Taos Pueblo
Renewable Energy Feasibility Study

FY 2003 Program and Project Review Meeting
November 19th, 2003

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Where Is Taos Pueblo?

Taos Pueblo
Taos County, New Mexico
Who Are the Taos Pueblo Indians?

It is generally accepted that Pueblo Indians are descendants of the Anasazi and Chaco Cultures.

We have our own private oral history which is not divulged to outsiders.
Pueblo Indians

Pueblo – A Spanish term meaning town or village. When Spanish explorer Coronado invaded the Pueblo Homelands (now Arizona and New Mexico) in 1540, he called the Indians who lived in permanent towns *Pueblo Indians* to differentiate them from their nomadic neighbors, the Apache and Navajo.
Taos Pueblo

Since time immemorial, the Red Willow People have lived in communal multistory adobe houses along the banks of the Rio Pueblo in what is now northern New Mexico.
Well before Columbus ‘discovered’ the New World, vast trading networks were well established.

The Pueblo Indians were successful farmers and traded surplus crops, tanned leathers, hawk and eagle feathers for items like seashells and macaw feathers.
Observers

- The movements of the Sun and Moon, wind, clouds were studied to know the timing of the seasons for ceremonies, planting, cultivation and harvesting.

- Prayer dances were held to ensure moisture and to give thanks for the abundance of harvests and successful hunts.
Stewards

- The Pueblo does not have a word in our language for religion. Our beliefs are a way of life that espouses harmony with other people and the natural world, and to respect and obey the laws of nature,

- The ancient ones were instructed as to their place in the ecological balance, and they embraced that role.
Our traditional government is a theocracy. A Tribal Council of life elders appoint a WarChief and Governor who serve for annual terms.

After their terms, the WarChief and Governor and their Lieutenants become Council Members.
Objectives of the Renewable Energy Study

- Perform a detailed inventory and examination of renewable natural resources located on Tribal Lands.
- Determine which resources could be harnessed for energy production which respects Taos Pueblo beliefs.
- Determine the most feasible and appropriate means of generating, transmitting, and utilizing tribal energy.
Systematic Approach

- 12 Tasks designed to achieve one or more related objectives;
- Fulfillment of objectives contributes to completion of tasks,
- Completion of tasks is organized in a ‘step-wise’ manner,
- Completion of one task permits implementation of the next
Task A: Collection of Baseline Data

- **Objective:** Develop understanding of potential renewable resources located on tribal lands.
- **Outcome:** A hardcopy reference book that summarizes previous research and knowledge relevant to renewable resources.
Task B: Quantifying Tribal Energy Loads

- Objective: Determine Energy Loads and Consumption patterns.

- Outcome: Compile accurate comparative data representative of existing tribal energy loads and consumption patterns, and estimate energy production/consumption demands associated with renewable energy generation outlined in Taos Pueblo Energy Strategic Plan.
Task C: Data Enhancement and Expansion

- **Objective:** Verify and Define renewable resource attributes (location, quantity, quality).

- **Outcome:** Utilize GIS technology to further understand potential renewable resources on tribal lands – Illustrate site specific resources.
Task D: First Tribal Leadership Review

Objective: Screening by Tribal Government of site-specific resources based on conflicts with traditional cultural or environmental values.

Outcome: Tribal oversight of project to prevent conflicts with development in sensitive areas.
Task E: Technical Resource Assessment

Objective: Develop rough costs for engineering/development estimates for photovoltaic, solar thermal, wind and hydro power generation, wood biomass power generation.

Outcome: Site Specific engineering/development costs.
Task F: Social and Sustainability Assessment

- Social benefits and barriers are identified for each development options. Basic long-term sustainability factors such as O&M will be considered.
- Objective 1: Social Assessment.
- Objective 2: Sustainability Assessment.
Task G: Tribal Government Review

Objective: Review and Elimination of site-specific development options based on findings of Tasks E & F. Tribal Council will consider recommendations and determine most appropriate sites.
Task H: Selection of Preferred Option

- Using information, data, and models developed in Task E & F, Taos Pueblo Tribal Council will select the preferred option(s) the ‘Operational Model’.

- Pros and Cons of each model to be presented at a facilitated session.
Development of a Mission Statement

- Taos Pueblo working in conjunction with Pueblo students will develop a mission statement to define the purpose and need, as well as the primary goals and objectives of the selected option ‘Operational Model.’
- Mission Statement will be used to further develop draft business plan (Task K).
Task J: Formation of an Interdisciplinary Team

- Develop nine-member team representing Taos Pueblo tribal government, federal agencies, and national laboratories.
- Facilitate understanding of renewable energy and provide advisory input to the consulting process and development of a draft business plan.
Task K: Development and Design of a ‘Green Building’

Utilizing students from Taos Pueblo’s Summer Sustainability Institute; Taos Pueblo will design and develop conceptual plans showcasing renewable technology, green building and design.
Task L: Development of a Business Plan

- Formulation of a comprehensive business plan defining financing, implementation, and operation strategies for the operational model(s).
- Taos Pueblo Tribal Council will review plan and make decision.
- Emphasis will be placed on long term sustainability of operational model.
“As I sat with Mountain Lake on the roof, the blazing sun rising higher and higher, he said, pointing to the sun, "Is not he who moves there our father? How can anyone say differently? How can there be another god?"

As Mountain Lake told Jung, "We are a people who live on the roof of the world; we are the sons of Father Sun, and with our beliefs we daily help our father to go across the sky. We do this not only for ourselves, but for the whole world.

Carl Jung, 1924
Taa- Aah
(Thank You)