

THE POWER OF CHOICE

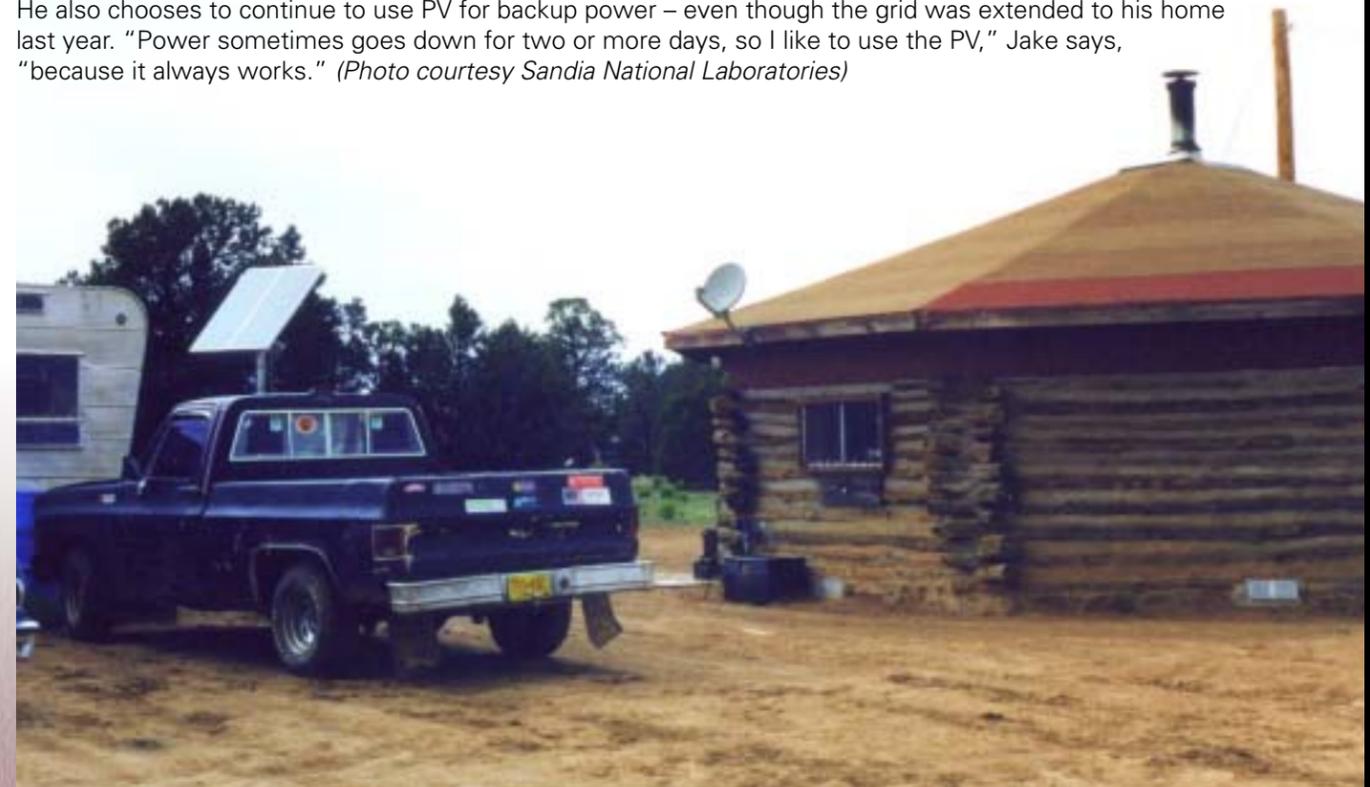


The Chischilli home on the Navajo Reservation benefits from photovoltaics. A widow, Marie is head of the house and has a comfortable home and a full-time job driving a school bus for the Dilkon School. They had burned up ten generators in previous years, costing them more than twice what their new PV system cost. The PV is mounted atop (and serves to shade) a sandbox. Clearly, photovoltaics was a great choice for this family. *(Photos courtesy Kiss + Cathcart, Architects, and Native American Photovoltaics)*



◀ Arla Ramsey, Vice Chair and Tribal Administrator of the Blue Lake Rancheria in California, chooses to live where no public utilities are available. For her south-facing house she chose a battery system charged by solar and a pelton wheel for a constant trickle charge. With this system, she enjoys all the amenities any homeowner might want. Her security lights are independently solar powered – and help keep the bears away! *(Photo courtesy Arla Ramsey)*

▼ Lewis Jake chooses to live in a traditional Hogan on the Ramah Navajo Chapter lands of New Mexico. He also chooses to continue to use PV for backup power – even though the grid was extended to his home last year. “Power sometimes goes down for two or more days, so I like to use the PV,” Jake says, “because it always works.” *(Photo courtesy Sandia National Laboratories)*





Unlike some reservations, the White Mountain Apaches typically live in electrified communities, but water presents a challenge. One requirement for White Mountain reservation homes is that each be served by a community water supply rather than drilling individual household water wells. Their water storage tanks are on hillsides so as to provide adequate pressure to homes below. These hillside sites are far from the electric grid, and the cost of installing cables from tanks to pumphouses would be prohibitive. After this analysis, the tribe chose photovoltaics to generate electricity for their community water. *(Photos courtesy Indian Health Service, Whiteriver Office of Environmental Health)*



“These photovoltaic projects are a start, but there is much more we need to do. New sources of funding are always welcome, always appreciated. We have a long, long way to go.”

Wilbur Haskie, Zuni Conservation Project, Zuni Pueblo



▲ World-renowned Native American flutist, R. Carlos Nakai, chooses to live off-grid, and chooses to power his home with photovoltaics. The home is located in the southwestern United States, and both home and system were built by the PV supplier. *(Photo courtesy Sundance Solar Designs)*



► The Lower Brule Sioux Tribe in South Dakota needed to put a fence around a wind anemometer on a 175-foot weather tower. Using photovoltaics to electrify just a single strand of wire, they were able to fence the structure in about an hour, where setting posts and running conventional barbed wire would have taken considerably longer – and been much more expensive. Tribal members say the application fits perfectly with their use of other renewable energy sources. *(Photos courtesy Lower Brule Sioux)*



This PV system on the Zuni Reservation waters about 100 head of sheep, brought daily to the tank by the shepherd. When their Aermotor windmill experienced damage due to high winds, the Zunis found it was less expensive to use PV than to repair the windmill. Simply put, the Zuni consider PV their best option. The PV is portable and is rotated from site to site as necessary for watering sheep and cattle. *(Photo courtesy Sandia National Laboratories)*



WHY PHOTOVOLTAICS?

Tribal authorities and individual Native Americans are increasingly recognizing – as are other people throughout the world – that renewable energy systems offer some real advantages when compared with conventional energy: lower operating costs, less vulnerability to fluctuating fuel costs, less harm to the environment, and greater autonomy. Photovoltaics is particularly well suited to providing power for applications far from the electric grid. But when the power of choice is permitted in the equation, then PV is often chosen for the reasons stated above, irrespective of where the PV is located, and irrespective of what the PV powers. In short, the Power of Choice is a powerful multiplier.



Because there was no access to grid electricity, Miriam Hilborn, a member of the Laguna Pueblo (New Mexico) chose PV to generate electricity for her home. This choice means that the Hilborn family can live a fully self-sufficient lifestyle on reservation lands. *(Photo courtesy Sandia National Laboratories)*