



**U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY**

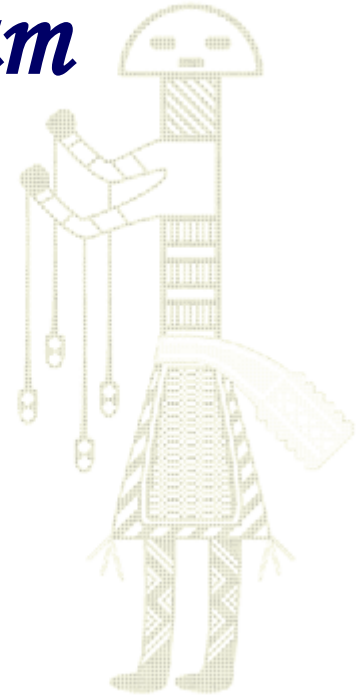
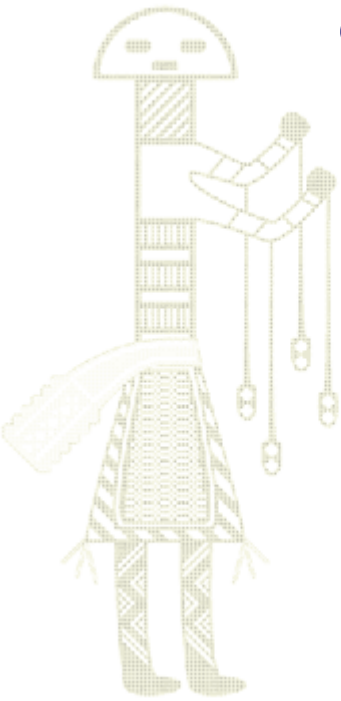
DOE's Tribal Energy Program



Sandra Begay-Campbell

Sandia National Laboratories

Principal Member of the Technical Staff





DOE's Tribal Energy Program

Promote tribal energy sufficiency, economic development and employment on tribal lands through the use of renewable energy and energy efficiency technologies



Authority

Title V of the Energy Policy Act (EPAAct 2005)





DOE's Tribal Energy Program



Mission

Offering financial and technical assistance to Tribes through government-to-government partnerships that:

- 1) Allow Tribal leaders to make informed decisions;***
- 2) Bring renewable energy and energy efficiency options to Indian Country;***
- 3) Enhance human capacity through education and training;***
- 4) Improve local Tribal economies and the environment; and***
- 5) Make a difference in the quality of life of Native Americans.***

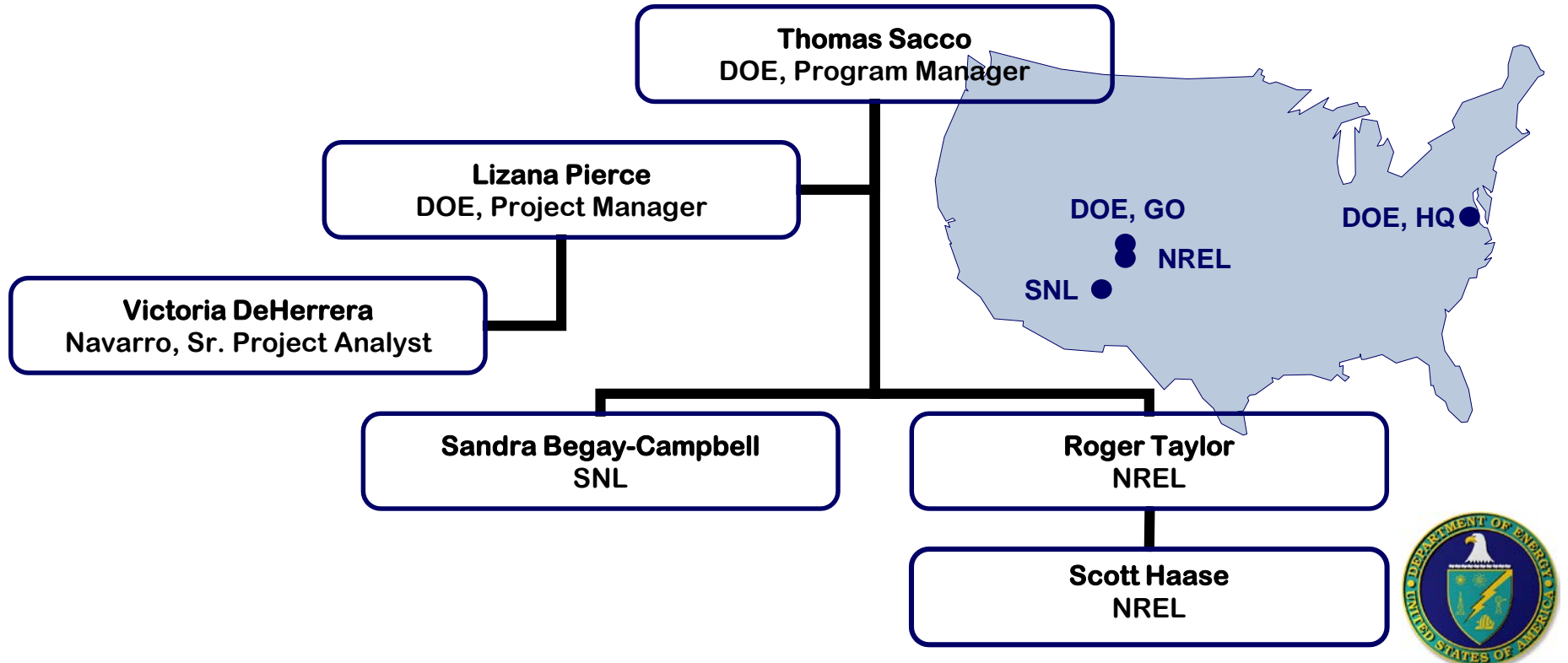




DOE's Tribal Energy Program

Organization

Program Management through DOE Headquarters, implementation through the DOE Golden Field Office, and technical support through the DOE's Laboratories





Renewable Energy Resources

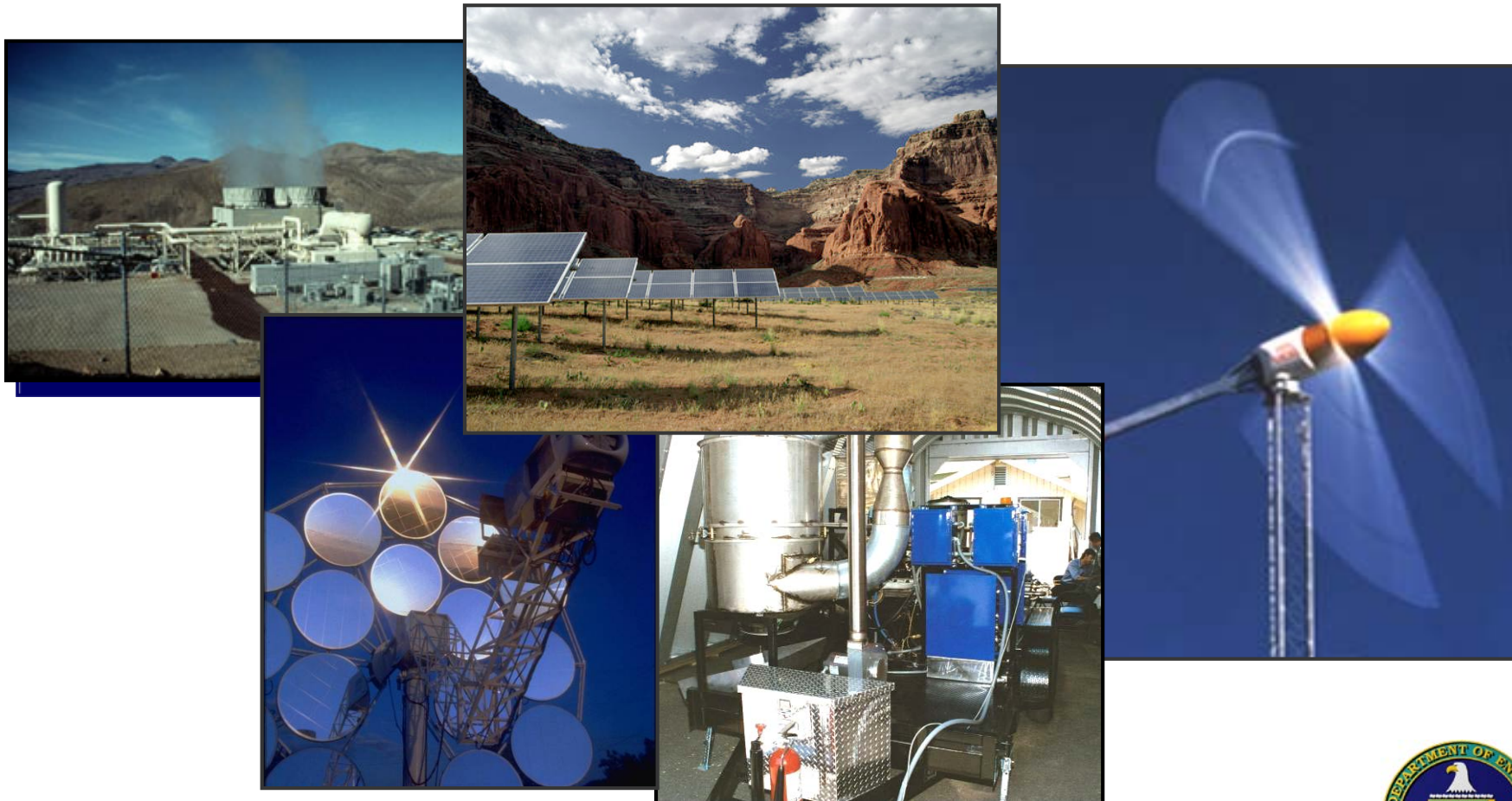


Using the Sun, Wind, Water,
and Earth





Renewable Energy Technologies





DOE's Tribal Energy Program

“Indian land comprises 5% of the land area of the United States, but contains an estimated 10% of all energy resources in the United States”

Tribal Trust Lands Comprises 55.7 Million Acres (Per BIA)

“Wind resources in the Great Plains could meet 75% of the electricity demand in the contiguous 48 states.” (Native American Energy Development and Self-Determination Act of 2003)



Tribal energy resource development can support local economies and Tribal sovereignty





DOE's Tribal Energy Program **Three Pronged Approach**

**Financial
Assistance**

*Success through
Government-to-
Government
Partnerships*

**Technical
Assistance**

*Leveraged through
Intergovernmental
Coordination*

Information & Education

*Leveraged with Intra-
governmental
Coordination*





DOE's Tribal Energy Program

Providing Financial Assistance

Providing financial and technical assistance to Tribes for the evaluation and development of renewable energy resources on Tribal Lands

Eligibility:

Federally-recognized Tribes or Tribal Energy Resource Development Organization (two or more entities, at least one of which is an Indian Tribe)



Tribal Lands include Indian reservations; Public domain Indian allotments; Former Indian reservations in Oklahoma; Land held by under the provisions of the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.); and Lands held in fee simple or under a Federal land lease.

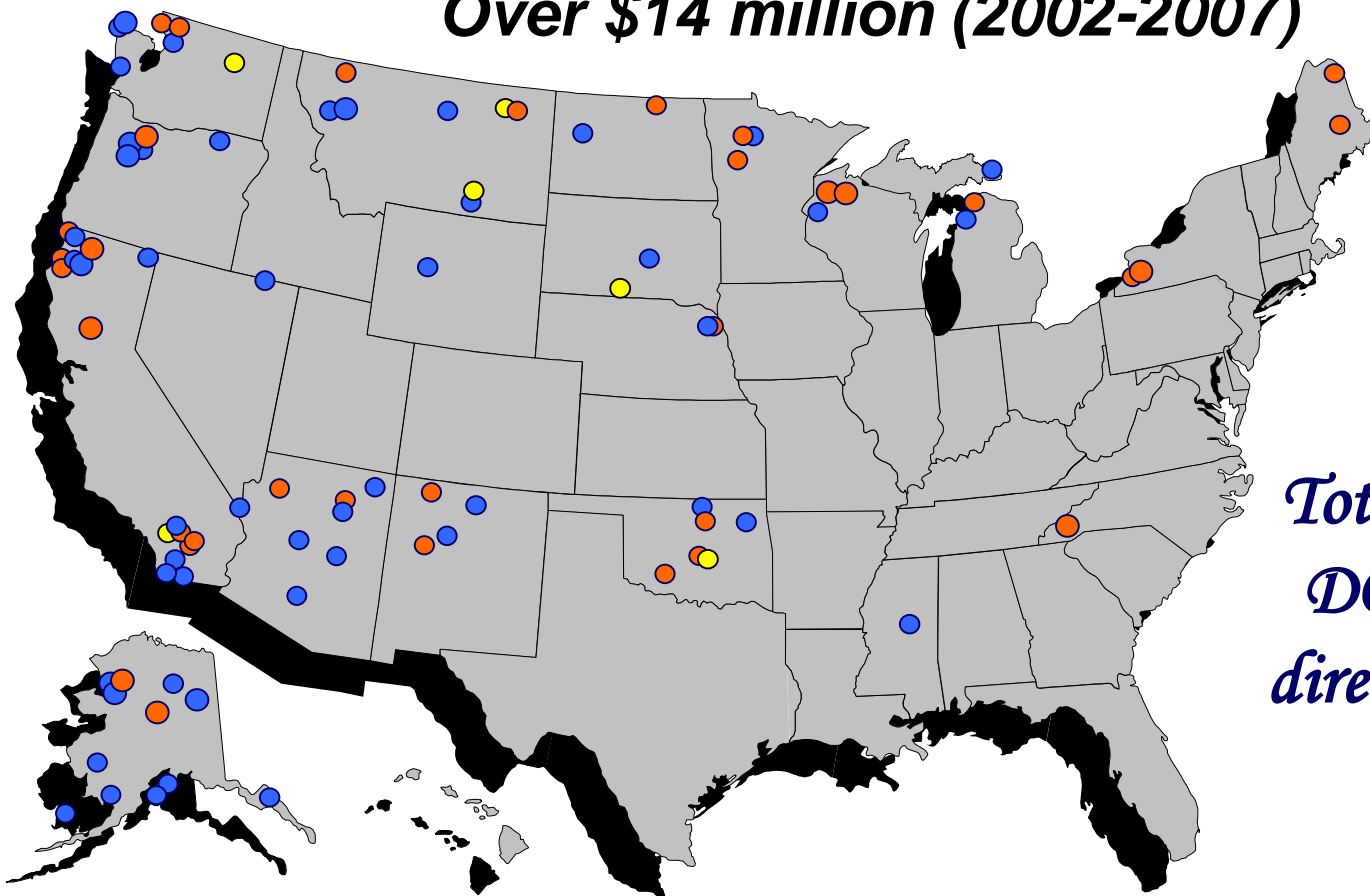
Funds Awarded through a Competitive Process





DOE's Tribal Energy Program

**DOE has funded 91 tribal energy projects totaling
Over \$14 million (2002-2007)**



- First Steps - 34
- Feasibility - 51
- Development - 6

*Total of 88% of
DOE funding
directly to Tribes*

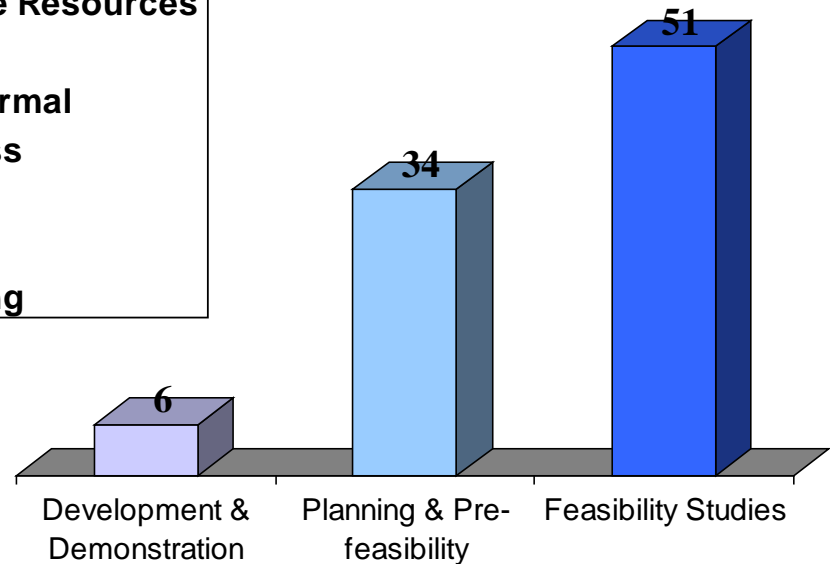
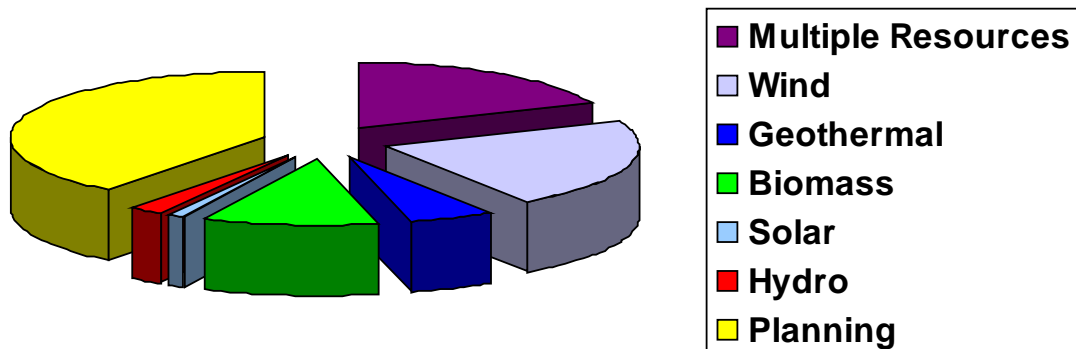
Tribes cost-shared \$4.1 million





DOE's Tribal Energy Program Tribal Projects


DOE Investment of Over \$14 Million



Tribes Cost Share \$4.1 Million

Ninety-one (91) Tribal energy projects funded (2002-2007)

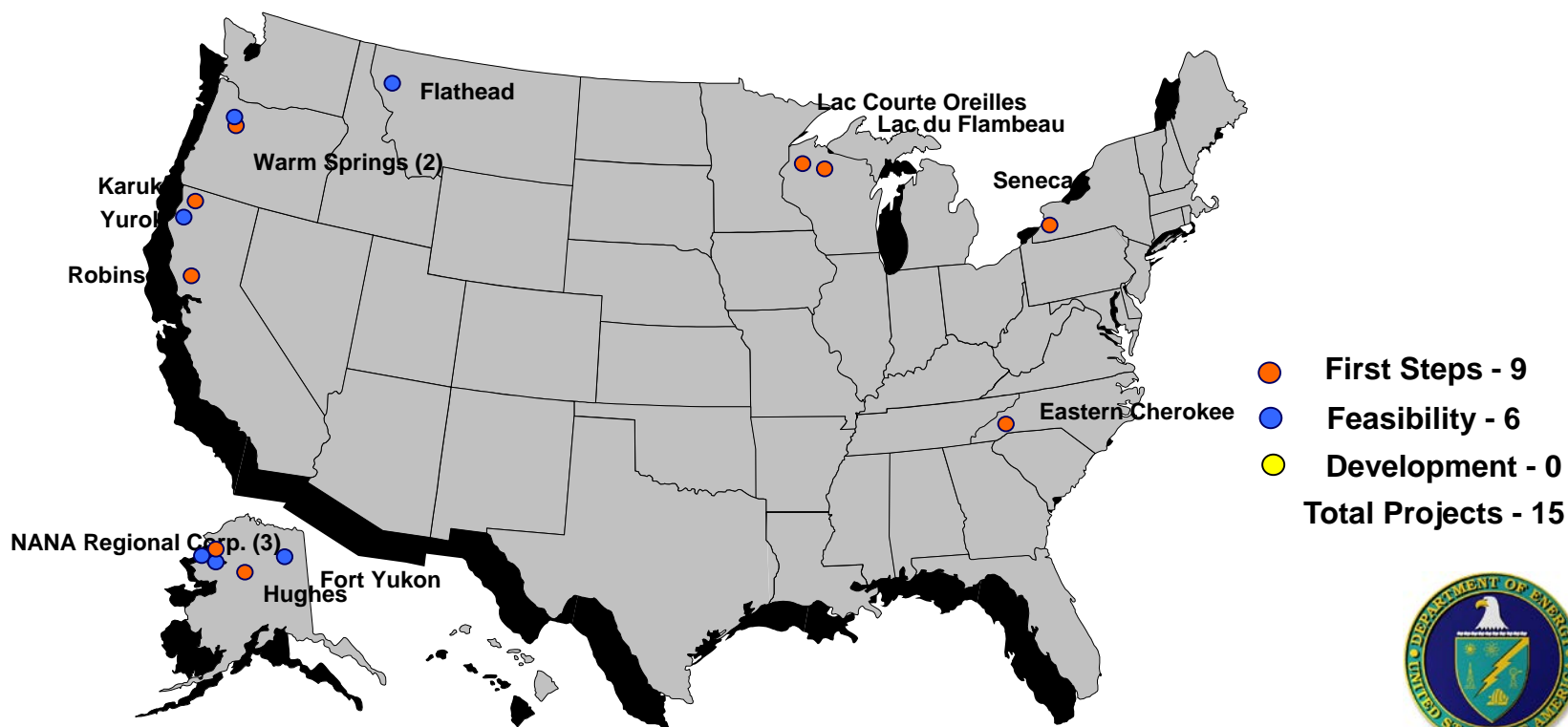




DOE's Tribal Energy Program

2007 TEP Project Awards

Department of Energy Names Director for Office of Indian Energy Policy and Makes \$2 Million Available for Projects on Tribal Lands





DOE's Tribal Energy Program

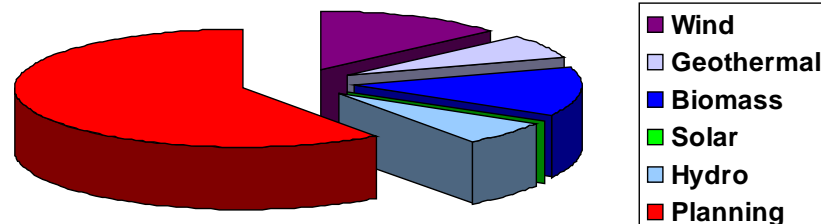
2007 TEP Project Awards

“First Step” Projects

- Eastern Band of Cherokee Indians - Strategic Energy Plan
- Hughes Village Council (Consortium of AK Villages) Designated Interior Regional Housing Authority to Manage - Capacity Building for Efficiency
- Karuk Tribe of California - Energy Option Analysis and Conservation
- Lac Courte Oreilles Band of Lake Superior Chippewa Indians - Energy Options Analysis & Resource Planning
- Lac du Flambeau Band of Lake Superior Chippewa Indians - Strategic Energy Planning & Energy Options
- NANA Regional Corporation - Strategic Energy Plan & Energy Options
- Seneca Nation of Indians - Energy Organization Development
- Robinson Rancheria Band of Pomo Indians (Consortium of California Tribes) - Strategic Energy Planning & Energy Options
- Warm Springs Power & Water Enterprises - Capacity and Awareness Building

Feasibility Projects

- Council of Athabascan Tribal Governments - Biomass Heat and Power & Biomass Delivery
- NANA Regional Corporation - Geothermal
- NANA Regional Corporation - Wind Energy
- Salish & Kootenai Holding Company (Flathead Reservation) - Biomass Heating
- Warm Springs Power and Water Enterprises - Utility-scale Wind Energy
- Yurok Tribe Hydro & Wind Energy





DOE's Tribal Energy Program

Providing Technical Assistance

Technical Assistance

- Technology Advice
- Models and Tools
- Resource Maps
- Strategic Energy Planning
- Project Support
- Economic Evaluations
- Design Review
- Special Studies

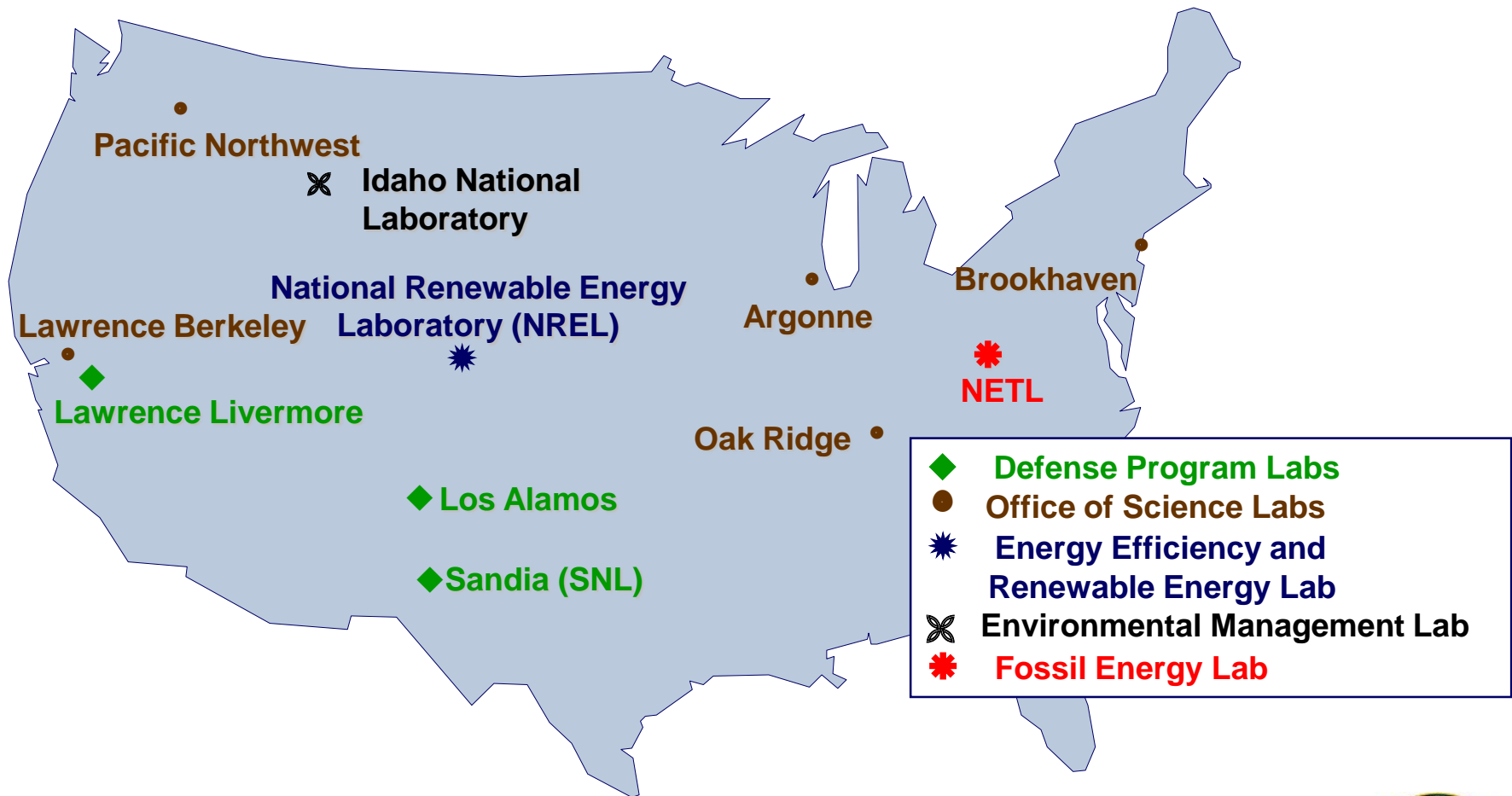


**Assisting Tribes through technical expertise through
DOE's National Laboratories**





Major DOE National Laboratories



NREL and SNL Support the Tribal Energy Program and the Tribes





Major NREL Technology Thrusts

Supply Side

Wind Energy
Solar Photovoltaics
Concentrating Solar
Power
Solar Buildings
Biomass Power
Biofuels
Geothermal Energy
Hydrogen
Superconductivity
Distributed Power



Demand Side

Hybrid Vehicles
Fuels Utilization
Buildings Energy
Technology
Federal Energy
Management
Advanced Industrial
Technologies

Cross Cutting

Basic Energy Science
Analytical Studies
International

Tribal Energy Program



**Only Laboratory Dedicated to
Renewable Energy**





Sandia National Laboratories

Tribal Energy Program Activities

- Student Internship Program
- Support Tribal requests (grantees):
 - Ramona Band of Cahuilla
 - Hualapai Nation
 - Navajo Nation
 - Hopi Nation
 - Laguna Pueblo
- Published the Solar Way
 - Visual tour of solar in Indian Country
- SNL MOU's
 - Navajo
 - Hualapai Tribe

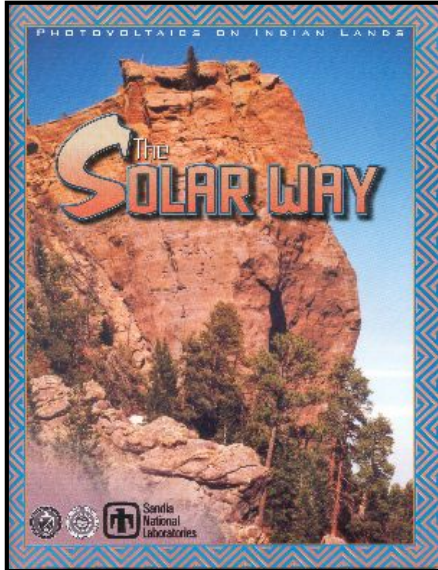


Sandia National Laboratory in Albuquerque, New Mexico

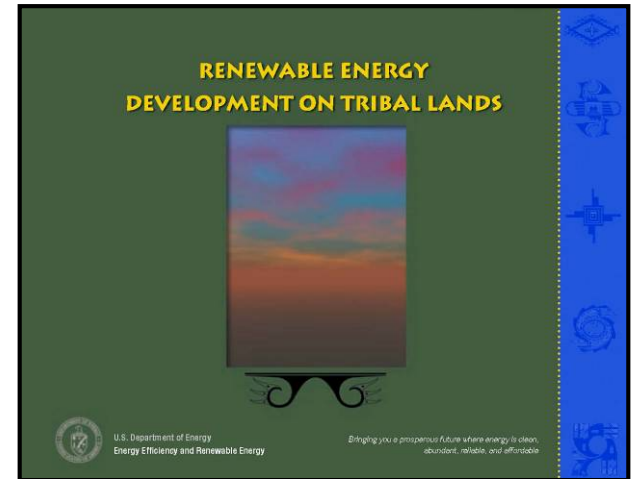
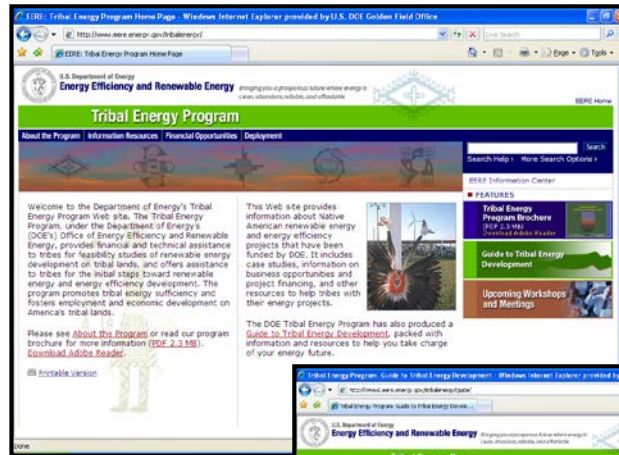
Helping our nation
secure a peaceful and
free world through
technology.



DOE's Tribal Energy Program



Information Resources



Tribal Energy Website

www.eere.energy.gov/tribalenergy



Guide to Tribal Energy Development

www1.eere.energy.gov/tribalenergy/guide





DOE's Tribal Energy Program Program Web Site

- Features
- Program Brochure
- Upcoming Workshops
- Financial Opportunities
- Projects on Tribal Lands
 - Project Overviews
 - Status and Reports
 - Contacts
- Information Resources
- Contacts



www.eere.energy.gov/tribalenergy





DOE's Tribal Energy Program

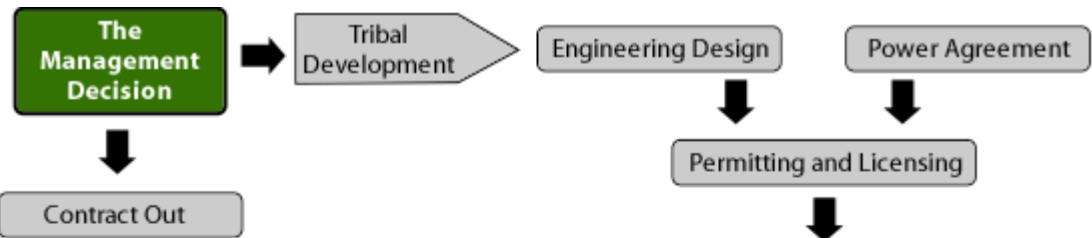
Guide to Tribal Energy Development

Development Processes

- Strategic Planning
- Options Analysis
- Organizational Development
- Project Development

Resource Library

- Energy Resources
- Technologies
- Costs
- Risk Factors
- Legal Issues
- Financing Options
- Contacts



www.eere.energy.gov/tribalenergy/guide





DOE's Tribal Energy Program

Student Internships

Requirements

- The student applicant must be a U.S. citizen and a **Native American**, defined as a member of a federally recognized tribe, Alaska Village, or Alaska Corporation (*excludes* state-recognized tribes; bands or groups; and first peoples of Guam or Hawaii). Specific interest in renewable energy is required.

Application Process

- Applications due February 22 for 12 week internship at Sandia National Laboratories or contact Sandra Begay-Campbell at (505) 844-5418 or skbegay@sandia.gov
- Application form posted on TEP website annually

Internships

- Three (3) summer interns sponsored in 2003 and 2004 each
- Year-round intern sponsored (2002-2004)
- One (1) summer intern and two (2) year-round interns (2005)
- Three (3) summer interns and one year-round intern sponsored (2006)
- Two (2) summer interns and one year-round intern sponsored (2007)



Summer Interns on the Navajo Reservation (2007)

Summer Interns on a windy day (2004)



**Student Paper and Workshop Materials
Posted on TEP Website**



DOE's Tribal Energy Program

Providing Information and Education

Co-sponsored Native American Energy and Mineral Institute (NAEMI) workshops

- Renewable Energy Analysis and Economics Workshop (July 2006)
- Biomass Energy Workshop (May 2006)
- Tribal Business Development: A One-Day Tutorial (May 2006)
- Solar Electricity and Solar Thermal Energy Workshop (June 2006)
- Renewable Energy for Tribal Community Development (August 2006)
- Wind Energy Applications and Training Seminar (August 2006)
- Renewable Energy for Tribal Community Development (August 2007)
- Oklahoma Renewable Energy for Tribal Community Development (September 2007)

Wind Energy Applications Training Symposium (WEATS)

- Co-sponsor WEATS 2006 (August 2006)
- Co-sponsored WEATS 2007 (August 2007)



WEATS 2006 participants touring the National Wind Technology Center (NWTC)

Course Materials Posted on TEP Website

www.eere.energy.gov/tribalenergy/short_courses.cfm





Funding Resources

- **Federal Grants**
 - One-stop for Federal grant opportunities, see www.grants.gov
 - Forwarded monthly through TEP Tribal Email list
- **Tribal Grants (Tribal Energy Program website)**
 - See www.eere.energy.gov/tribalenergy/government_grants.cfm
Identifies any grants through the Tribal Energy Program, Other DOE opportunities, and Federal funding, and provides links to funding through DOI, USDA, DOC, EPA, and HUD
 - Other opportunities forwarded through TEP Tribal Email List
- **Database of State Incentives for Renewables and Efficiency**
 - DSIRE at www.dsireusa.org/
- **Tax Incentives Assistance Project**
 - TAIP at www.energytaxincentives.org/



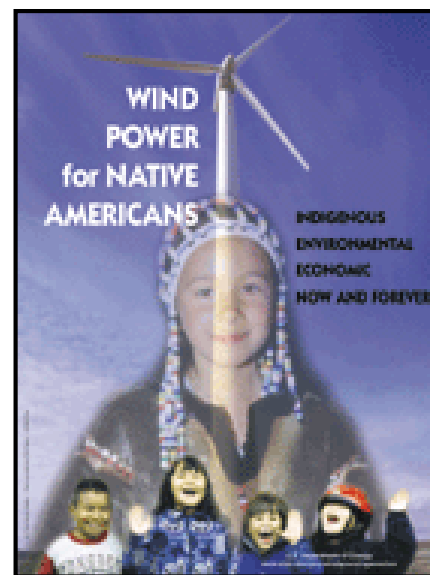


Wind Powering America's (WPA) Native American Program

WPA recognizes the vast wind resources on tribal lands and provides technical assistance to:

- Evaluate the resource; and
- Pursue development options that best match Native interests

Wind Powering Native America Video
Anemometer Loan Program
Native American Wind Interest Group
(NAWIG) Quarterly Newsletter



Native American Anemometer Loan Program has supported over 70 tribes



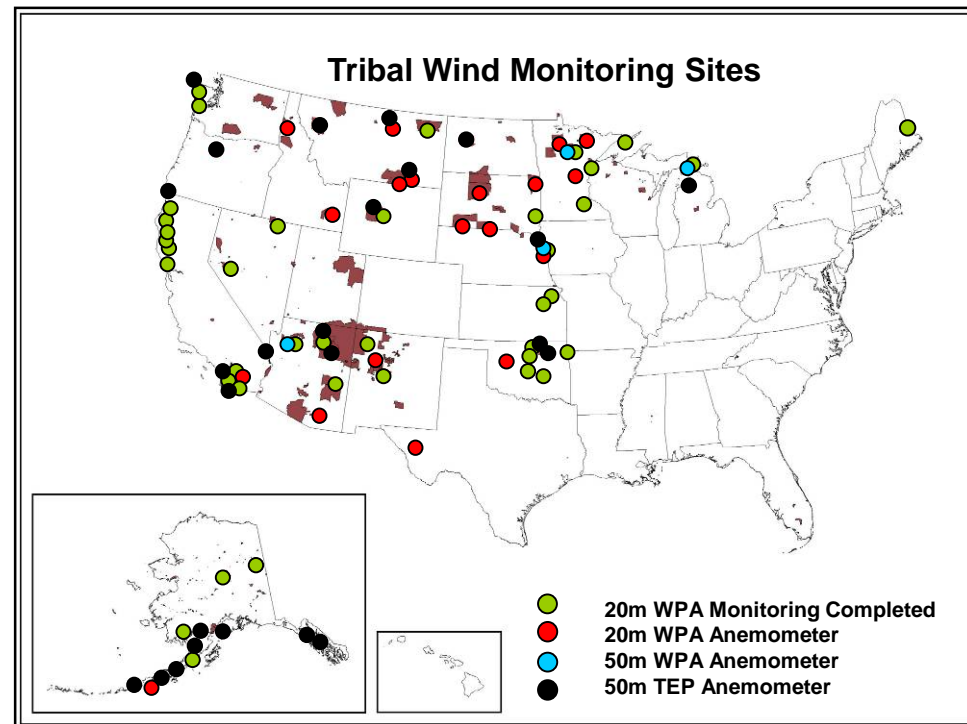


DOE's Tribal Energy Program

Native American Anemometer Loan Program

- Fifty (50) anemometers purchased under TEP grants
- Transferring equipment to NREL for re-use under the Native American Anemometer Loan Program

Tribes agreed to re-use by other tribes who wish to measure their wind resources



For more or to apply, see “Native American” at www.eere.energy.gov/windandhydro/windpoweringamerica





DOE's Geothermal Program

Tribal Projects Competitively Awarded Funding



Chena Hot Springs



- Partially Funded 400kW Chena Hot Springs Geothermal Power Plant
- Fort Bidwell Indian Community Selected for Geothermal Resource Exploration and Definitions

www.eere.energy.gov/geothermal





DOE's GeoPowering the West

GeoPowering the West is a commitment to dramatically increase the use of geothermal energy in the western United States



Jemez Pueblo received DOE support to study its geothermal resource

- Provides information and technical assistance to tribes
 - Partners with tribes to expand the use of geothermal energy
- Site visits completed at Pyramid Lake Paiute, Walker River Paiute and Wind River Tribe
 - Geothermal greenhouse tours provided to several New Mexico pueblo officials



**GEOPOWERING
THE WEST**

www.eere.energy.gov/geothermal





DOE's Tribal Energy Program Team

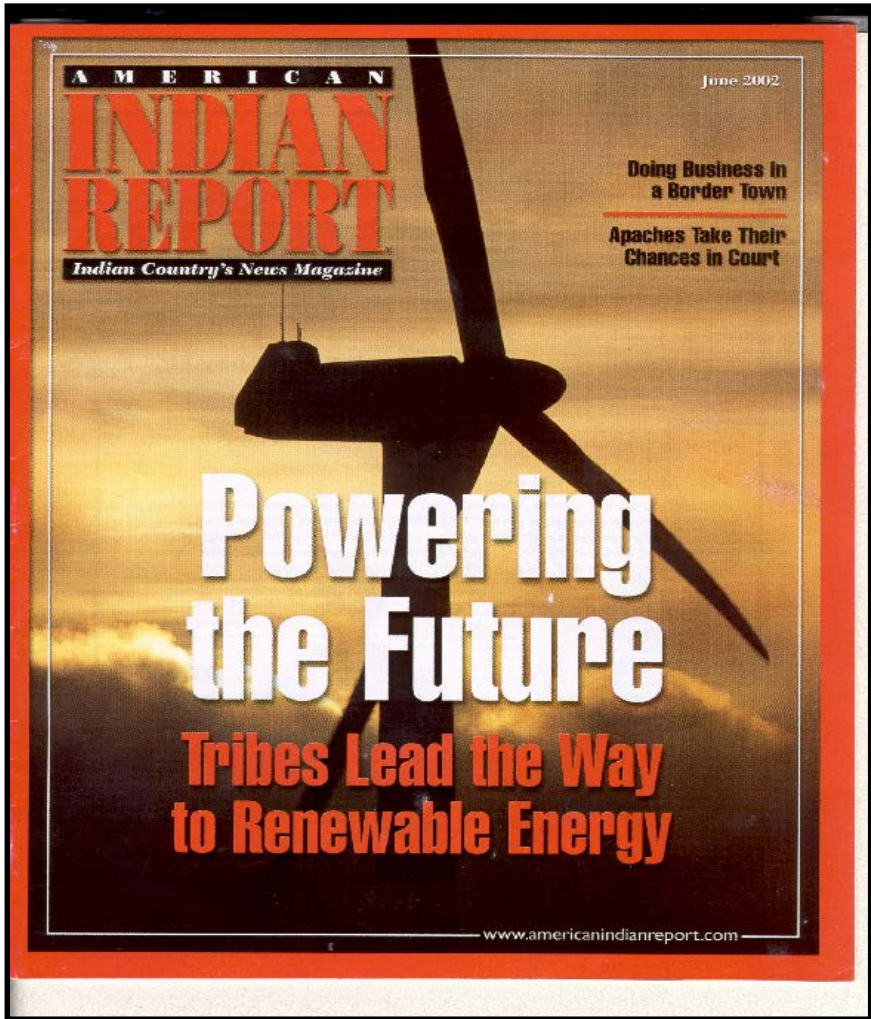


The Tribal Energy Program team, from left to right: Scott Haase, Sandra Begay-Campbell, Thomas Sacco, Lizana Pierce, Victoria DeHerrera, Roger Taylor and Faline Haven (formerly with TEP).

Sandra Begay-Campbell
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QUESTIONS

“Tribes Leading the Way to Renewable Energy”

American Indian Report
June 2002

