



U.S. Department of Energy
Energy Efficiency and Renewable Energy

Tribal Energy Program Summer Internship

Amanda J. Benavidez
Graduate Student Intern
University of New Mexico

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Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy under contract DE-AC04-94AL85000.





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Pueblo of Laguna Utility Authority Community Solar Plan Renewable Energy Project Development





Pueblo of Laguna Utility Authority Mission Statement

The Pueblo of Laguna is committed to working toward its energy goals while actively remaining as environmentally responsible as is practical. Laguna Pueblo seeks to improve the overall quality and reliability of electric service within its communities. Laguna also wants to promote energy self-sufficiency in responsible manner.



Community Strategic Planning

Energy Planning Priorities

Where are they?

- Natural Gas not accessible to 2 villages.
- High Energy Burden.
- HUD homes are not energy efficient.
- Utility companies must meet tribal needs.

Where do they want to be?

- Energy Independence.
- Reduce energy consumption by 30%
- Build traditional homes.

How do they get there?

- Education: people and tribal council
- Data: Creating community profile
- Utility company partnerships & Grants
- Build internal capacity: Training





How the Utility Authority Developed A Solar Program

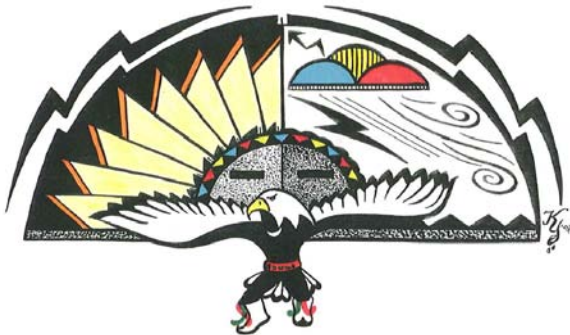


Energy Grant 2006

- Feasibility Study
- Research thru Capacity Building
- Fatal Flaw Analysis
- Monitoring for Wind
- Solar is best fit

Low Income Home Energy Assistance Program (LIHEAP)

- **Customer Service Program**
- Energy Burden
- Community Poverty Level





Community
Out Reach
Customer Service
Survey
LIHEAP

Luguna Utility Service News

What is Renewable Energy?

Solar Power: Photovoltaics (PV)

Wind Power in Indian Country

Background

Project Overview

Map

Pueblo of Laguna Renewable Energy Project Options

Your Input is Invited.

Background

Project Overview

Map



WIND POWER in Indian Country

Background

Project Overview

Map





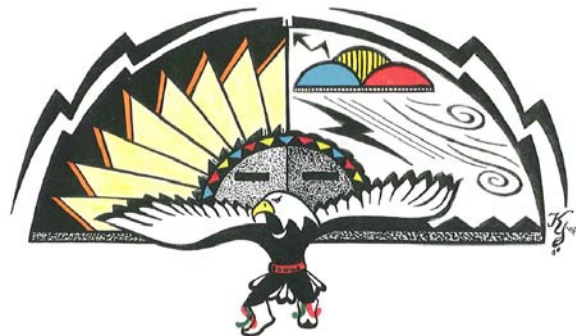
Survey Results

Is the Community Ready for Renewable Energy?

Words from the Community:

“It is good to know that our Tribe is being proactive in considering all viable options in addressing renewable energy projects”

“I totally support renewable energy projects that are a good fit for our people, especially tribal members who don’t have access to natural gas or households who must depend on wood only.”

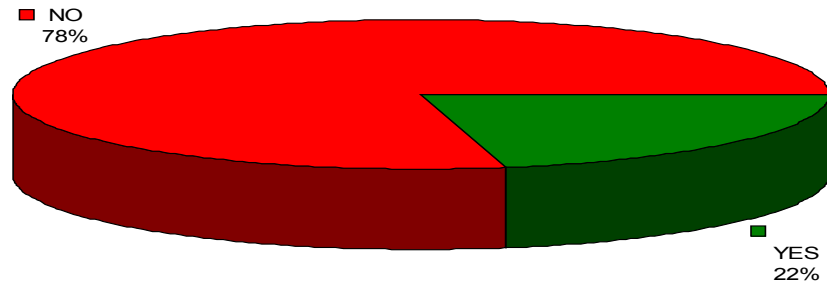


“Our Father gave us an abundant amount of sun and wind. It is only plausible to make use of it.”



Community Survey Results

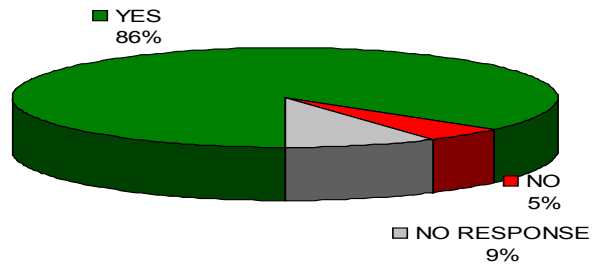
Pueblo of Laguna Renewable Energy Survey Results
Have you had any experience with renewable energy power generation?





Community Survey Results

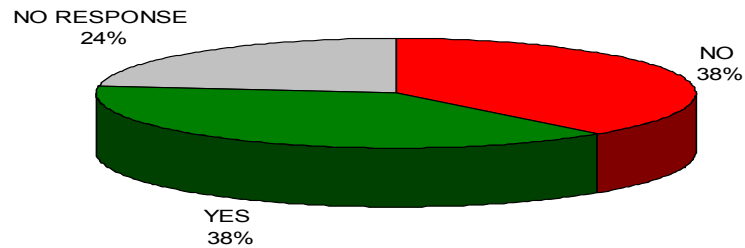
Pueblo of Laguna Renewable Energy Survey Results
Do you feel there is a need for renewable energy power generation within the Pueblo of Laguna?





Community Survey Results

Pueblo of Laguna Renewable Energy Survey Question Results
Do you feel that the Pueblo of Laguna should produce power to sell to others outside of Laguna?





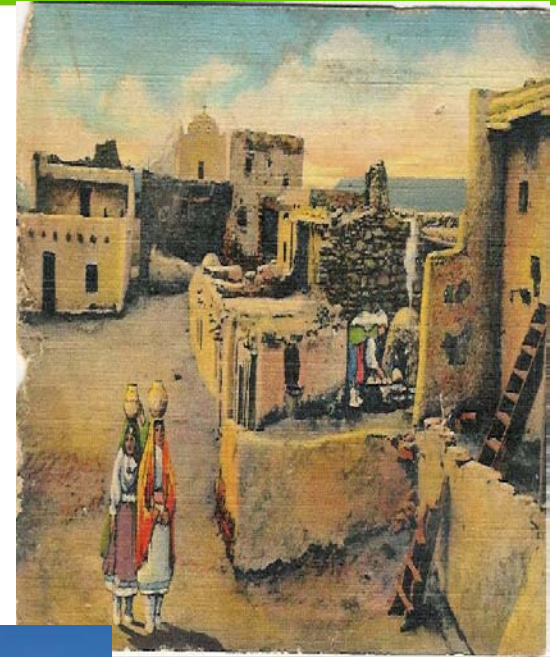
Cultural Standards

Traditional Values

Cultural Zoning
and Standards



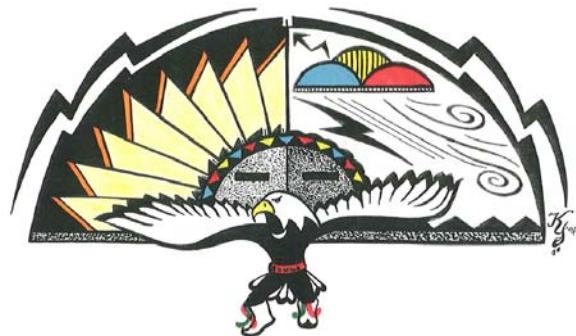
Sacred spaces



Village Officials
may regulate
historical value



Architectural
Integrity



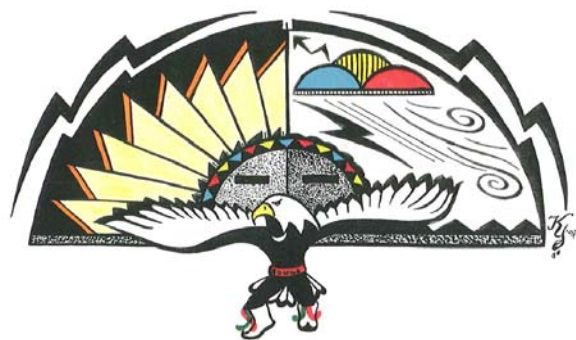


Capacity Building

Training
Technical Staff

Reducing
installation cost
and
maintenance

- Hands-on training for current technical staff to install PV systems
- After installation maintenance will be on going.





Tribal Energy Program

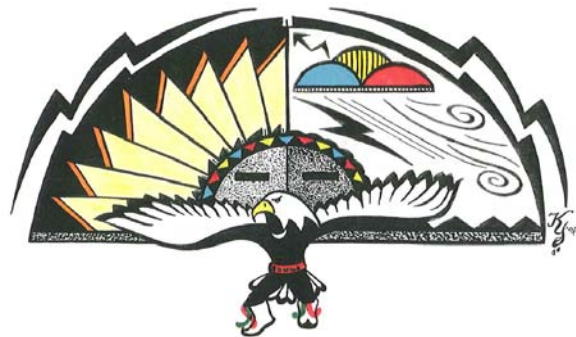
**Solar Panel
Donation**

**Sandia Labs
Tribal Energy
Program**

**Internship
Program**

Next Steps—Apply for funding to install solar panels donated by WAPA

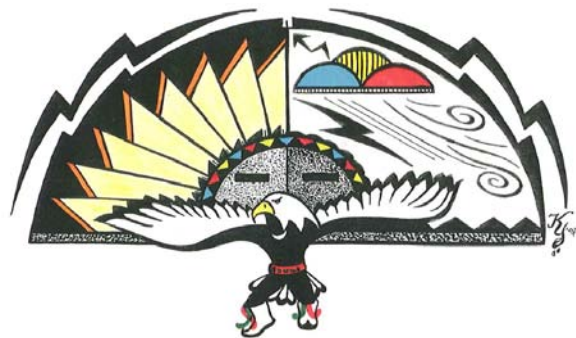
- Target LIHEAP recipients
- Community Centers
- Elderly and Low Income
- Areas without Natural Gas
- Assistance from UNM Planning Student Interns





Solar Tour 2008

Navajo
Hopi
Hualapai





Summer Memories





Thank you!

Any Questions?

Amanda J. Benavidez
Graduate Student Intern
Tribal Energy Program

ajbenav@sandia.gov