



## **PICURIS COMMUNITY SOLAR PHASE II**

**By**

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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 and our natural resources. Our 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 Pueblo Governor is Craig Quanchello.

Picuris pueblo is nestled in a setting of serene beauty in what is known as the "hidden valley" of the Sangre de Cristo Mountains in Northern New Mexico. It is 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 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 relationship to Mother Earth
- Self determination
- Remove its dependency on third party energy infrastructure
- Protect itself from external threats:
  - Wildfires that may impact utility Grid
  - Cybersecurity concerns
  - Terrorism
- Decrease the overall cost of electricity

## **Community Solar Phase I Completed 2017**

The first phase of the Picuris Community Solar commenced commercial operation in January 2018. The 1 MW project utilized a combination of funds from a Department of Energy (DOE) Grant and a conventional loan and all the energy produced goes directly into the Kit Carson Electric Cooperative grid.

The tribe receives its revenue from a 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 remaining eight months.

## **Community Solar Phase II (Under Construction)**

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.

The microgrid design includes energy storage 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 partnered g with Sandia National Labs to provide an energy analysis that would be used as the basis for requesting grant funds.

The microgrid will reduce the cost of electricity and will be significantly less than the present cost that uses the Kit Carson Coop system. The goal is that with both solar projects, the tribal household members would have their electric bills completely subsidized.





## **Phased Approach for Microgrid**

**Phase I** – 1 MW Solar Array – Completed 2018.

PPA with Kit Carson Electric Co-op

**Phase IIa** – 750 kW Solar Array – Broke ground in October 2023

Completion by May 2024. Annual production 1.6 GWh

**Phase IIb** – 250 kW Solar Array planned extension of Phase IIa

In conceptual stages; Annual production 480 MWh

**Phase III** – 1 MW/4 hour Energy Storage: 2024

Contract negotiations with Sandia Lab

**Phase IV** – Complete microgrid with solar, energy storage

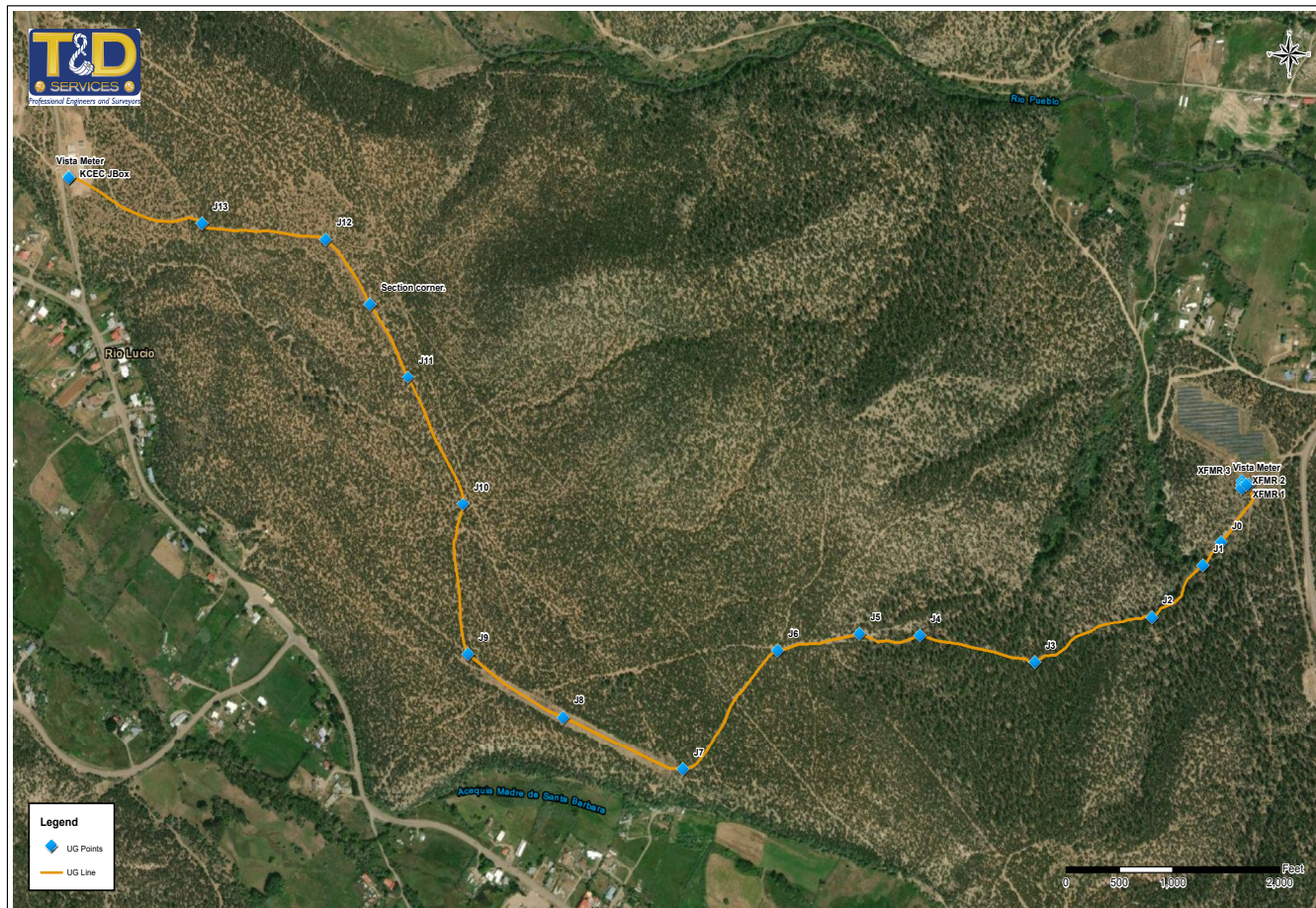
backed up with natural gas generators- planned for 2025/2026

# Phases IIa and IIb Solar Array



Phase IIa under construction has 1,440 Trina Solar panels w/2 Solar Edge 330 kW inverters  
Phase IIb planned will have 420 Trina Solar panels w/1 Solar Edge 33 kW inverter

# Route of Dedicated Feeder from Solar Array to Pueblo Buildings & Households



## **Project Partners and Sponsors**

**US DOE Office of Indian Energy**

**UD DOE Office of Electricity Energy Storage Program**

**11<sup>th</sup> Hour Project Foundation/Wells Fargo Bank**

**Southern Methodist University/Cornell University**

**Sandia National Laboratories**

**Electric Power Research Institute (EPRI)**

**Kit Carson Electric Cooperative**

**Sol Luna Solar**