

Picuris Pueblo: Path to Energy Self Sufficiency

SCIENCE, TECHNOLOGY AND
TELECOMMUNICATIONS COMMITTEE

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Picuris Pueblo

60 miles N of Santa Fe; 25 miles SE of Taos
Intersection of SR 75 and SR 76

Population 200; 25,000 acres in a valley

Governor Craig Quanchello



Energy Future and Vision

Energy Independent and Resilient from green energy sources

Recent fire is a reminder

Provide a replicable model for other NM tribes to emulate

Electric Infrastructure and Supply

Homes and admin buildings are metered individually

Approx 100 meters

Annual average load 500 kW

Electric service by Kit Carson Electric Co-operative

Fully underground service within Pueblo boundary

Phased Development

Phase I – 1 MW Photovoltaic Array (Completed)

Phase II – 750 kW Photovoltaic Array (In Process)

Phase III – 1 MW/4 Hours Energy Storage (In Planning)

Phase IV – Operational Microgrid (Conceptual)

Phase I - Community Solar

1.2 MW solar array completed in 2017

Fixed tilt, ground mount

Built by Osceola Energy: \$2.1M contract

Partially funded by DOE

Energy sold to Kit Carson Co-op through a Power Purchase Agreement

Generates income that offsets resident's energy cost

Annual Energy Production: 2.2 GWH



Phase II - Community Solar

750 kWac with 500+ Watts bi-facial panels

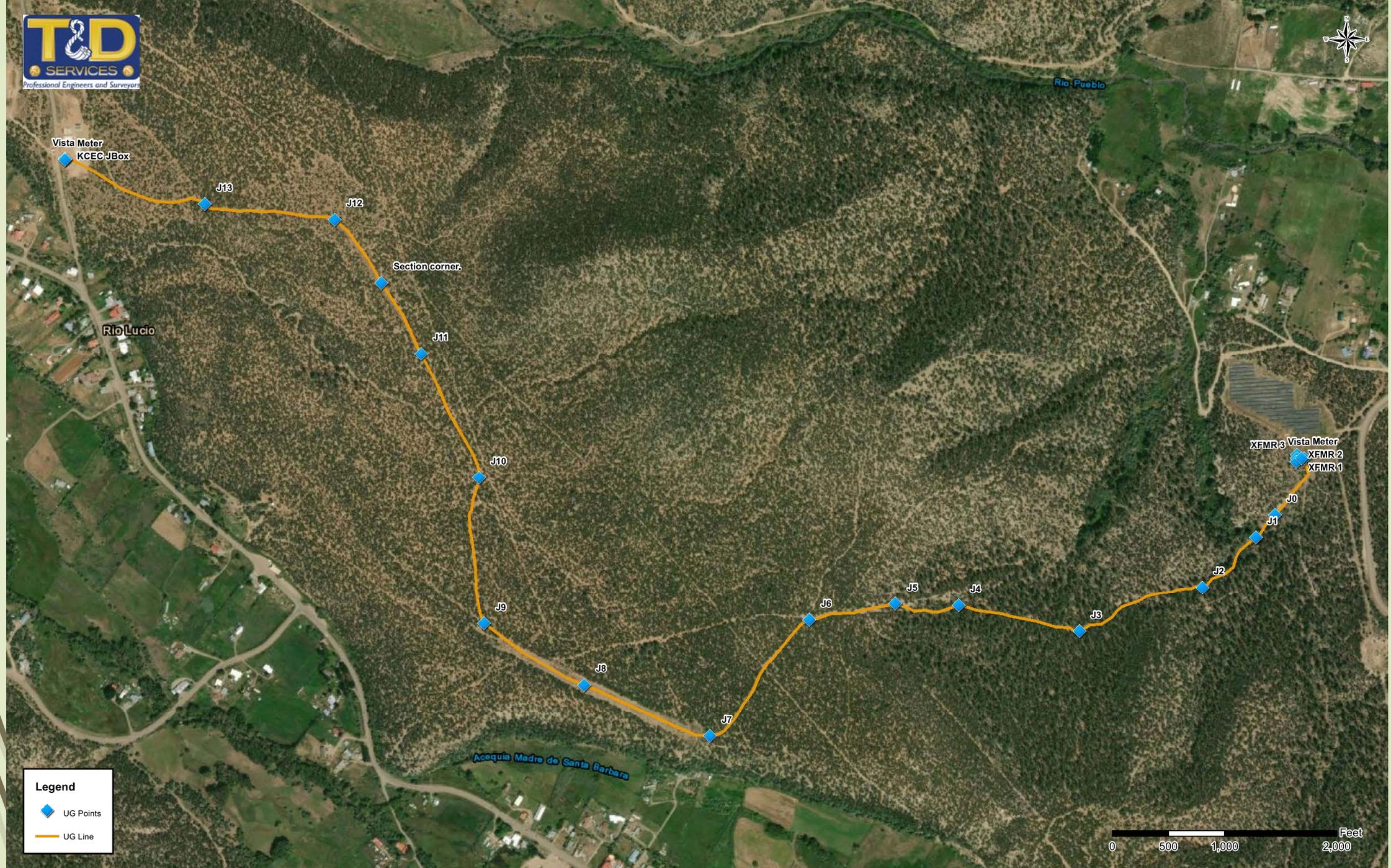
Ground mount, fixed tilt racks for solar panels

Connects to Pueblo loads via 2.5 mile underground
12.47 kV feeder

Annual energy production: 1.6 GWH

Project completion by September 30, 2023

Both Phase I and II are located on 10-acres tribal Lands



Legend

- UG Points
- UG Line



Phase II Request For Proposals (RFP)

RFP released mid-July to 40 solar companies

Mandatory site visit for proposers

Responses received in August from 4 companies

Two finalists selected

Tribal Council will decide vendor for project award

Phase III - Energy Storage

1 MW/4 MWh battery energy storage

Study by Sandia National Labs

Supported by US DOE Energy Storage Program

Energy storage will be located on Pueblo

Critical component for resiliency and possibly grid support to Kit Carson Electric Co-op



**Termination of
u/g cable**

Phase IV - Microgrid

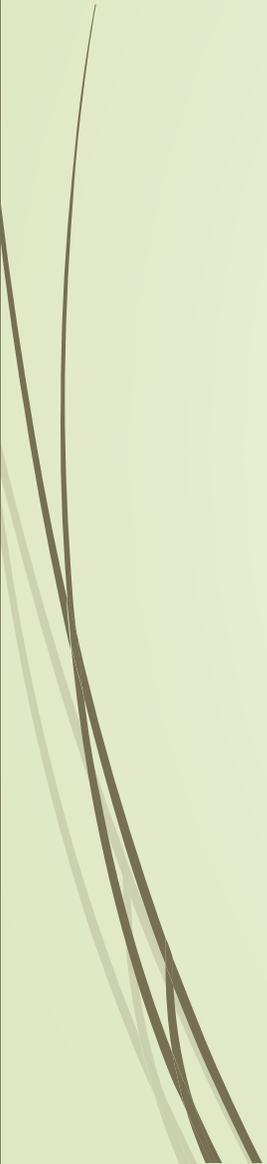
Combine solar, energy storage and existing diesel (natural gas) to form a microgrid

Supply all Pueblo loads and support Kit Carson Co-op grid as needed

Why is Picuris Following This Path?

Picuris is a non-gaming tribe; approx. 200 members

- Reinforcing their connection to Mother Earth
 - Sustainable clean energy
- Controlling their destiny with stable supply of low-cost energy
 - 17 cents/kWh vs 7 cents/kWh (stays constant)
 - Economic development opportunities
 - Not relying on a 3rd party energy supplier or otherwise
- They are survivors – 85% wiped out by smallpox
 - Resiliency and self reliance is in their DNA
- Showcase and training center for other tribal entities

The slide features a light green background with a white gradient. On the left side, there are several thin, dark, curved lines that sweep upwards and outwards from the bottom-left corner. The word "Questions?" is centered in a large, black, sans-serif font.

Questions?