

Lincoln County Power District's completed community solar project. Members who join the program share in the power generated by the panels.



Pioneering Electrical Providers

Lincoln County Power District No. 1 builds Nevada's first community solar project

By Dianna Troyer

With perfectionist mindsets and can-do attitudes, Lincoln County Power District No. 1's employees made history when they built Nevada's first community solar project near Panaca on Highway 93.

"It's a fantastic example of innovation," Paul Thomsen, director of the Nevada Governor's Office of Energy said during the dedication ceremony last month.

His office provided a grant to help build the system, which was done in response to a customer survey.

"It's no surprise to me that a rural co-op was the first to build such a project," Paul says. "Energy co-ops trace their history to rural residents working together to share a resource and getting projects done efficiently."

This is the first of many more to come in Nevada.

"Other utilities qualify for grants to build similar systems and have contacted me," says Mark Williams, state energy coordinator for USDA Rural Development, which provided grant funding for

the project.

"We're grateful the grants made the project feasible and economical," says Lincoln Power District Manager Dave Luttrell.

For the next 25 years, the photovoltaic project will produce 90 kilowatts annually and help reduce the amount of energy the district purchases on fluctuating open markets.

"That's approximately the amount needed to power 10 average homes in Lincoln County for a year," says Dave.

Customers can buy a \$3,200 share in the project, similar to members of an irrigation district owning a share of water. Owners will receive credits in the form of energy offsets on their monthly electric bills.

The power district began selling shares in the project in mid-September. Although interest has been high, shares are still available.

Kathy and Werner Lang, who live on Mount Wilson, were excited to buy the first share.

"The sun here is always shining," says Kathy. "It makes sense to convert solar power to electricity. We're environmentalists and had solar panels on



Dave Luttrell, left, speaks during the dedication ceremony for the solar project.

our house when we lived in Switzerland. It's good to have it here, too."

Panaca residents Neldon and Carol Mathews bought a share because they wanted to see the project succeed.

"Energy is so important, and this project will be beneficial for our town and the region," says Neldon. "I wanted to do what I could to assist."

The historic project, built during the summer, culminates more than a year of painstaking planning. The system was built economically because the cost of solar components has plummeted in the past few years, and district employees instead of outside contractors designed and built it.

"I'm proud of our talented staff," says Dave. "As a small utility in a remote location, we work hard to be self-sufficient."

The project started after members completed a survey last year, indicating they were interested in solar energy.

"At first, we thought we'd create a small-scale solar field to serve as a demo for customers who wanted to install solar at their home," says engineer Kyle Donahue, who designed the system. "While doing research, we noticed utilities nationwide have built successful community solar projects in their service territories. So our original idea morphed into a 90-kilowatt community project."

Fortunately, an ideal location was on land the district owns.

"Part of the district's land near Panaca runs on a north to south slope and was perfectly aligned for our solar arrays to get the most efficient use of the sun," says Kyle.

He says the biggest challenge he and other employees confronted was learning about various photovoltaic materials and current design procedures and codes.

"This was the district's first project," he says, "and

we were determined to do it right."

He describes himself and Pat Gloeckner, operations manager, as perfectionists.

"Throughout the design and construction, we found ourselves doing things over and over until we were satisfied," says Kyle. "Finally, I realized most people wouldn't notice if one panel was one-quarter inch higher than another. Despite our learning curve and perfectionism, the project progressed smoothly. Our employees are great and work efficiently under all kinds of circumstances."

After employees started construction in mid-May, the system was energized July 1.

"For more than a month, we tracked how much electricity was being produced so we'd have accurate numbers on which to base the cost of a share," says Dave.

The solar arrays produce electricity at a minimal cost, he says, estimating the equivalent rate at 4.672 cents per kilowatt-hour.

"At that rate level, the project will generate at a rate equal to or less than what the district has to pay for the power we buy from the wholesale power markets in the summer," says Dave. "This rate is locked in for the life of the project."

Routine maintenance of the system is minimal.

"We'll inspect the system monthly to determine how often to clean the panels," says Kyle. "A shadow, bird droppings, seeds, pollens, leaves, dirt spots or dust can have a negative impact on the power production. With just under 400 panels, you can imagine the time it would take to clean each one monthly. We were told with the slope of panels, a good rainstorm will clear most debris and dirt from the surface."

Kyle says the project shows the utility listens to customers' comments.

"They aren't just ratepayers," says Kyle. "They're neighbors, friends and family. We're trying our best to provide them with the most cost-effective, efficient and reliable service. This small-scale solar project hopefully helps us continue along that path."

Dave is confident the solar project will be worthwhile.

"In future phases, we'd like to expand and generate up to 1,000 kilowatts of electricity annually with the solar arrays," says Dave. "The amount of supplemental power we have to purchase increases each year as the drought conditions in the Colorado River Basin worsen. This project will help provide power long-term for an extremely low cost." ■