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$60M answer?

Could solar power be solution to lack of electricity on the rez?

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GALLUP — Bill Bright was an occupational therapist working for the Bureau of Indian Affairs, Chinle Agency, when he was first exposed to the plight of Navajo families who lived in rural areas without electricity. That was more than 20 years ago, and the number of families without power was unknown, he said. It was not until the Navajo Tribal Utility Authority released a number of potential customers without electricity in its area of service about seven years ago that Bright, now the president of Gallup Solar, really understood the magnitude of the problem.

It started with 18,000 families.

"A number was not available at the time when I was in Chinle," Bright said. "I had no idea there were that many."

Earlier in the year, NTUA spokeswoman Deenise Becenti reported the authority successfully reduced the number of families without electricity in its area of service to 15,000. NTUA has been helping connect families to the grid at an estimate of 700 families a year, according to NTUA General Manager Walter Haase.

Haase estimates it would cost about $600 million to run distribution lines to supply the remaining 15,000 homes, and another $200 million to build the backbone of the system. But before the homes can be connected, the families would have to secure environmental and archaeological surveys and permission from the grazing permit holders or allotment holders to build on the land. This process can take years if not decades.

NTUA and Continental Divide Electric Cooperative won't run power lines to homes in their area of service on the Navajo Nation unless the permits are secured, as required by the BIA on fee, trust or allotment land.

That's why Bright thinks the answer to these families is solar power.

"We could power everybody in a hurry and create jobs," Bright said. "With a basic kit, it's not a complicated system."

Solar success stories

April Shorty moved into her new Gallup home, built by Habitat for Humanity and equipped with solar panels, in August.

Beverly Matt finally got solar-powered electricity in her home in Piñon in October, with the help of Gallup Solar.

Bright said a basic 1,000-watt system would include a solar panel and battery strong enough to run basic appliances.

"On the reservation people just need a refrigerator, lights and charge a cellular," he said. "We are talking about hogans, not mansions. We should get them started because these things are modular and they can add more panels in the future."

Gallup Solar is a not-for-profit organization based in Gallup. The organization has been helping people in Gallup and on the Navajo Nation with solar systems at a low cost.

In Piñon, for instance, Gallup Solar installed a system for about $4,000 in the home of Beverly Matt. The solar panels in this system were donated by Engineers Without Borders, so the cost of the panel was not included.

While Gallup Solar does not have the resources to supply 15,000 families, it could supply the Navajo Nation with technical assistance, Bright said. He estimates the cost to supply 15,000 families with basic 1,000-watt solar panel kits to be about $60 million.

NTUA thinking solar

During an interview in his office in May, Haase was asked about the cost to install solar to 15,000 families in his company's area of service.

"It's $18,000 per unit. … You can get some lights and run a refrigerator, and if you use a hair dryer you blow it," he said. "It does not work."

Haase further said the type of houses built on the Navajo Nation would not be able to handle larger units.

"I've been through this," he said. "Environmental people are saying the opposite … (but) solar would be a more expensive solution. It's high maintenance and more costly."

Derrick Terry, NTUA's renewable engineer specialist, said $18,000 would only cover the cost of an off-grid solar/wind hybrid system. It would not cover installation, but NTUA does not charge the customer for installation costs.

The system Haase was referring to includes 680 watts, 880 watts and 1,080-1,800 watts, which come with an NTUA supplied refrigerator, Terry said. Their panels are manufactured by SunWise, Kyocera and Sacred Power.

Becenti said NTUA has been providing solar options to families who live too far from the main grid.

"We offer the solar unit as an option — just to give the home electricity to, at the very least, operate a refrigerator," Becenti said.

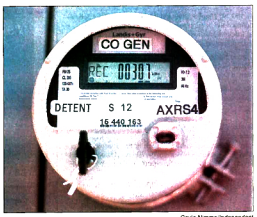
Bright said the $18,000 per system quote provided by Haase can go down if large quantities are purchased, and if locals are taught to connect and maintain the systems.

"We want these students taking solar classes in Gallup and Farmington, let them do the maintenance. We are not encouraging outsiders to come put those up and go away," he said. "Just as there have been federal and state money available to help bring cellphone services to the rural areas, there is likely money for bringing power.

"If NTUA would initiate this, it could erase the long and contentious list of people waiting for as much of 20 years. Also, there would not be the need to get easement permits to put poles across properties as there are no poles. We do not recommend contracting with the much more expensive off reservation solar contractors. Keep the money in the Navajo Nation economy, help students work their way through college, and create future green jobs. In five to 10 years the currently affordable batteries will need replacing with the then affordable home size lithium models, which will last much longer. The solar panels last for 30 years or more. Gallup Solar can recommend our local consultant and PV system designer to NTUA as needed."

Gallup Solar community meetings are held at 113 E. Logan in Gallup from 6-8 p.m. every Wednesday.

Cayla Nimmo/Independent
Bill Bright, president of Gallup Solar, poses in front of April Shorty's solar-powered Habitat for Humanity house in Gallup Tuesday.



Cayla Nimmo/Independent
An electrical panel on the side of April Shorty's house in Gallup shows both the amount of electricity delivered from a solar panel to the household, and how much excess electricity is delivered to the city Tuesday.