

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

DOE's Tribal Energy Program



2013 Program Review

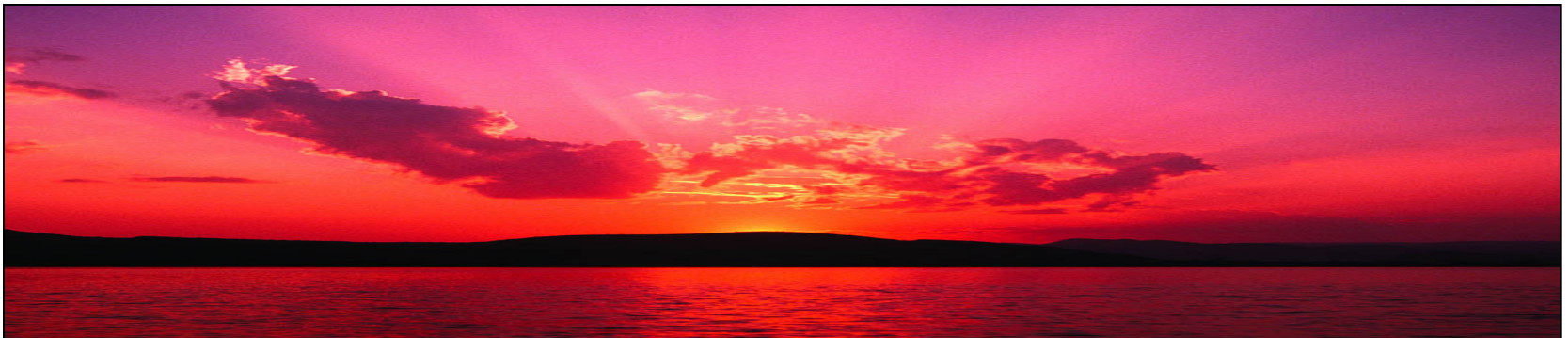
March 24, 2013

Lizana Pierce, Project Manager



Purpose

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



In cooperation with DOE's Office of Indian Energy Policy and Programs, the Tribal Energy Program provides financial and technical assistance to Tribes to develop their renewable energy resources and reduce their energy consumption.



Mission

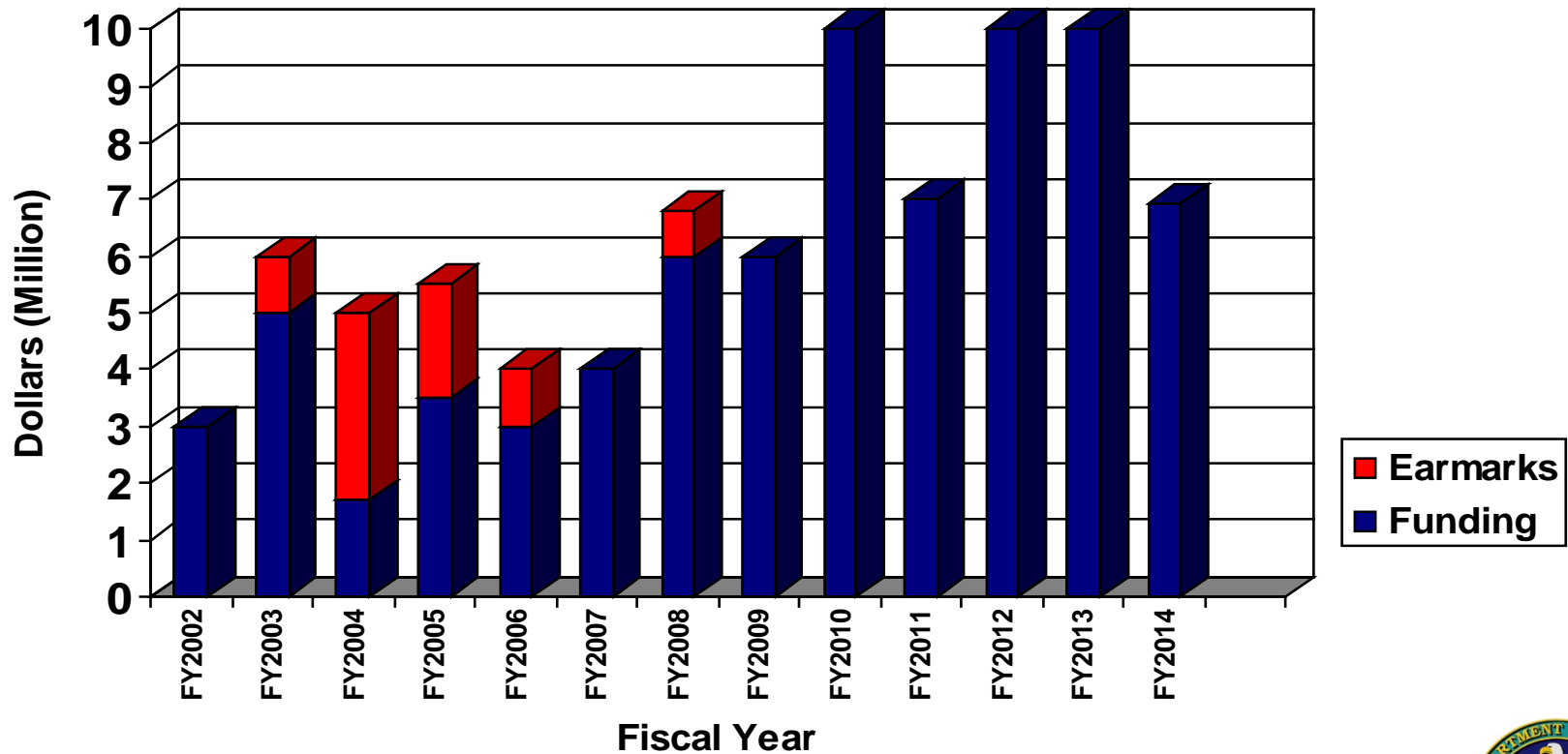


Offering financial and technical assistance to Tribes through government-to-government partnerships that:

- 1) Enable Tribal leaders to make informed decisions about energy choices;***
- 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 American Indians and Alaska Natives.***



Program Funding History



Averages ~\$6.0 million per year





Tribal Energy Program Funding*

	FY2011	FY2012	FY2013	FY2014	FY2015
DOE Request	\$10.0	\$10.0	\$10.0	\$7.0	\$0.0
Appropriated Funds	\$7.0	\$10.0	\$9.42	\$6.9	TBD

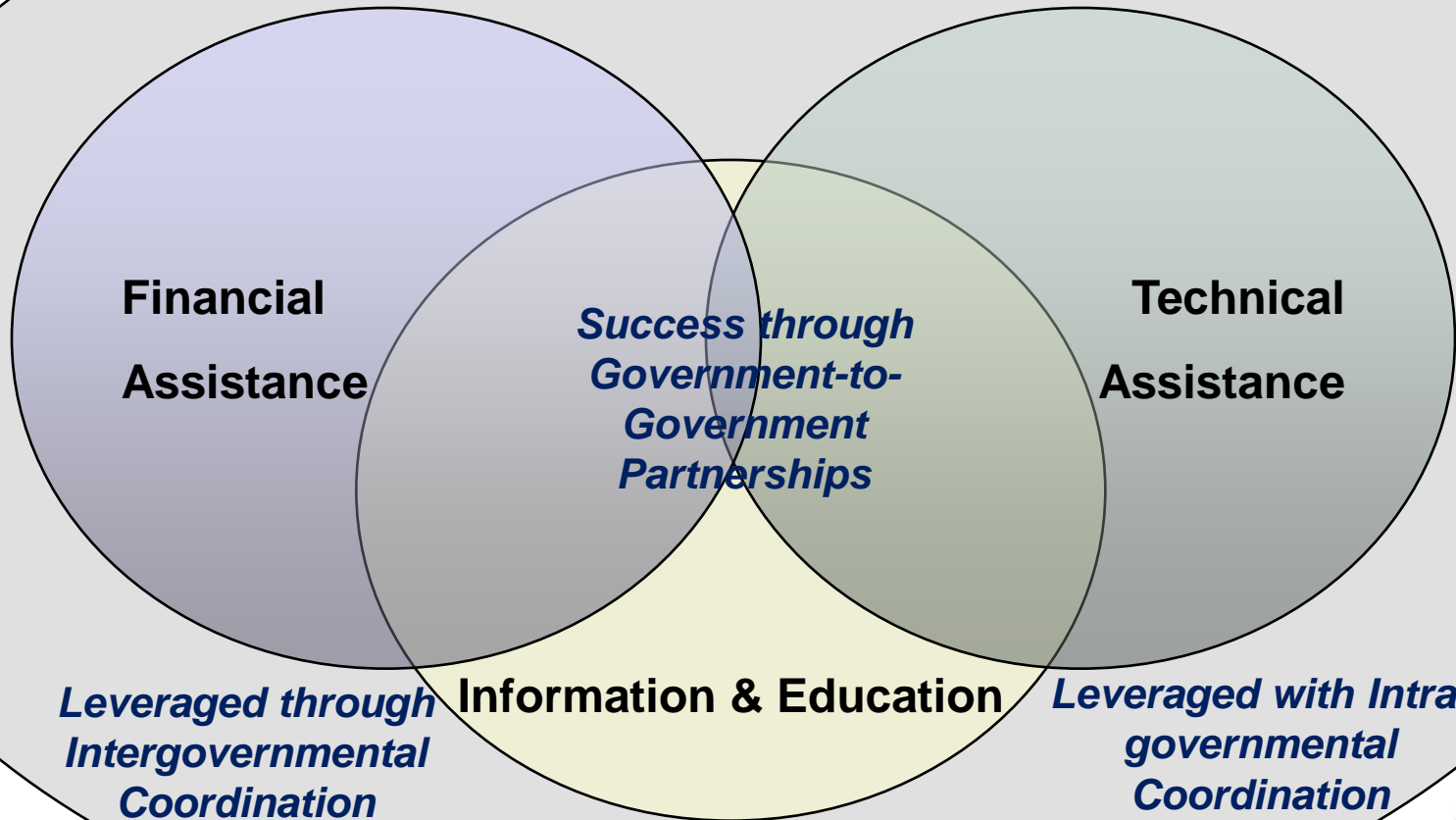
Per the President's FY2015 Budget Request, \$0 million requested for Tribal Energy Program

Per the Request, "The Tribal Energy Program and its activities..... is proposed for consolidation into the Office of Indian Energy Policy and Programs."

* Amounts in Millions



Three Pronged Approach



Providing Financial Assistance

Providing financial and technical assistance to Tribes for the evaluation, development, and deployment of renewable energy resources and energy efficiency on Tribal lands

Eligibility:

Federally-recognized Tribes including Alaska Native villages or regional or village corporations, Tribal Energy Resource Development Organizations, and Tribal Consortia (two or more entities, at least one of which is an Indian Tribe and the application is submitted by the 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 long-term Federal land lease.

All Funds Awarded through a Competitive Process



Competitive Process (2002-2013)

Accomplishments *

- **17 Funding Opportunities Announcements issued**
- **Total of 610 applications accepted** (valued at \$316 million)
- **84.8% of meritorious applications funded** (Total of 184 of 217)
- **Funded 30.2% of all applications received** (using multi-year funds)
DOE average is ~5 to 10%.
- **Funded 126 Different Tribes** (22.2% of the 566 Tribes)

* Including 9 pending awards.



FY2013 Financial Assistance

Financial Assistance to Spur Deployment in Indian Country

- **Tribal Renewable Energy and Energy Efficiency Deployment Assistance (DE-FOA-0000853)**
 - Deployment of renewable energy and energy efficiency improvements
 - 30% reduction in total fuel use and minimum 10 kW
- **Community-Scale Clean Energy Projects in Indian Country (DE-FOA-0000852)**
 - Deployment of clean energy systems (renewable energy, energy efficiency, or renewable or natural gas fueled combined heat & power systems)
 - 15% reduction in total fuel use and minimum 50 kW



Solar arrays on home on the Navajo Nation

See Tribal Energy Program website for copies of the Funding Opportunity Announcements and Join Email List for Future Notifications



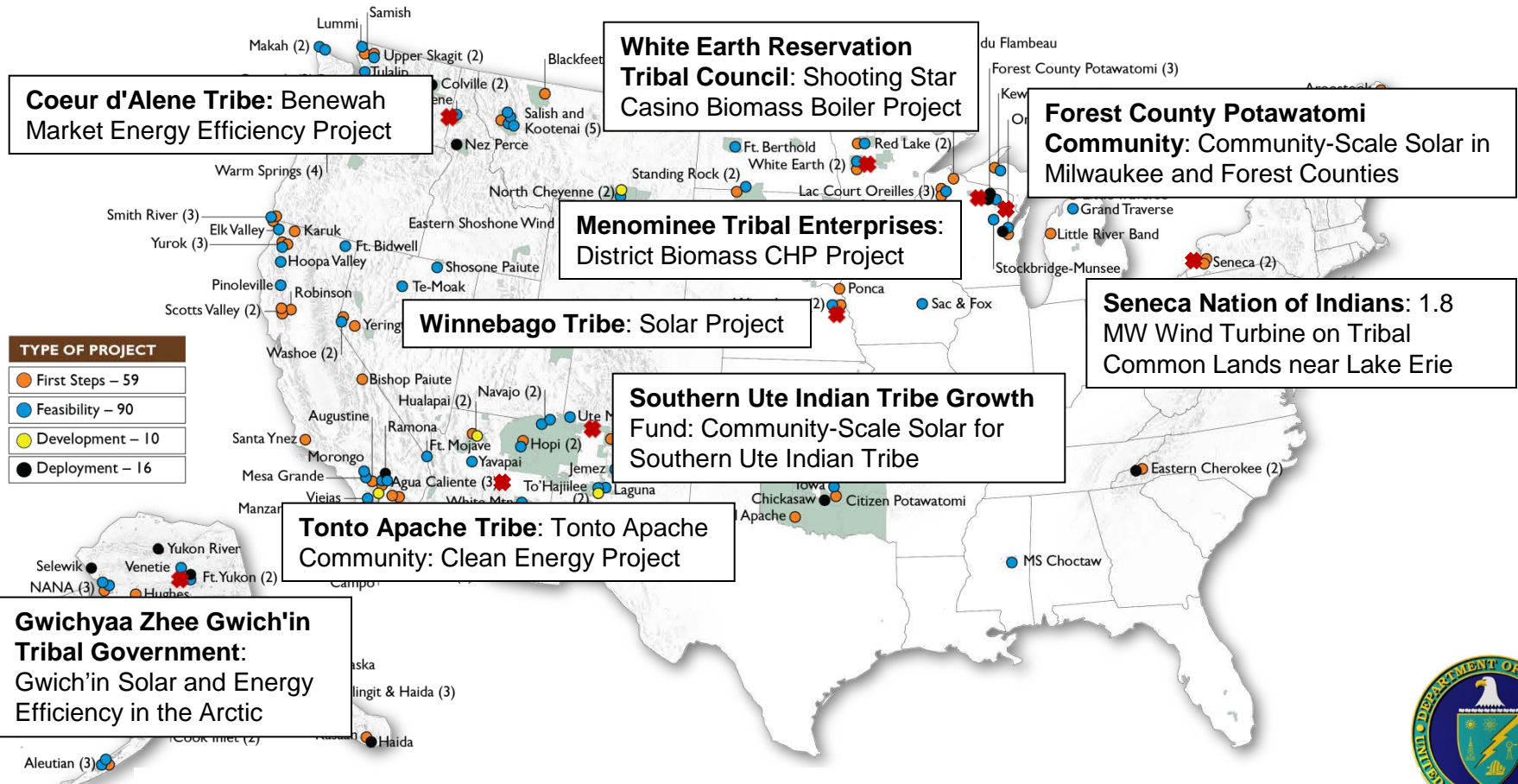
Highlighted during the 2013 White House Tribal Nations Conference

Awards Pending for Nine Tribal Energy Projects Valued at more than \$7 Million

“As part of the Obama Administrations commitment to strengthening partnerships with Tribal nations and building stronger, more resilient Communities that are better prepared for a changing climate, the Energy Department announced nine tribal clean energy projects to receive more than \$7 million.”



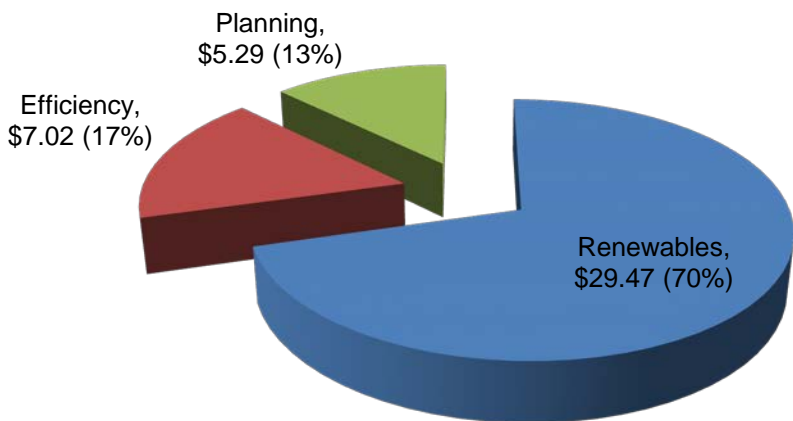
Awards pending for nine Tribal energy projects valued at more than \$7 million



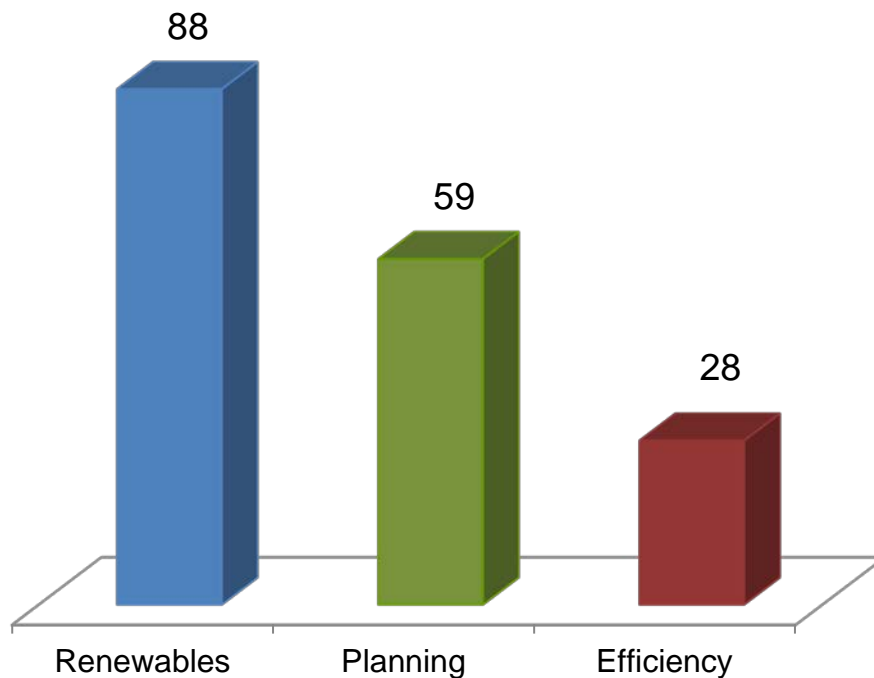
Tribal Energy Project Pipeline

DOE'S Investment of \$41.8 Million in 175 Tribal Energy Projects (2002-2012)

DOE Investment by Type (\$M)



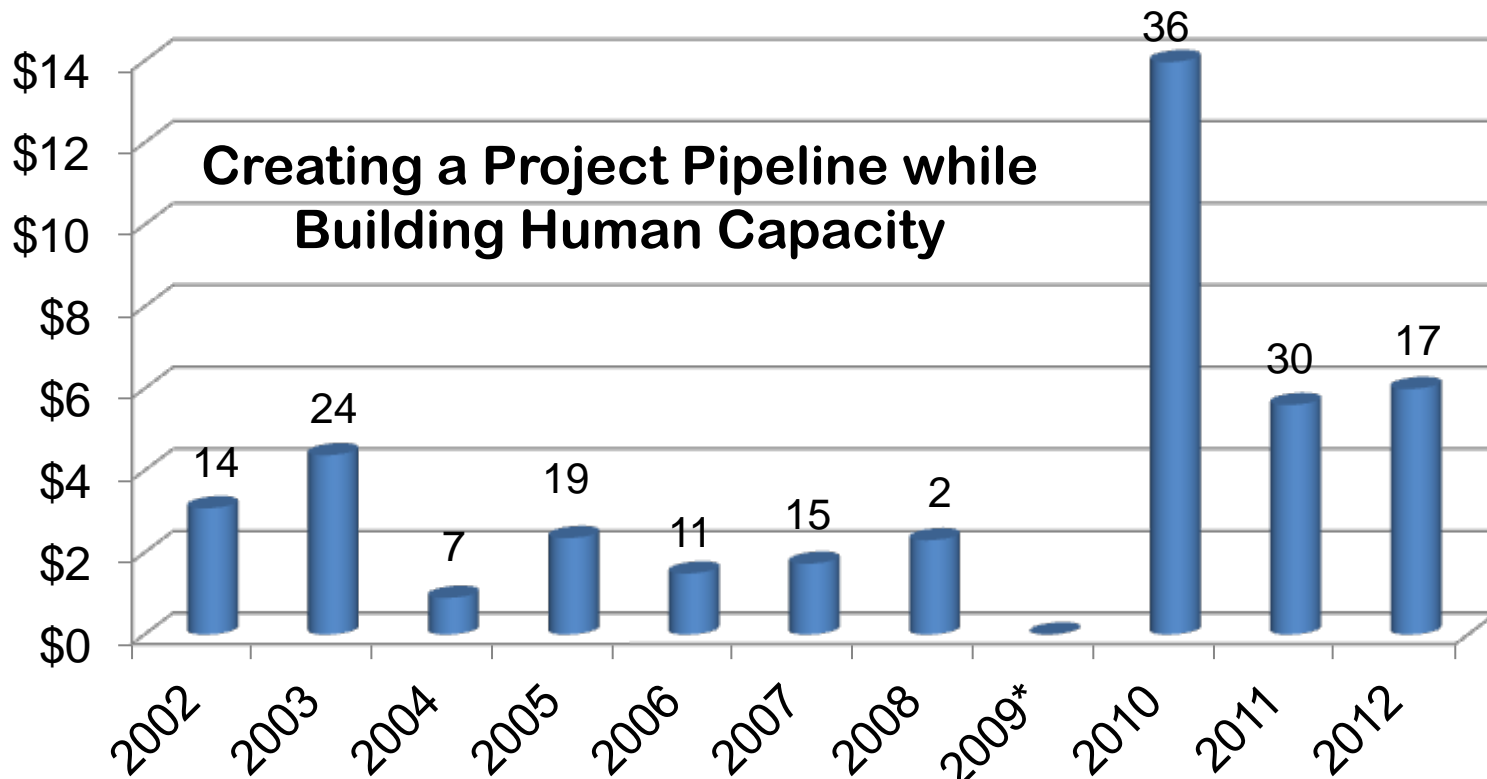
Investment in Tribal Clean Energy



Funded 21.6% of All Tribes (2002-2012)



Project Funding History



* FY2009 funds carried over and used to fund projects awarded in FY2010

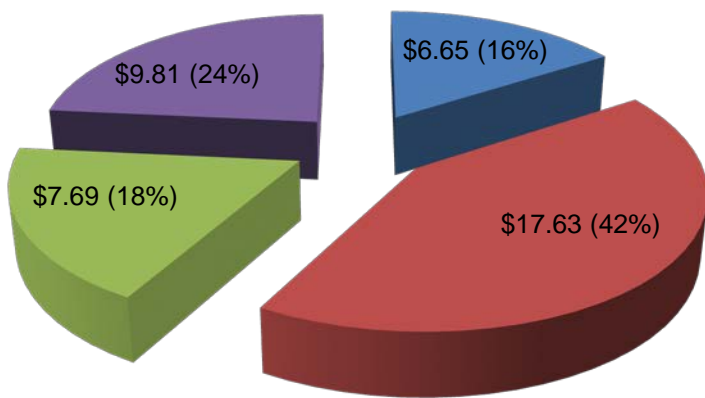
Investment in Tribal Energy Sufficiency



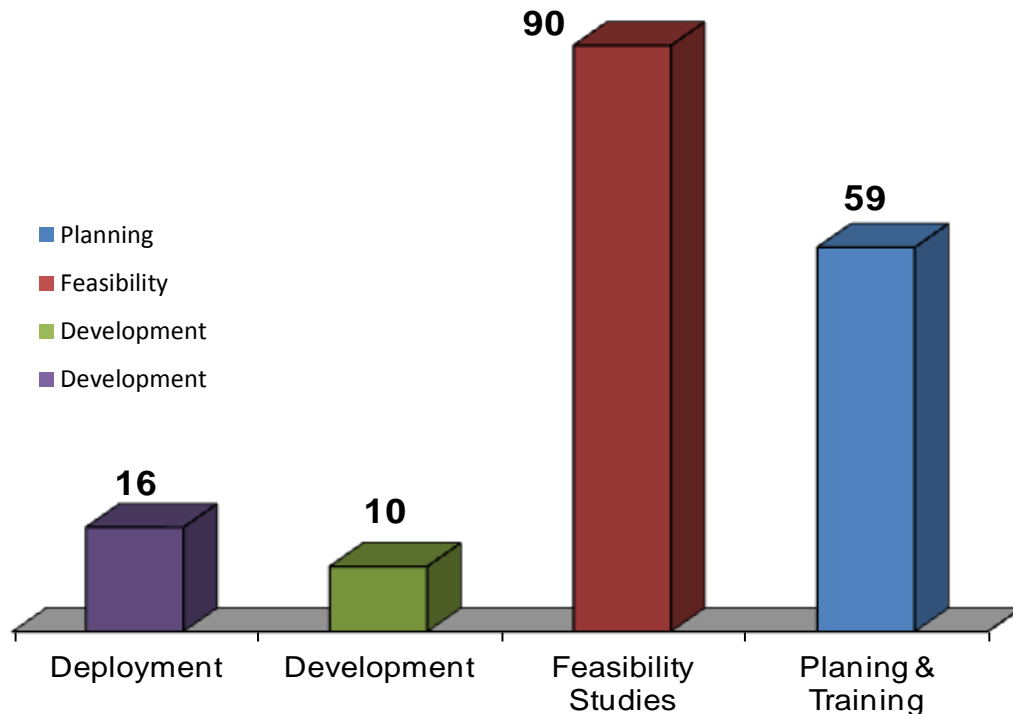
Tribal Energy Project Pipeline

DOE'S Investment of \$41.8 Million in 175 Tribal Energy Projects (2002-2012)

DOE Investment by Phase (\$M)



Clean Energy Projects in Various Stages of Development



Assisting Tribes Fulfill Their Energy Vision



Project Accomplishments

Return on DOE's \$41.8 Million Investment

- Over 800 MW of potential new renewable energy generation under development
- Over 4,000 MW of tribal renewable energy resources being assessed
- Over 1.7 million square feet of tribal buildings (67) retrofitted for a savings of over \$3 million per year
- Energy audits completed on over 250 tribal buildings
- Over 170 tribal members training as part of these tribal energy projects

Leveraged by \$36M in tribal cost share



Project Accomplishments

Renewable Energy Deployment in Indian Country

Renewable Energy Deployment Projects

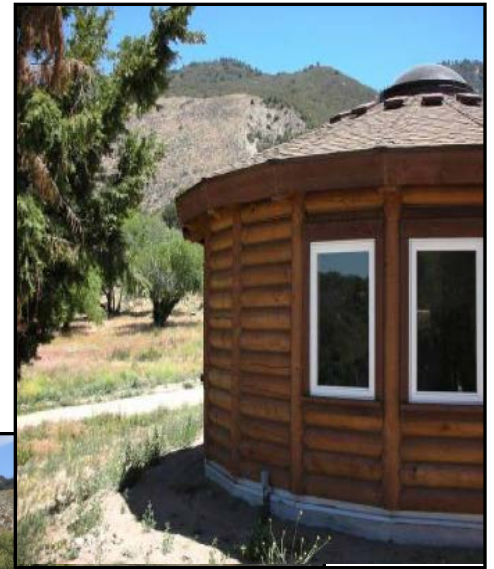


Colville Indian Power and Vener Energy Substation (WA)

Council of Athabascan Tribal Government (CATG)
Biomass Heating Project in Fort Yukon (AK)



Ramona Band (CA)
Renewable Powered Eco-tourism Project



Project Accomplishments

Renewable Energy Deployment in Indian Country

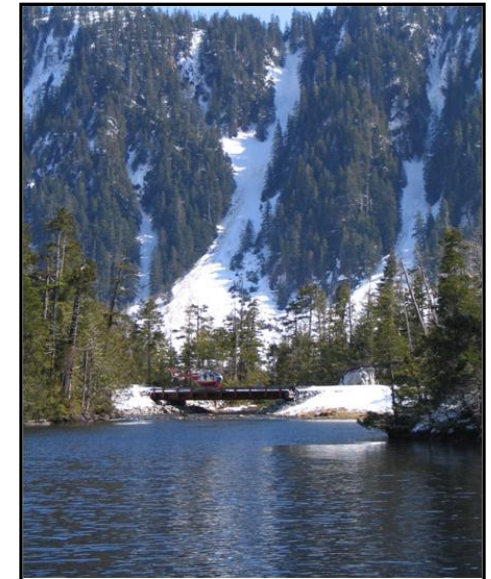
Renewable Energy Deployment Projects (Continued)



Chaninik Wind Group's
Thermal Heating Project (AK)



Assiniboine & Sioux Tribes installed two 50 kW wind turbines on the Fort Peck Reservation



Haida Corp's
Reynolds Creek 5MW Hydro
Project in Angoon (AK)



Project Accomplishments

Deployment to Save Energy for the Future

Building Retrofit (Deployment) Projects



Lighting upgrades could save the **Chickasaw Nation** (OK) \$180,000 per year



Forest County Potawatomi Community retrofitted Wunder Hall, a historic building on Concordia Campus (WI)

Forest County Potawatomi Community installed 1,664 new LED lights for a 54% reduction in energy use (WI)



Project Accomplishments

Deployment to Save Energy for the Future

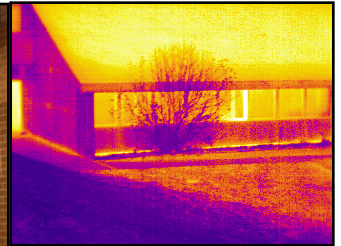
Building Retrofit Projects (Continued)



Nez Perce Tribe (ID) installed windows, insulation, and efficient lighting in 5 tribal buildings (54,312 square feet total) including the Water Resources Office and PiNeeWaus Gym shown below.

Retrofits estimated to reduce energy use by 35% and save \$13,800 per year.

Project completed in alignment with the Tribe's Strategic Energy Plan which was developed with Technical Assistance from the Tribal Energy Program.



Project Accomplishments

Deployment to Save Energy for the Future

Building Retrofit Projects (Continued)

Alaska Native Tribal
Health Consortium
(Selawik, AK) will
upgrade sanitation
facilities



Central Council Tlingit &
Haida Indian Tribes of Alaska
(CCTHITA) retrofitting 4
buildings for projected annual
savings of \$52,271 (AK)



Yukon River Inter-Tribal Watershed Council
(YRITWC) installing energy efficiency measures for the
Nunamiut people of Anaktuvuk Pass to reduce energy
use by 34%



Project Accomplishments

Renewable Energy Development

Renewable Energy Development Projects



Campo Band's Wind Farm
DOE funding Phase II
(160 MW)

Hualapai (AZ) Exploring
"large-scale" solar and wind
development



Northern Cheyenne Tribe
completed wind feasibility
study and began pursuing
wind 30MW wind farm
(anemometer at sunset, MT)



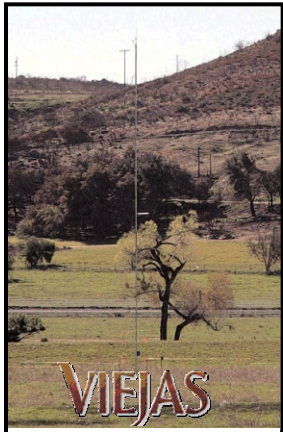
**Rosebud Sioux's (SD) Little Soldier
Turbine - Pursuing a 30 MW and 190
MW Wind Farm**



Project Accomplishments

Assessing Indigenous Resources

Renewable Energy Feasibility Studies



Viejas Tribal
Government
Tribal Utility and
Wind Study (CA)

Pueblo of Jemez Geothermal
Feasibility Study (NM)



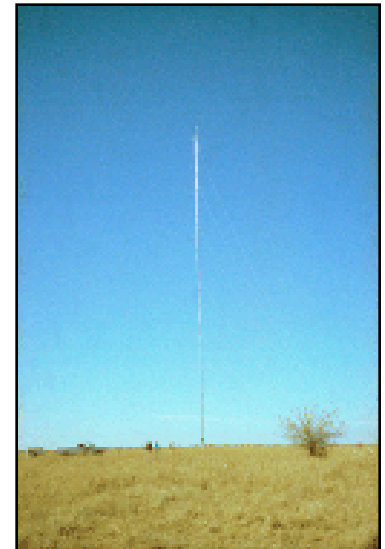
Three Affiliated Tribes Wind
Feasibility Study (ND)



**Makah
Indian
Nation**
Wind
Feasibility
Study (WA)



Kaw Nation
Wind Resource
Assessment (OK)



**St. Croix
Chippewa**
Biomass
Study (WI)



Project Accomplishments

Assessing Indigenous Resources

Energy Efficiency Feasibility Studies (Energy Audits)



Sault Ste Marie's Tribal Health Clinic and Community Center, one of 45 buildings which will have energy audits (MI)

Oneida Nation's Housing Authority will conduct energy audits on 44 buildings (WI)



Tlingit Haida Regional Housing Authority (THRHA) to conduct energy audits on over 50 buildings in Southeast Alaska (AK)



Project Accomplishments

Planning for the Energy Future

“First Steps” Grants

- Human capacity grants,
- Strategic Energy planning,
- Energy organization development, and
- Energy options (pre-feasibility)

Seneca Nation
conducted strategic
energy planning (NY)



**Cabazon Band of
Mission Indians**
Energy Plan (CA)

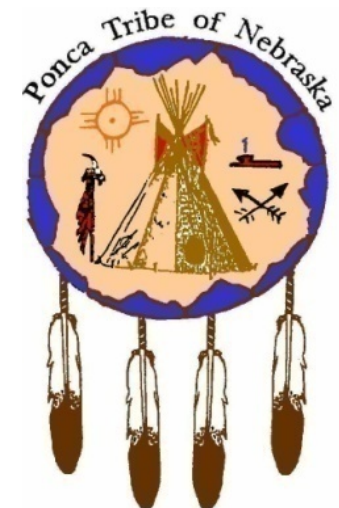
San Carlos Apache
conducting an energy options
analysis (AZ)



Ponca Tribe
conducting an energy
analysis and
conducting community
awareness under their
“Project Earth Lover”
Campaign (NE)



**Earth
Lover**



Building Local Skills and Knowledge

Over 170 Tribal Members Trained

Keweenaw Indian Community trained members in weatherization: 9 energy auditors; 8 envelop professionals; and 38 air sealing insulation installers. Logo contest winner shown above.



Cook Inlet Tribal Council training two apprentices in weatherization (4,000 hour program). Apprentices to graduate February 2012 and be hired to serve local communities.



Scotts Valley Band partnered with 12 Tribes in Lake and Mendocino Counties to build local capacity through education and training. Twenty-three members trained and 3 hired by the Tribes.



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*



Providing Technical Assistance

Types of Technical Assistance

1) Strategic Energy Planning

Consists of an on-site workshop

2) Project Development Support

Consists of expert guidance and analysis that helps address specific barriers Tribes face while developing a clean energy project.



National Renewable Energy Laboratory (NREL) Science & Technology Facility and Solar Energy Research Facility (SERF)



MARSHCREEK



Assisting Tribes with expertise from DOE's National Laboratories and Other Providers



Technical Assistance Requests for Tribes

- Offered within available resources
- The application process is a quick and easy on-line process
- The value of technical assistance for Tribes is typically limited to 40 hours and may include, but is not limited to, renewable energy technology information, renewable resource information, energy efficiency techniques, project support, system performance modeling, policy information, design review, special studies, strategic energy planning, pre-feasibility transmission studies, and training.

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

DOE's Tribal Energy Program

REQUEST FOR TECHNICAL ASSISTANCE

CONTACT INFORMATION	
First & Last Name	
Tribe/Affiliation	
Title	
Address 1	
Address 2	State/Province
City	Zip Code
Phone	Fax
E-mail	

DESCRIPTION OF REQUESTED ASSISTANCE
(Typically limited to 40 hours)

Describe the technical scope of activities requested:

Identify the timeline of needed assistance, if applicable:

BACKGROUND INFORMATION

Provide background on your reservation (i.e., location and size), renewable energy resources, existing projects, and past efforts:

Return form to Lizana Pierce via e-mail at lizana.pierce@eo.doe.gov
or facsimile at (303) 275-4753

Complete Request Form On-line at the Tribal Energy Program Website



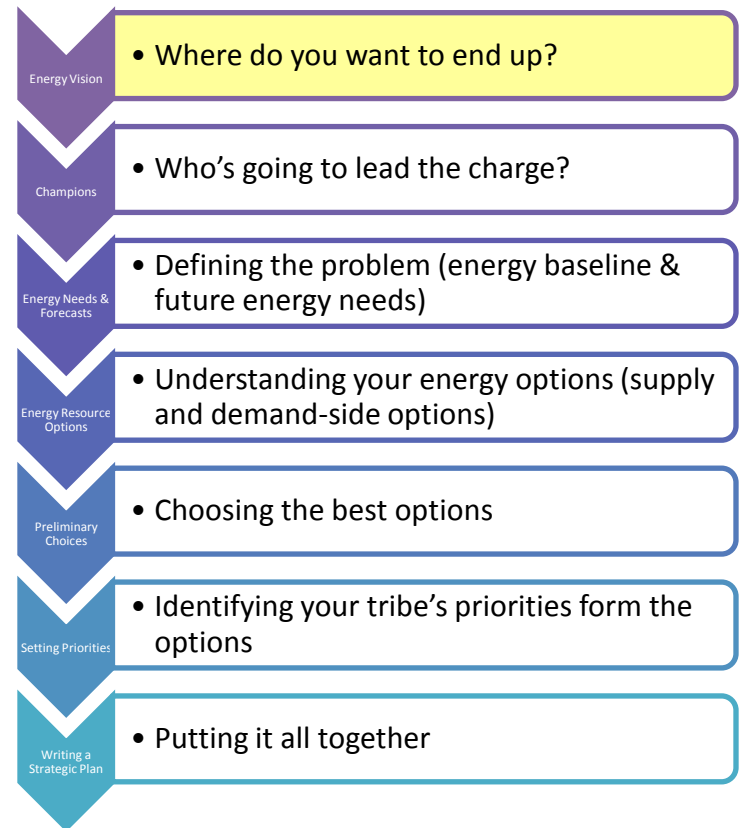
Technical Assistance

On-site workshop designed to assist tribal leaders and tribal staff in understanding their resources, identifying their options, and developing a viable road map to successful completion of the project.

- 1) Yankton Sioux Tribe (February 2014)
- 2) Delaware Tribe (September 2013)
- 3) Menominee Tribe (August 2013)
- 4) Klamath Tribes (July 2013)
- 5) Crow Creek Housing Authority (March 2013)
- 6) Fort Belknap Indian Community (June 2012)

**Additional Thirty-five (35) Strategic
Energy Planning Sessions
2006-2011**

Strategic Energy Planning



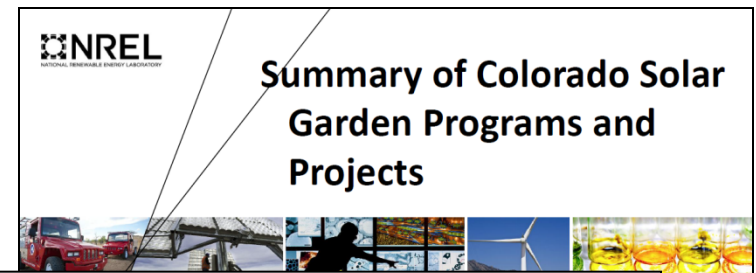
Technical Assistance

Project Development Support

Project development support consists of expert guidance and analysis that helps address specific barriers tribes face while developing a clean energy project.

Examples of project development technical assistance include:

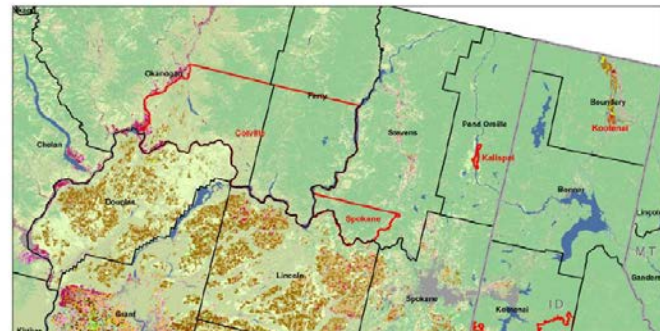
- Third-party independent reviews of transmission studies, financing structures, lease agreements, project reports, etc.
- Objective advice grounded in research and real-world experience on technologies
- Modeling and analysis (or assistance in using available modeling/analysis tools)
- Pre-feasibility transmission studies
- Interconnection agreement facilitation
- Economic evaluations
- System design reviews
- Other specific studies or analysis, upon request



Oilseed Crop Inventory for the Spokane Indian Tribe

Report prepared by Anelia Milbrandt, NREL
October 15, 2012

The Spokane Indian Tribe is located in eastern Washington State. The majority of the tribe's land is covered by evergreen forest with some pasture and shrubland (Figure 1). Cropland areas are located south and west of the tribe, illustrated by the mosaic pattern on the map. Various grains, legumes and orchards are grown in the area, as well as oilseeds.





Technical Assistance

Pre-feasibility Transmission Studies

- 1) Moapa Band of Paiutes (June 2009)
- 2) Utu Utu Gwaitu Paiute Tribe (Sept 2009)
- 3) Canoncito Band of Navajos, To'Hajiilee Chapter (March 2010)
- 4) Navajo Hopi Land Commission (May 2010)
- 5) Hualapai Tribe (July 2010)
- 6) Ute Mountain Ute Tribe (Feb 2011)
- 7) Chemehuevi Tribe (May 2013)
- 8) San Carlos Apache (May 2013)
- 9) Ione Band (November 2013)
- 10) San Ildefonso Pueblo (November 2013)
- 11) Nez Perce Tribe (December 2013)

Assessment of Electric Power Service Options, Including Solar Applications, for the Moapa Travel Center

Pre-Feasibility Assessment of Renewable Generation Applications, for NHLCO Paragon Ranch Solar

Pre-Feasibility Assessment of Renewable Generation Applications, For the Canoncito Band of Navajos (Tóhajiilee)

SAN ILDEFONSO PUEBLO



PRE-FEASIBILITY TRIBAL UTILITY REPORT
NOVEMBER 22, 2013

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

**Financial
Assistance**

*Success through
Government-to-
Government
Partnerships*

**Technical
Assistance**

*Leveraged through
Intergovernmental
Coordination*

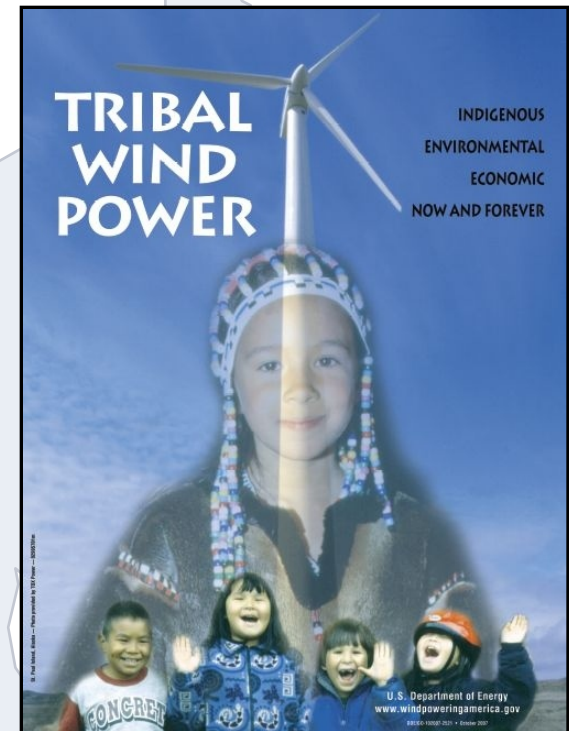
**Information &
Education**

*Leveraged with Intra-
governmental
Coordination*



Education & Training

- Annual Program Review
- National Workshops
- Tribe Specific or Regional Trainings
 - Upon Request and within available resources
- Student Internships
- On-line “Guide to Tribal Energy Development”
- On-line Short Courses (workshop material)
- Informational Resources (handbooks & guides)
- Webinars (real-time and archived)



Building Human Capacity in Indian Country



Annual Program Review

Unique Tribal Forum for Sharing and Learning

- Forum for Tribes to meet and learn from other each other and to share their successes
- Networking & learning opportunity
- Forty to fifty (40-50) Tribal energy projects presented
- Typically ~200 participants



Student Summer Internships

Applications

- Applications due each February
- 12 week internship at Sandia National Laboratories (NM)
- See TEP website for application form or “Join email list”

Immersion into Renewable Energy

- Interns gain hands-on experience on renewable energy systems
- Required to produce a research paper as part of the internship

Interns

- Twenty-nine (29) interns sponsored since 2002

Contact

- Sandra Begay-Campbell at (505) 844-5418 or skbegay@sandia.gov

**Student Papers & Testimonials Posted on
TEP Website**

Deadline Extended until March 28th

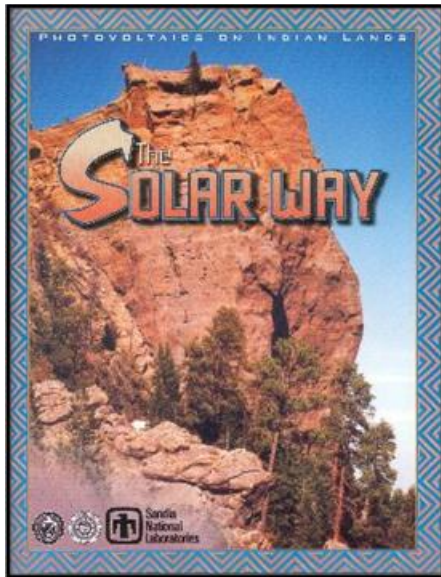


Deborah Tewa (certified electrician & solar installer) at Sandia's PV Laboratory (2002)



2008 Interns' participated in PV installation & training workshop (AZ-Hopi)

Tribal Energy Program



Information Resources



Informational Materials

Short Courses

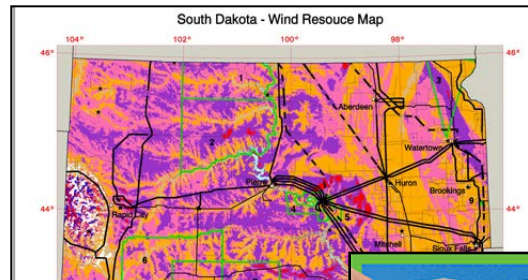
- Analysis & Economics
- Business & Financing
- Community Development
- Demand-side Options
- Renewable Technologies

Handbooks & Guides

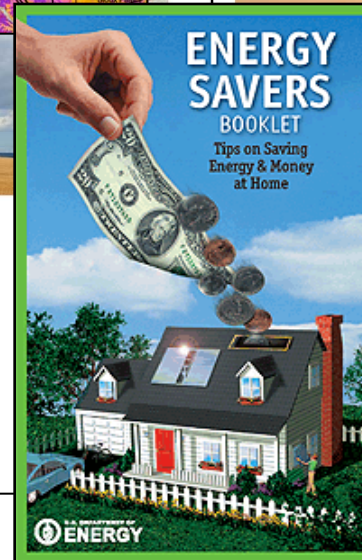
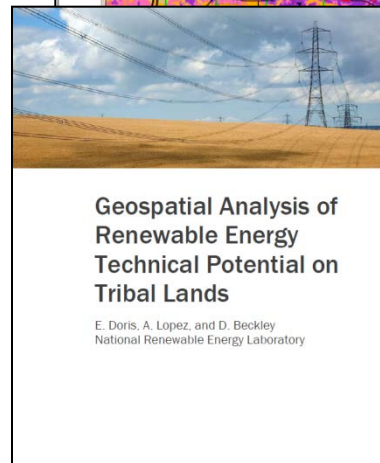
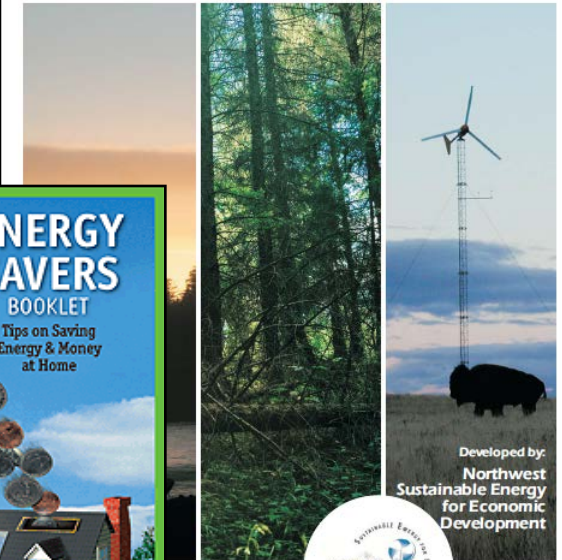
- A Guide: Energy Planning
- Energy Consumption and Renewable Energy Development on Indian Lands
- A Handbook: Renewable Energy in Indian Country

Tools & Models

- Resource Potential Maps
- Reservation Specific Wind Maps



Energy Planning: A Guide for Northwest Indian Tribes



All Material Posted on Program Website



Program Website

- Features
- Program Brochure
- Upcoming Events
- Short Courses
- Education & Training
- Funding Opportunities
- Projects on Tribal Lands
- Link to “Guide”
- Information Resources
- Join Email List
- Contacts

The screenshot shows the homepage of the Tribal Energy Program website. At the top, it features the U.S. Department of Energy logo and the text 'Energy Efficiency & Renewable Energy'. The main heading is 'Tribal Energy Program'. Below this is a navigation menu with links for HOME, ABOUT, PROJECTS, EDUCATION & TRAINING, CLEAN ENERGY DEVELOPMENT GUIDE, TECHNICAL ASSISTANCE, FINANCIAL OPPORTUNITIES, INFORMATION RESOURCES, and EVENTS. A search bar is located in the top right corner. The main content area includes a 'POPULAR LINKS' section with a list of links such as 'Learn about funding opportunities' and 'Get information on existing tribal energy projects'. There is also a 'FEATURES' section with icons and titles like 'New Projects Selected for Funding' and 'Funding Opportunities for Tribes'. A 'Subscribe to email updates' button is visible at the bottom left. On the right side, there are sections for 'EVENTS' and 'FEATURED PUBLICATIONS', each listing recent activities and documents.

Providing a Clearinghouse of Information

www.eere.energy.gov/tribalenergy



Program Website

Projects on Tribal Lands

- **Project Lists Sorted by**
 - Tribe
 - Award Year
 - Award Type
 - Technology

- **Project Map (List by State)**

- **Project Summaries**
 - Overview
 - Scope
 - Location
 - Status
 - Presentations
 - Final Reports
 - Tribal Contacts

The screenshot displays the EERE Tribal Energy Program website. The top navigation bar includes links for HOME, ABOUT, PROJECTS, EDUCATION & TRAINING, ENERGY DEVELOPMENT GUIDE, TECHNICAL ASSISTANCE, FINANCIAL OPPORTUNITIES, INFORMATION RESOURCES, and EVENTS. The main content area is titled "Projects on Tribal Lands" and includes a list of filters (By State, By Tribe, By Technology, By Award Year, By Award Type, Funding History) and a map of the United States. A detailed project summary is shown for the "Agua Caliente Band of Cahuilla Indians - 2005".

Agua Caliente Band of Cahuilla Indians - 2005

Project Description
The Agua Caliente Band of Cahuilla Indians will establish a comprehensive energy strategic plan that captures economic and environmental benefits while continuing to respect tribal cultural practices and traditions. Their goal is to understand their current and future energy consumption, and they will develop a strategic energy plan, including an action plan to clearly identify the energy options for the tribe. The project is anticipated to have a positive impact on the tribe; promote greater understanding of energy efficiency; establish partnerships with energy stakeholders, including electric and natural gas suppliers; and position the tribe to be influential with regional energy development.

Project Status
The project is complete. For details, see the final report (PDF 490 KB) and October 2006 (PDF 217 KB) and October 2006 (PDF 3.0 MB) presentations provide additional information. [Download Adobe Reader.](#)

Project Contact
Todd Hooks (760.883.1350)

Project Overview	
Tribe/Awardee:	Agua Caliente Band of Cahuilla Indians
Location:	Palm Springs, CA
Project Title:	Development of a Strategic Energy Plan
Type of Application:	First Steps
DOE Grant Number:	DE-PS36-05G015173
Project Amounts:	DOE: \$89,312 Awardee: \$15,393 Total: \$104,705
Project Status:	Completed More
Project Period of Performance:	Start: September 2005 End: August 2006

Assuring Visibility of Tribal Projects



“Guide to Tribal Energy Development”

Development Process

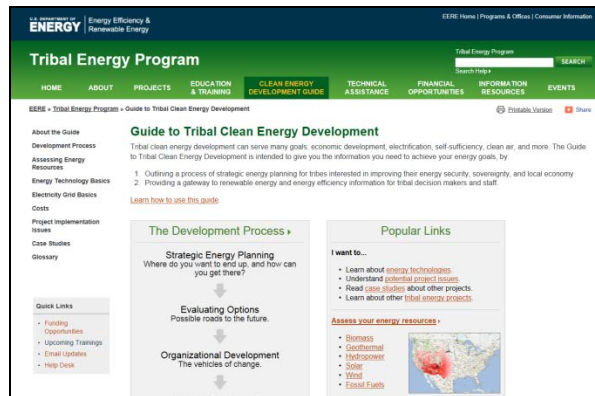
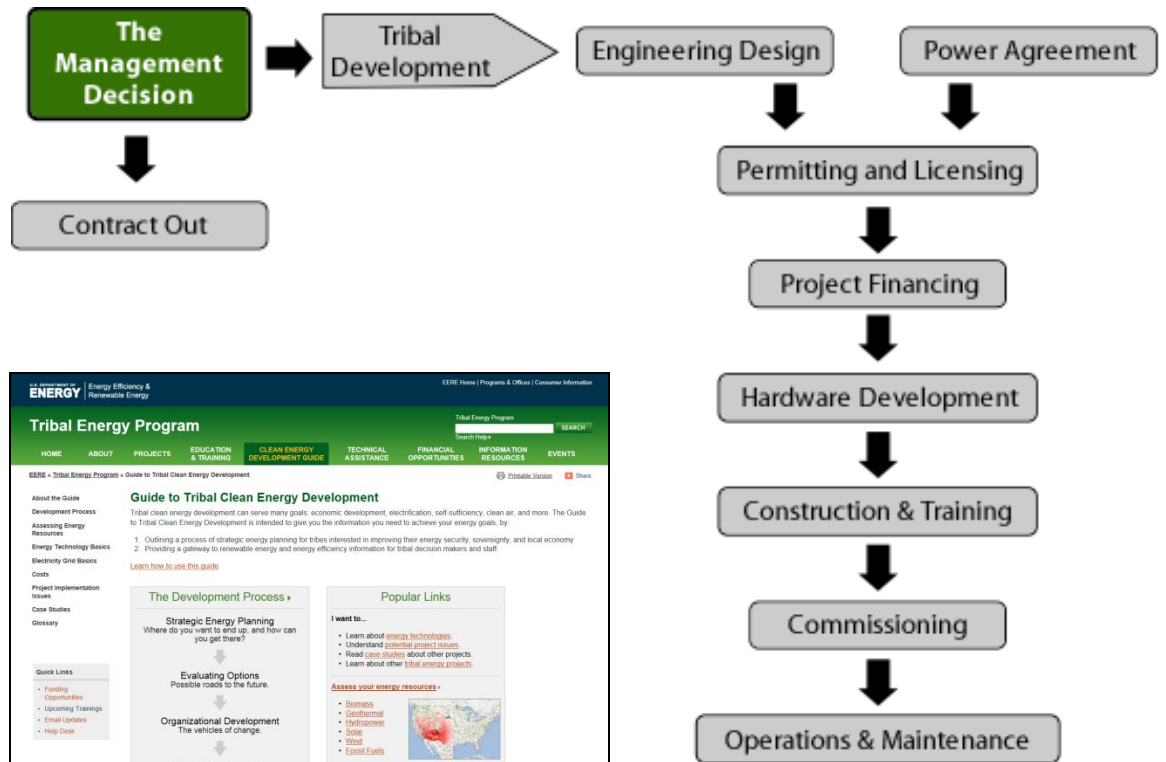
- Strategic Planning
- Options Analysis
- Organizational Development
- Project Development

Business & Financing

- Short Courses
- Handbooks

Resource Library

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



Providing a Clearinghouse of Information

www.eere.energy.gov/tribalenergy/guide



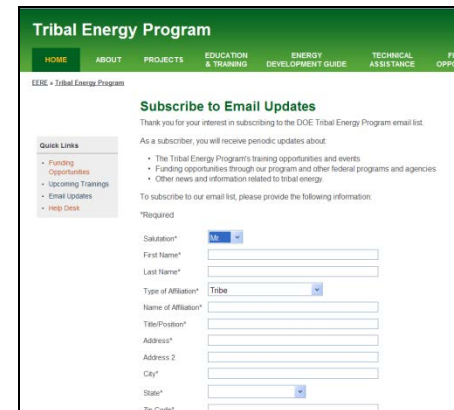
Email Notices

As subscribers, Tribes receive email newsletters on:

- Training opportunities and upcoming events
- Funding opportunities through our program and other federal programs and agencies
- Other news and information related to Tribal energy.

Simple On-line Subscription

- Over 2,900 subscribers
- 100's of email notices sent each year
- Distributed through other Tribal and Agency listservs – Expanding distribution
- On-line inquiries available



The screenshot shows the 'Tribal Energy Program' website with a navigation menu (HOME, ABOUT, PROJECTS, EDUCATION & TRAINING, ENERGY DEVELOPMENT GUIDE, TECHNICAL ASSISTANCE, FINANCIAL OPPORTUNITIES) and a 'Subscribe to Email Updates' form. The form includes a 'Quick Links' sidebar with links for Funding Opportunities, Upcoming Trainings, Email Updates, and Help Desk. The main form area contains a 'Subscribe to Email Updates' heading, a thank-you message, and a list of benefits: 'The Tribal Energy Program's training opportunities and events', 'Funding opportunities through our program and other federal programs and agencies', and 'Other news and information related to tribal energy'. Below this is a section for providing contact information, with a note that asterisks indicate required fields. The form fields include: Salutation* (dropdown menu), First Name*, Last Name*, Type of Affiliation* (dropdown menu with 'Tribe' selected), Name of Affiliation*, Title/Position*, Address*, Address 2, City*, State* (dropdown menu), and Zip Code*.

Join Our Email List
www.eere.energy.gov/tribalenergy



Assisting Tribes Achieve Their Energy Vision



Rosebud Sioux's (SD)
Little Soldier Turbine
First 750 kW Turbine on
Tribal Lands in the
Contiguous U.S.



Solar arrays on **Navajo** home (AZ)



Solar Installations at **Pueblo of Laguna's**
Majors Ranch (NM)

A 6kW PV System at **SIPI's** Science and
Technology Building (NM)



Jicarilla Apache Reservation PV
array on Dulce High School (NM)



Questions?

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