to live in areas without electricity instead of settling in electrified communities, she said, "There's an attachment to the land. We've always lived there ... and we have to live within our chapter boundaries."

David also commented on the question, saying: "People used to choose to live that way, but not any more."