

RESERVING THE OLD WAYS

NATURE'S GIFT

The tradition of gift-giving among the Lakota has been cherished for generations. Even with the depressed economic conditions on the Rosebud Reservation, the gift-giving tradition continues. Beekeeping – a way to provide meaningful gifts of honey – is one activity of the Center for Permaculture as Native Science. Success is made possible by photovoltaics, which electrifies fences that keep area ranchers' cattle away from the Lakota

People's honeybees. (Photos courtesy Center for Permaculture as Native Science)



▲ High school students creating fetishes with a PV-powered grinding wheel. (Photo courtesy Zuni Conservation Project)



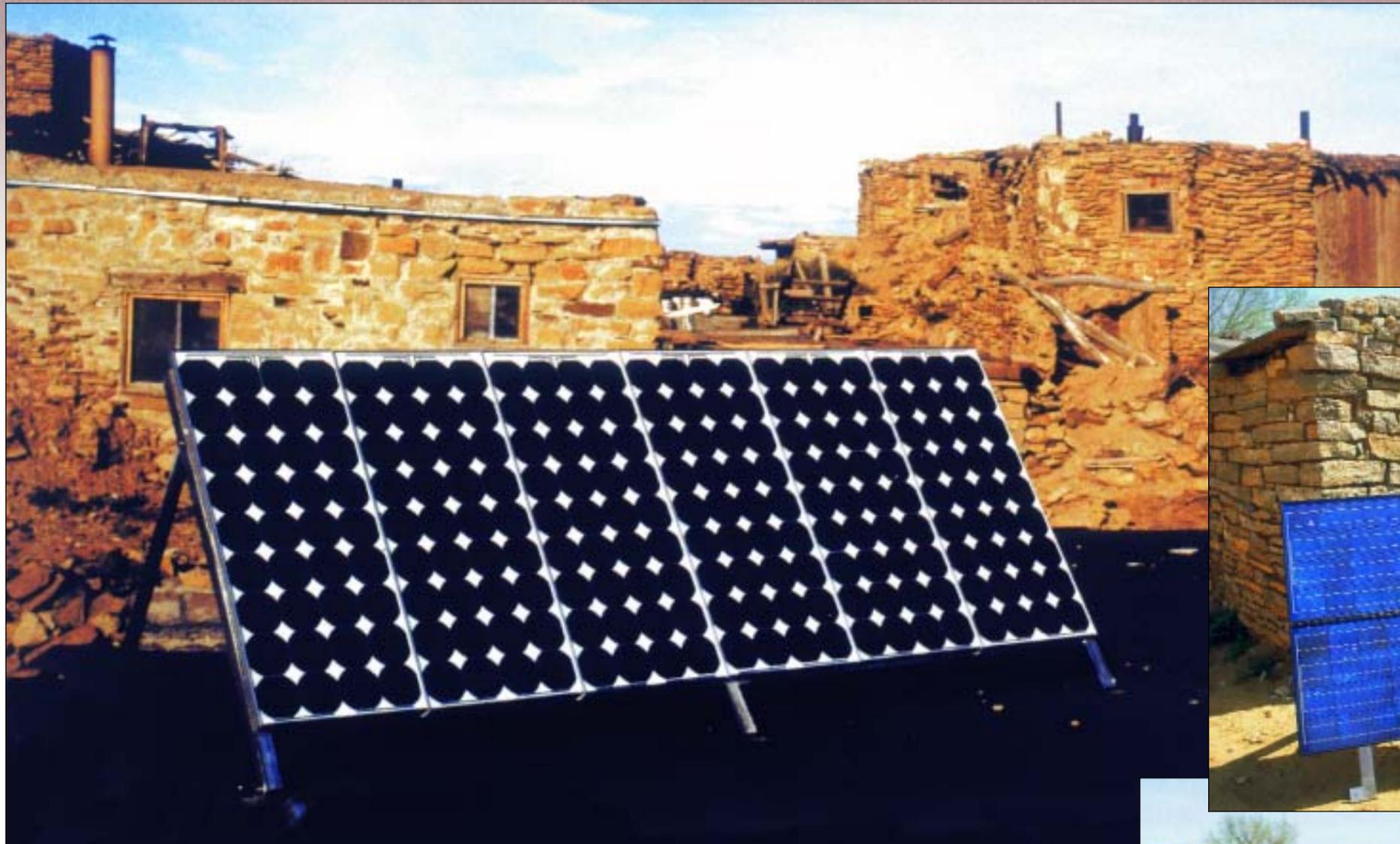
▲ Mabel Ghahate is a beadworker from her home on the Zuni Reservation. Her husband, Silas, herds sheep. Both these elders benefit from PV for lights, where kerosene was previously the only option. (Photo courtesy Sandia National Laboratories and Zuni Conservation Project)



► Drinking water for the Old Pueblo at Santa Ana, New Mexico, is made possible by a PV-powered water pump. In order to keep cultural traditions alive, some villagers at Santa Ana keep two homes – one at the unelectrified Old Pueblo – which is also the site of their festivals and religious ceremonies – and one at their new Pueblo. This solar electric system requires much less maintenance than the windmill it replaced. (Photo courtesy Sandia National Laboratories)

▼ Ceremonies of the Turtle, Wolf, and Bear Clans are held in the Oneida Nation Long House. Tribal elders desire that this traditional log house be kept without utility-provided electricity. Instead, lighting is created with solar power. The building includes two wood heating stoves, and the fans circulate warm air throughout the building. (Photo courtesy Oneida Nation)





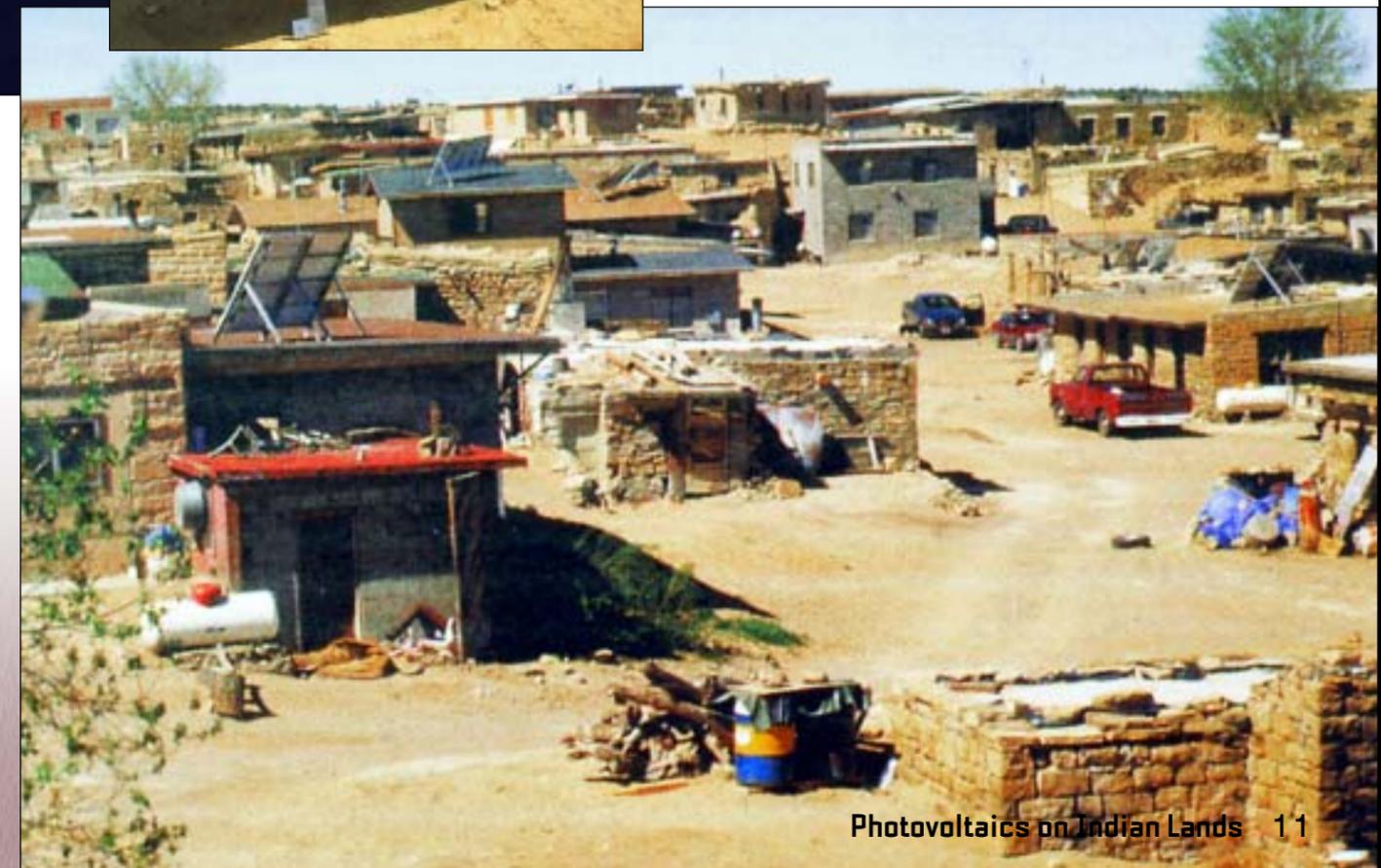
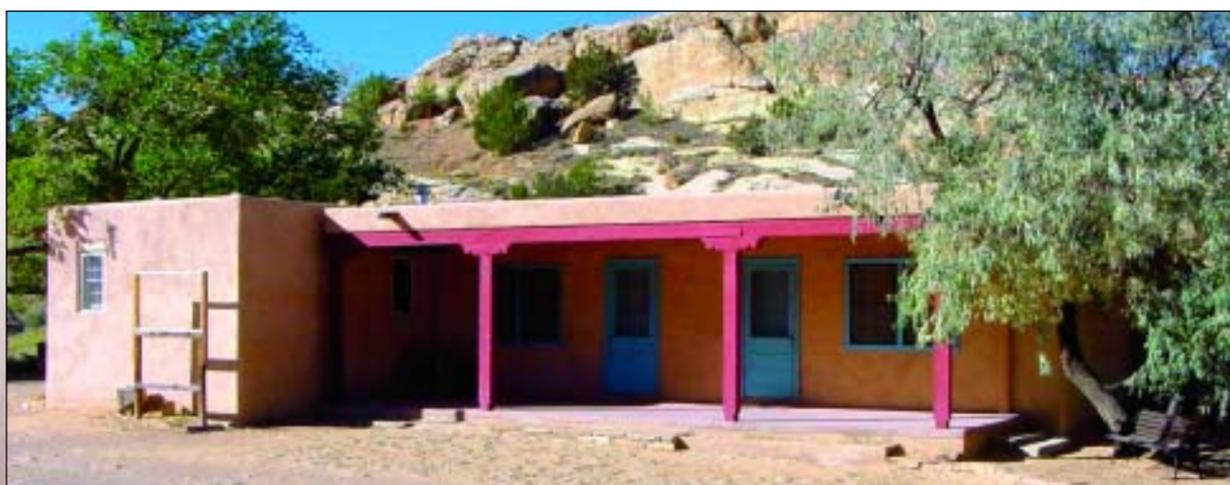
A VILLAGE FOR ALL TIMES

Old Oraibi, a Hopi village on Second Mesa, Arizona, is the oldest continuously inhabited community in North America. It is also one of a handful of Hopi villages who wish to preserve their autonomy and sovereignty without public power lines, the force fields from which they believe to be disruptive to the atmosphere, ambience, and balance of their lives. Photovoltaics provides modern amenities to villagers at Old Oraibi without compromising Hopi tradition. Yet another tradition made possible by solar electricity is the making of the blue corn piki bread. This bread, reserved for traditional occasions and ceremonies, is prepared in special 'piki houses'. At this one, a portable, light weight array is moved in place only long enough to provide temporary power, and is then removed. (Photos courtesy Hopi Foundation and Sandia National Laboratories)



◀ Inside and outside a Hopi piki bread house.

▼ Two 48-watt PV panels sit unobtrusively atop the roof of a traditional home owned by Christine Pasqual-Sims at Old Acoma, New Mexico. The array provides enough energy for lighting with low-wattage fluorescent bulbs throughout the house – a noticeable difference in cost compared to the family's former use of propane and kerosene lamps. (Photo courtesy Theresa Pasqual-Pruitt)



“You have to keep the sheep – that’s where your strength is.”

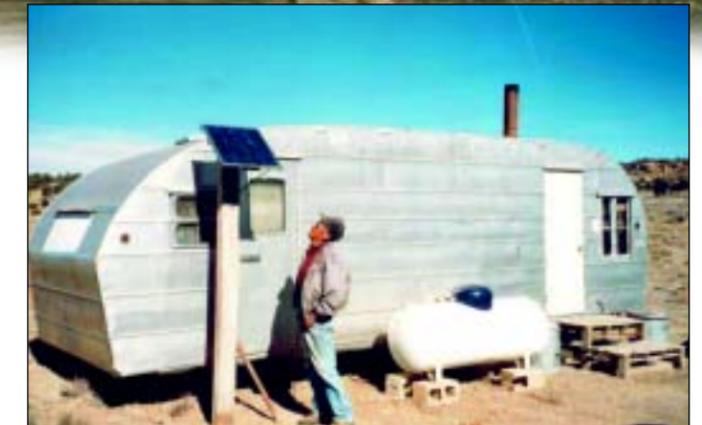
Sharon Begay, Navajo

► The Yazzies are an elderly couple living near the Navajo Nation community of Dilkon. Mr. Yazzie spends long days in the field herding sheep, and Mrs. Yazzie weaves traditional rugs. During the day, her loom is often placed under the PV structure to take advantage of the shade it provides. The couple has long believed in photovoltaics, having had a PV system for more than 15 years. NAPV provides maintenance for the system. (Photo courtesy Kiss + Cathcart, Architects)



KEEPING THE ANCIENT TRADITIONS ALIVE

► Sheep herding is a cultural tradition long-practiced by American Indian tribes, particularly those in the southwestern United States. Up with the sun to take perhaps 150 head to grazing lands – then back to an often isolated camp. PV allows lights and radio to mitigate the loneliness and help attract younger people to keep the herding tradition alive. (Photos courtesy Zuni Conservation Project and Sandia National Laboratories)



▲ Zuni sheep camp. (Photo courtesy Zuni Conservation Project)



► Photovoltaics provides water for raising livestock, a tradition valued by both the Hopi and the Navajo who resettled on the New Lands near Sanders, Arizona. (Photo courtesy The Solar Exchange)