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PUEBLO OF PICURIS SOLAR ENERGY RESEARCH CASE STUDY

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Presentation to DOE Office of Indian Energy

November 21, 2024



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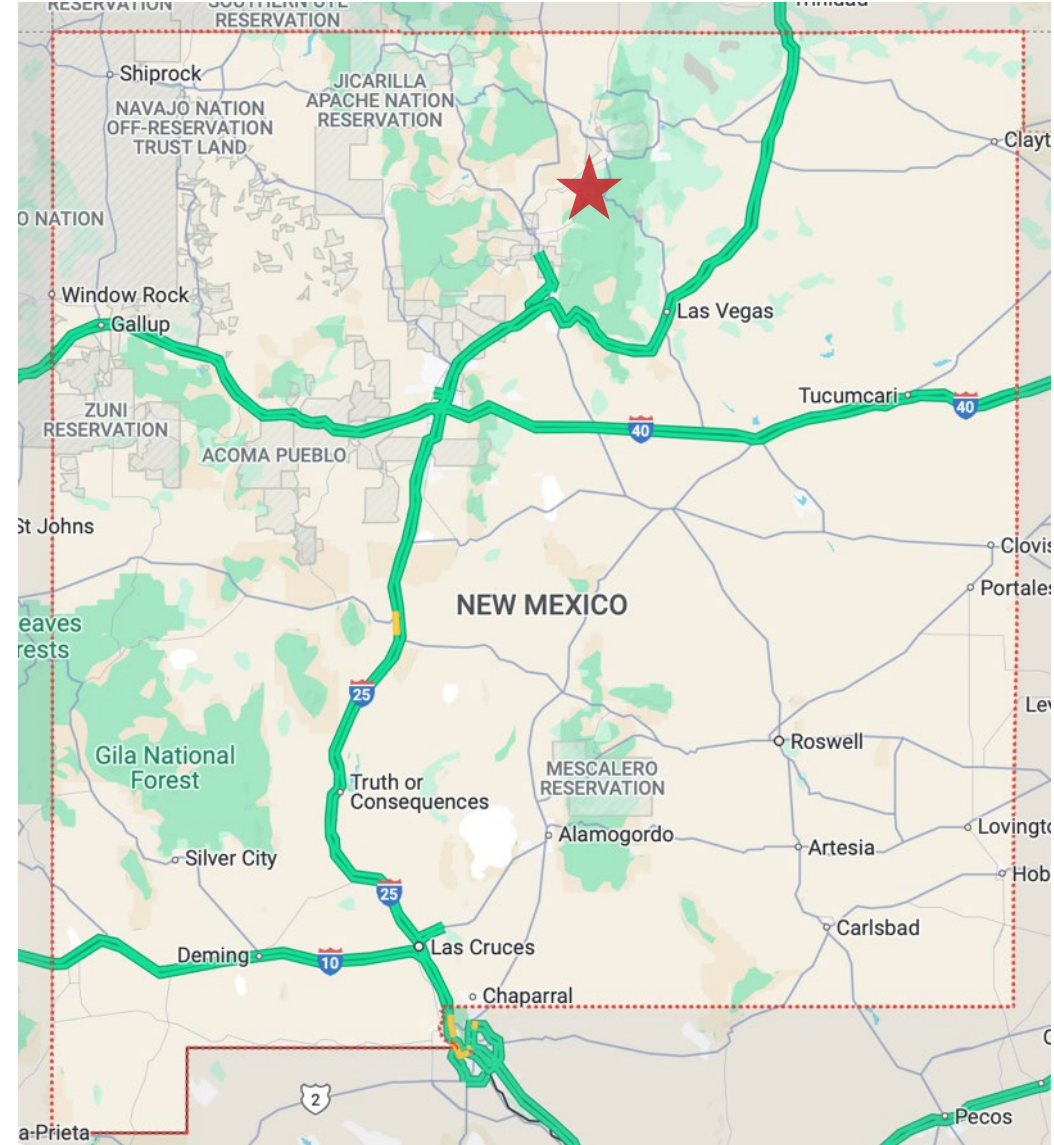
ABOUT ME

- Navajo & San Carlos Apache
- Shonto, AZ
- Education:
 - Monument Valley High School
 - Dartmouth College (B.A.)
 - Texas A&M University (M.S.)
 - Rochester Institute of Technology (PhD)
- Hobbies: reading, walking, baking



PICURIS PUEBLO

- Northern New Mexico
- Picuris Pueblo, NM – Tribal Headquarters
- 376 members & 90 homes
- Utility: Kit Carson Electric Co-op





SOLAR ENERGY - COMPLETE

- 1 MW solar array - operational
 - funded by DOE Office of Indian Energy (IE)
 - Power Purchase Agreement with Kit Carson Electric Coop (KCEC)
 - Electricity credit on bill
 - \$75 winter
 - \$50 summer



Picuris Pueblo Phase 1 Solar Array, Photos by Jennifer Valdez & Sherralyn Sneezzer

MICROGRID IN PROGRESS

- 1 microgrid in-progress
 - Phase 2: 750 kW solar array
 - funded by DOE IE
 - Installation complete
 - Not operational (yet)
 - Phase 2B: 250 kW solar array
 - Archaeological assessment of land
 - Phase 3: Battery Storage
 - Partnered with Sandia National Labs
 - DOE Grid Deployment Office (GDO)



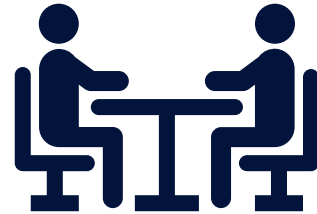
Picuris Pueblo Solar Arrays, Photos by Jennifer Valdez



METHODS



Visiting in-person
(~8 days)



Interviews (24)

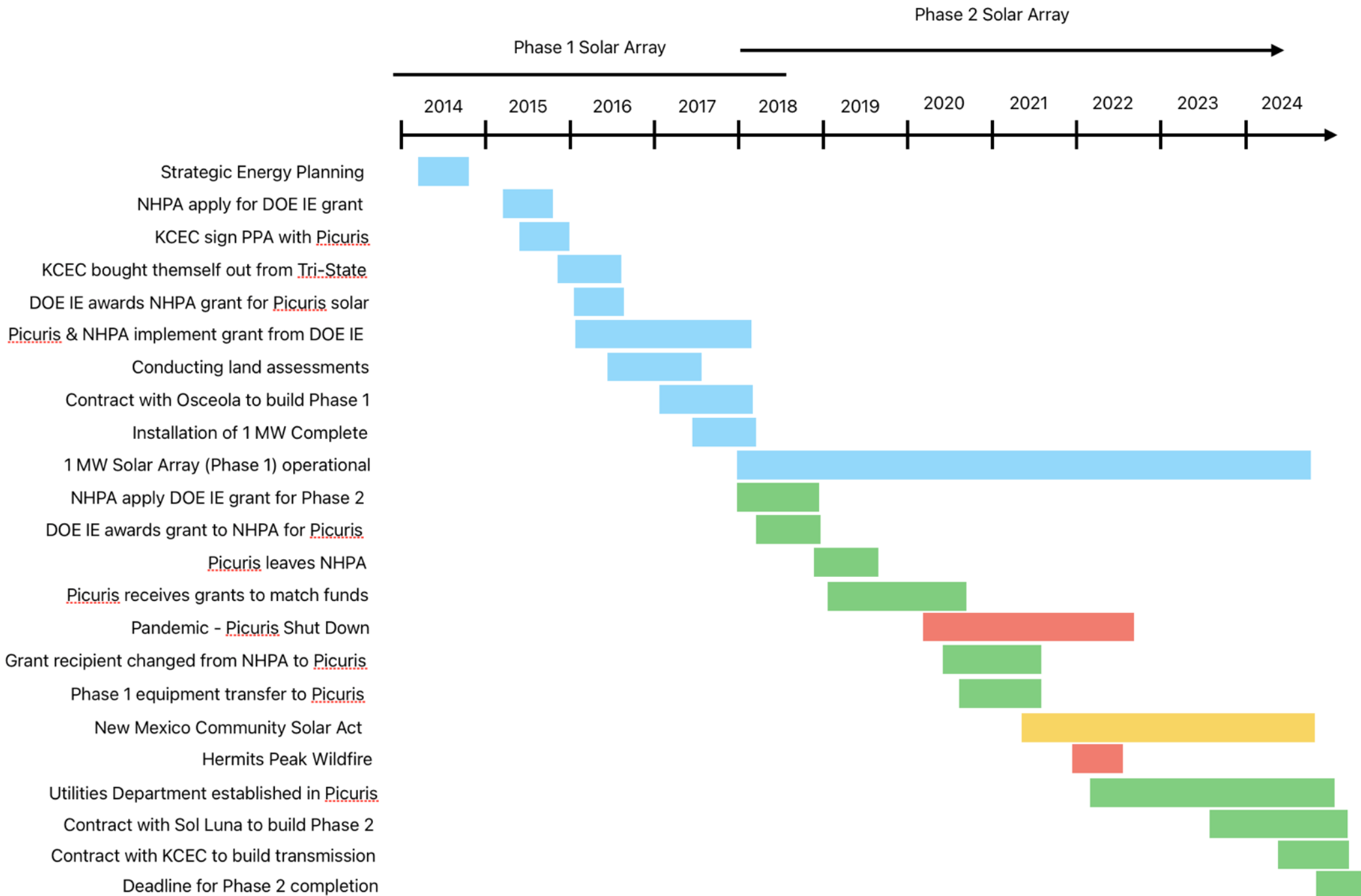


Recorded audio



Review documents

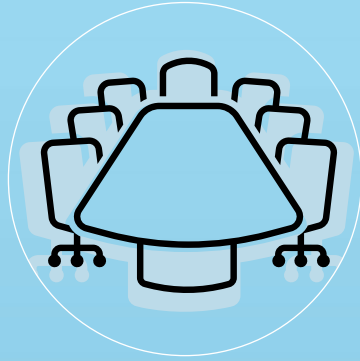
NOTE: All quotes in the presentation were anonymously given from Picuris Pueblo members. The recorded audio and documents were given back to the Pueblo for their archives / files.



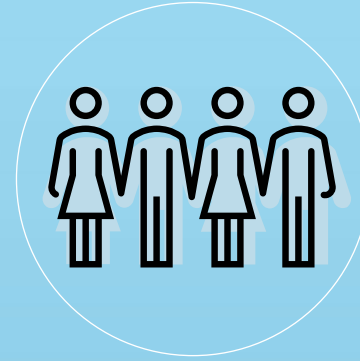
ENABLING FACTORS



Strategic Energy
Plan



Continuity in
leadership



Community
seeing personal
benefits



A Team



PLANNING

“It outlined what we needed to do, what the people wanted, or what we wanted in terms of self-sufficiency.”

- Strategic Energy Planning
 - Goals:
 - Clean energy
 - New sustainable buildings
 - Thriving services & businesses
 - Consensus building



Picuris Pueblo Solar Array, Photo by Sherralyn Sneezzer



CONTINUITY

“We’ve been very lucky in keeping our head leadership throughout this whole term I’ve been here...I think the continuity with him, as the governor, has been good, because we don’t have people changing the idea or the focus of what the goal is for this renewable energy, the solar phases.”

Governor Quanchello (8 consecutive terms)

Knowledge holders remain in community

- Wayne Yazza, Utilities Director
 - Tribal leader to utilities



Picuris Pueblo Solar Array, - Wayne Yazza. Photo by Jennifer Valdez



TANGIBLE COMMUNITY BENEFIT

- Monthly bill credits
- Participants feeling positive about solar array (90%)
 - “it’s very helpful since I am the only breadwinner in my household”
 - “She lives off social security. Her income is limited. You know, that really helps her out substantially.”
 - “Every time I call to pay my light bill, I’m always over credit.”



Picuris Pueblo Solar Array – Pictured Celestino – Utilities Technician.
Photo by Sherralyn Snezer



A TEAM

- Cohesive team with differing roles supporting each other
- Skilled members
 - Wayne Yazza – Utilities Director
 - Celestino Yazza – Utilities Technician
 - Les Rubin– Finance Director
 - Margaret Lucero – Utility Business Manager
 - Abbas Akil – Solar Consultant
- Supported by others working in the tribe

“Wayne and Celestino are invaluable. I don’t even think that people...realize how good they are, and how much they cover, and what they do”.



Pictured Les Rubin – Finance Director and Margaret Lucero – Utility Business Manager. Photo by Sherralyn Sneezzer



PARTNERSHIPS

- Northern Pueblo Housing Authority
 - grant management & writing
- Universities
 - archaeological assessments
- Sandia National Laboratories
 - energy storage assessments



Picuris Pueblo Solar Arrays and archaeological assessment, Photo by Jennifer Valdez



ACKNOWLEDGEMENTS

- DOE Office of Indian Energy
- Sandra Begay
- Jennifer Valdez
- Les Rubin
- Wayne Yazza
- Abbas Akhil
- Celestino Yazza
- Valerie Gulure-Fierro
- Margaret Lucero
- Gwen Simbolo
- Mike Simbolo
- Governor Quanchello
- Pueblo of Picuris



Picuris Pueblo members and employees. Photos by Jennifer Valdez, Sherralyn Sneezzer



THANK YOU