

# Pueblo of Picuris Community Solar Projects

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## About Picuris Pueblo

Picuris Pueblo currently has 306 members and 86 homes. Our traditional way of life starts with respect of the land and nature, our natural resource, everyday life consist of farming, hunting, providing for our families and honoring our culture by practicing traditions and beliefs as our ancestors did before us. The Current Governor is Craig Quanchello and the Lt. Governor is Wayne Yazza along with six (6) other tribal councilmen.

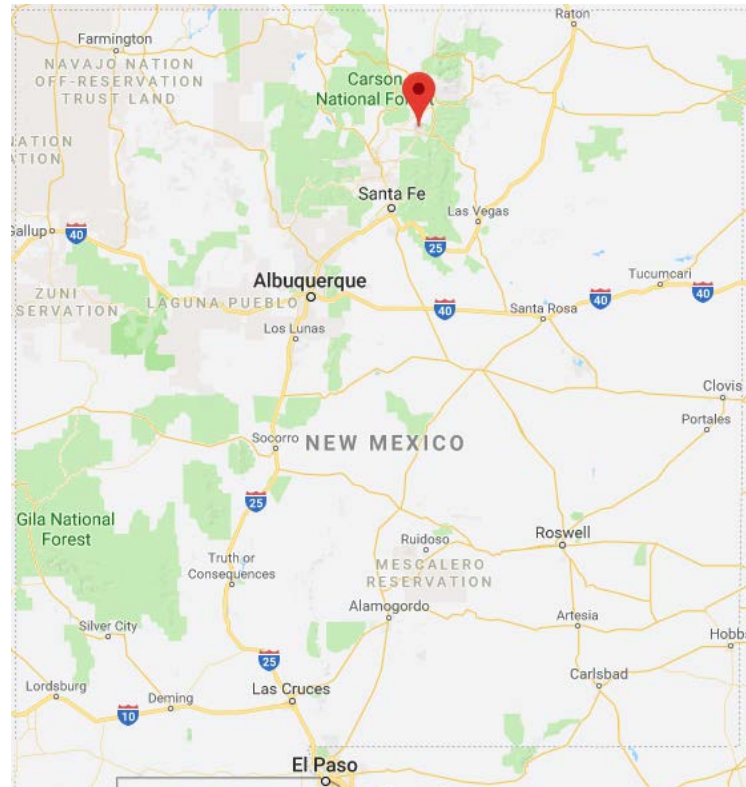
Picuris pueblo is nestled in a setting of serene beauty in what is known as the "hidden valley" of the Sangre de Cristo Mountains on Northern New Mexico. Its located 60 miles north of Santa Fe, and 24 miles southeast of Taos on scenic highways 75 & 76.

Our tranquil village rests along the banks of the Rio Pueblo river, which nourishes the evergreens, cottonwoods, aspens, grasses and flowers that blanket our valley and surrounding mountains. The scenic beauty is unsurpassed in New Mexico, the Land of Enchantment.

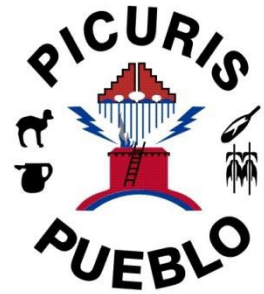
# Tribal Considerations

- **Traditional Values of the Tribe and its on-going relationship to Mother Earth**
- **Self Determination**
- **Remove its dependency on Third Party Utility Infrastructure**
- **Protect itself from External Threats:**
  - **Wildfires that may impact Utility Grid**
  - **Cybersecurity Concerns**
  - **Terrorism**
- **Decrease the overall cost of electricity**

# LOCATION OF PUEBLO OF PICURIS







# Picuris Pueblos Past Projects

Solar Powered Fire Station – First Net-Zero Building in NM



## 1<sup>st</sup> Solar Array Project:

This is the first phase of the solar power initiative Picuris Pueblo has undertaken. The first 1 MW project utilized a combination of funds from a Department of Energy (DOE) Grant and a conventional loan. The first project has been operational since January 2018 and all the energy produced goes directly into the Kit Carson grid.

## 1<sup>st</sup> Solar Array Project:

The tribe receives its revenue from its power purchase agreement with Kit Carson Coop which pays for each KW generated. The tribal buildings, tribal member homes and economic development buildings are billed by Kit Carson as any other consumer subject to the PRC approved rates.

The surplus generated by the difference of the monthly Revenue received and the monthly Loan payments has allowed for a \$ 75 subsidy per household for the four winter months and \$ 50 subsidy per household for the other eight months.



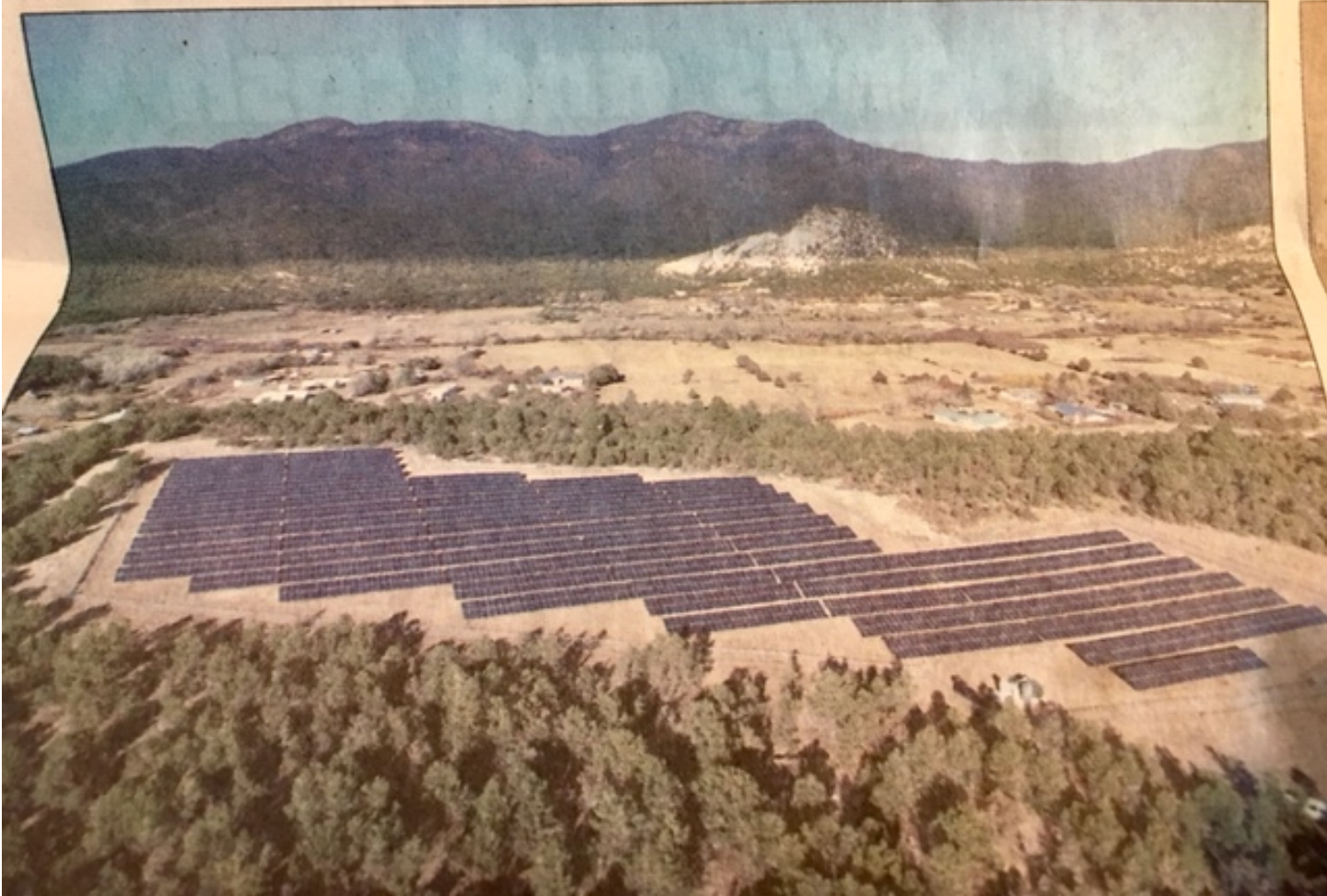
# 1<sup>st</sup> Solar Array Project:

roughly 600 homes, or about one-third of all homes in the sur-

cally draw on its own electricity reserves.

told *The Taos News* the overwhelming dryness of the winter

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## 2<sup>nd</sup> Solar Array Project:

The Pueblo has secured another DOE grant for a Solar Microgrid project that would provide electricity directly into the tribal buildings, tribal member homes and economic development buildings that would include the new travel center complex. The matching requirements for the tribe has been reached from funds from Wells Fargo and from 11<sup>th</sup> Hour Project Foundation.

## 2<sup>nd</sup> Solar Array Project:

There is a need for an energy storage component that would support the electricity needs when the solar array is not generating and would be available for backup if the utility grid is off line. The tribe is working with Sandia Labs that is providing an Energy Analysis that would be used as the basis for requesting Grant funds from the DOE Office of Electricity Energy Storage Program.

With a Microgrid design, the cost of electricity per KW will be significantly less than the present cost that uses the Kit Carson grid system. The goal is that with both solar projects, the tribal household members would have their electric bills completely subsidized.

# **Pre-Feasibility Utility Report- National Renewable Energy Laboratory**

This initial report on the feasibility of options for the Picuris Pueblo to become electrically self-sufficient. This report is a general report designed to provide high-level information based on public information and reasonable assumptions. Assumptions used in this report should be fully investigated through further research of data and public information should be clarified through use of requests for proposals and negotiations designed for the project.

## **Pre-Feasibility Utility Report- National Renewable Energy Laboratory**

The Pueblo's request states, "We would like to understand the likely next steps to exercise our sovereignty and become electrically self-sufficient on our small Pueblo. We would like a study that gives us an overview of tribal utilities, does an initial assessment of our loads, provides an initial financial and technical feasibility study of the Pueblo providing its own power and operating an electric system, the types of tribal laws that are needed and other related matters."



### **Energy Storage Benefits - Goals of the Project**

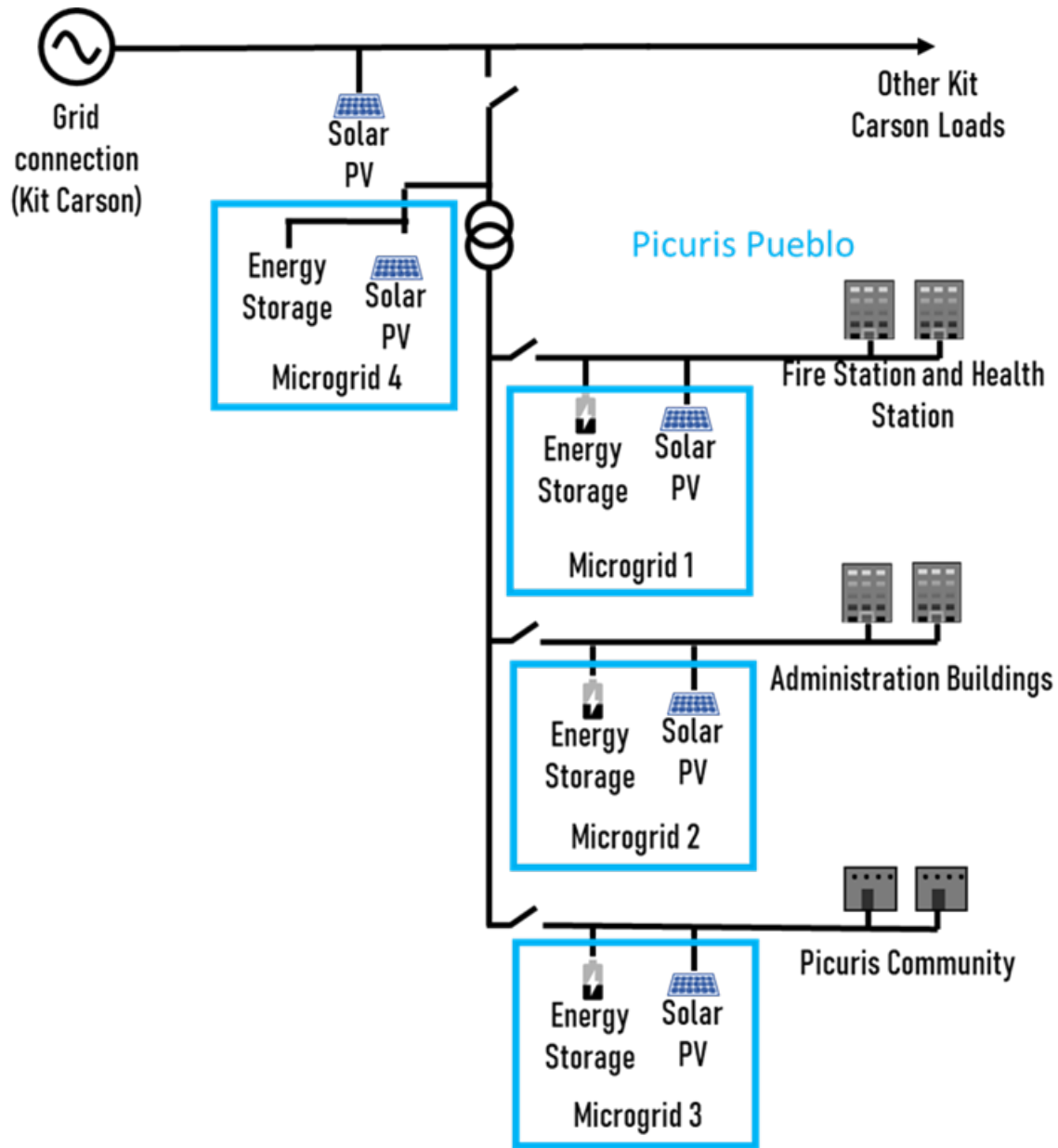
Evaluate benefits of energy storage systems to Picuris Pueblo in three scenarios:

- Pueblo uses storage and solar for themselves
- Purchases power from the grid when necessary
- Sells excess Power

Estimate size of Energy Storage and Benefits:

- How to spend the Grant?
- How can Energy Storage save Costs?

# Solar Project #2



## **Energy Storage Benefits to Picuris Pueblo**

Technical Assistance is provided by Stan Atcitty and his team in the Office of Energy Storage in Sandia Labs with support from Dr. Imre Gyuk, the Program Manager for the DOE's Office of Electricity Energy Storage Program. Sandia Labs provides technical assistance and economic analysis for tribes working on energy projects .