



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

DOE's Tribal Energy Program



Lizana K. Pierce, Project Manager

U.S. DOE, Golden Field Office
(303) 275-4727 or lizana.pierce@go.doe.gov
www.eere.energy.gov/tribalenergy



Department of Energy

**Advancing Energy and National Security through
Science, Technology and Environmental Stewardship**

Contributes to the future of the Nation by ensuring energy security, maintaining the safety, security and reliability of the nuclear weapons stockpile, cleaning up the environment from the legacy of the Cold War, and developing innovations in science and technology

Managed by Program Offices:

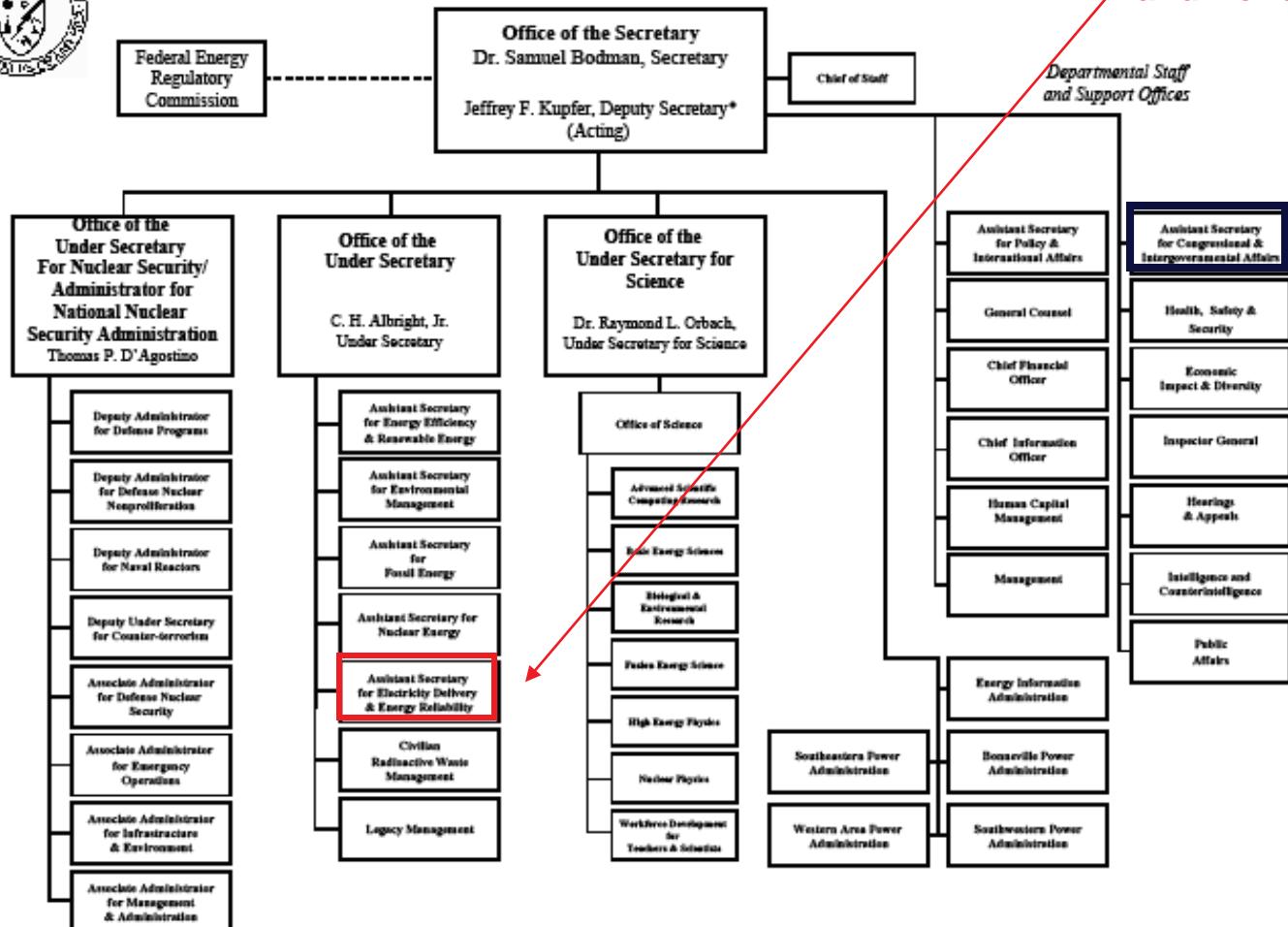
- Civilian Radioactive Waste Management
- Electricity Delivery and Energy Reliability
- Energy Efficiency & Renewable Energy
- Environmental Management
- Fossil Energy
- Legacy Management
- Nuclear Energy
- Science



Principally, a National Security Agency



DEPARTMENT OF ENERGY



Office of Energy Efficiency
and Renewable Energy

Congressional and
Intergovernmental
Affairs

* The Deputy Secretary also serves as the Chief Operating Officer

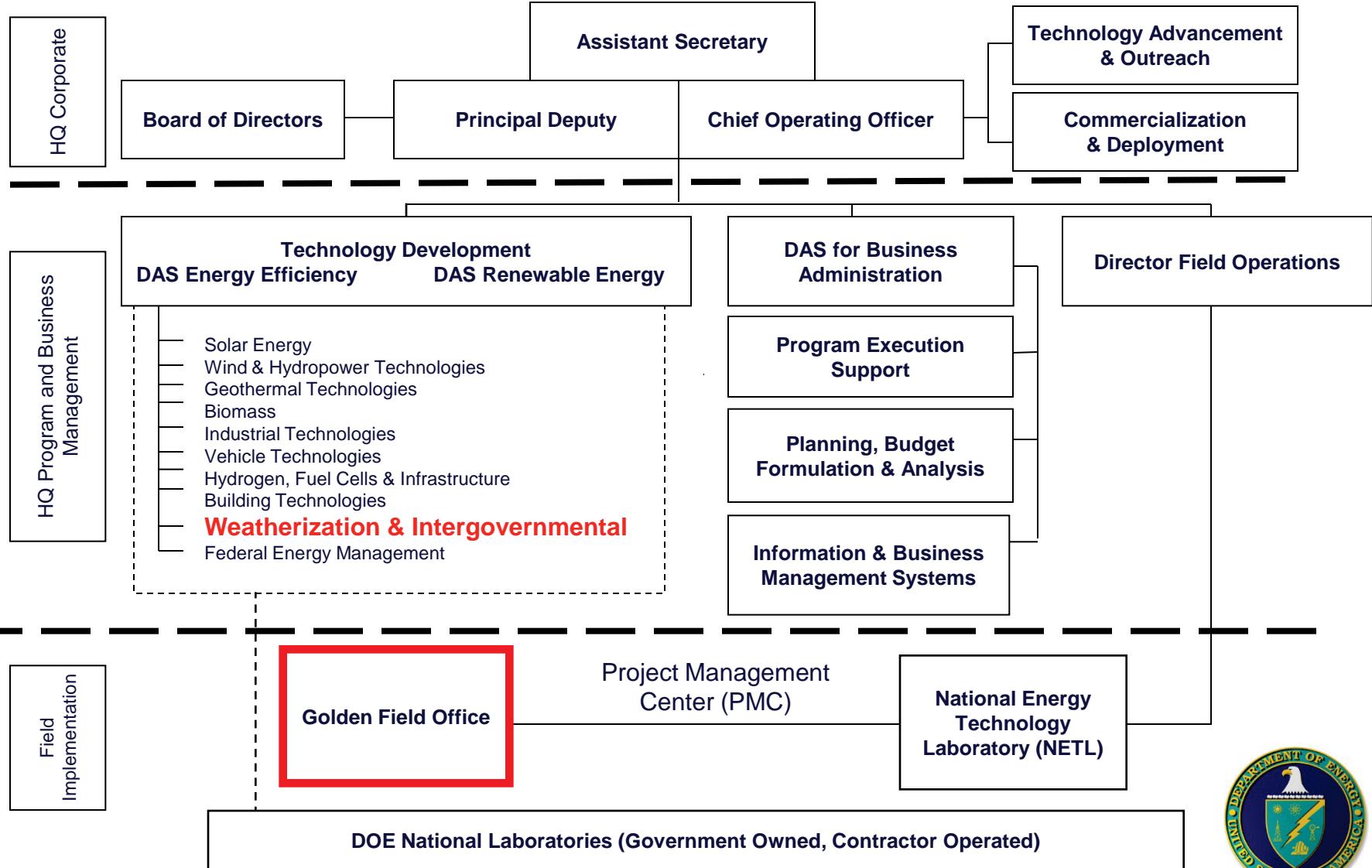
10 Mar 08



EPAc 2005 Directs the Establishment of an “Office of Indian Energy Policy and Programs”



Office of Energy Efficiency and Renewable Energy





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 (EPAct 2005)





DOE's Tribal Energy Program



Mission

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

- 1) Empower 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 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

Program Management

Thomas Sacco
DOE, Director

Field Implementation

Lizana Pierce
DOE, Project Manager



Technical Assistance
(DOE Laboratories)

Sandra Begay-Campbell
SNL

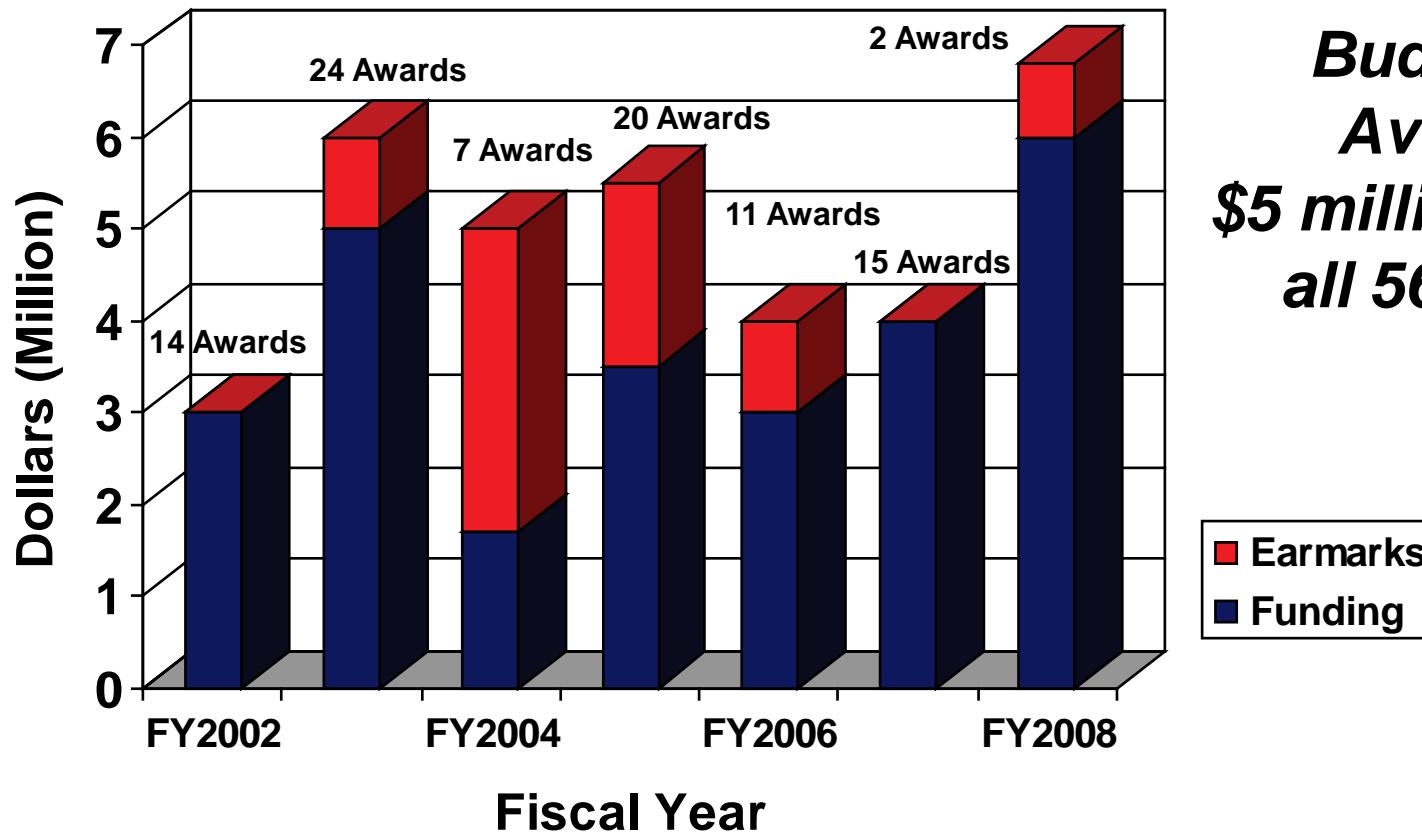
Roger Taylor
NREL





DOE's Tribal Energy Program

Funding History



*Budget has
Averaged
\$5 million/year for
all 564 Tribes*

*\$20 Million/ Year Authorized in Title V, Indian Energy,
EPAct 2005*





FY2009 Program Funding

	<i>FY2009*</i>	<i>FY2010</i>
<i>DOE FY2009 Request</i>	\$1.0	\$1.0
<i>Appropriated Funds</i>	\$6.0	\$10.0

* Amounts in Millions

“Funding reduction maintains core tribal energy assessment and technical assistance contributions. In FY 2008, program restructuring was initiated to develop finance mechanisms that streamline project development and increase access to private developers, thereby reducing the need for direct financial assistance to Tribes. Redirected funds enable EERE to accelerate critical national research priorities that benefit the Nation.”





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

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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 Tribe, Tribal Energy Resource Development Organization, or Tribal Consortium (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.

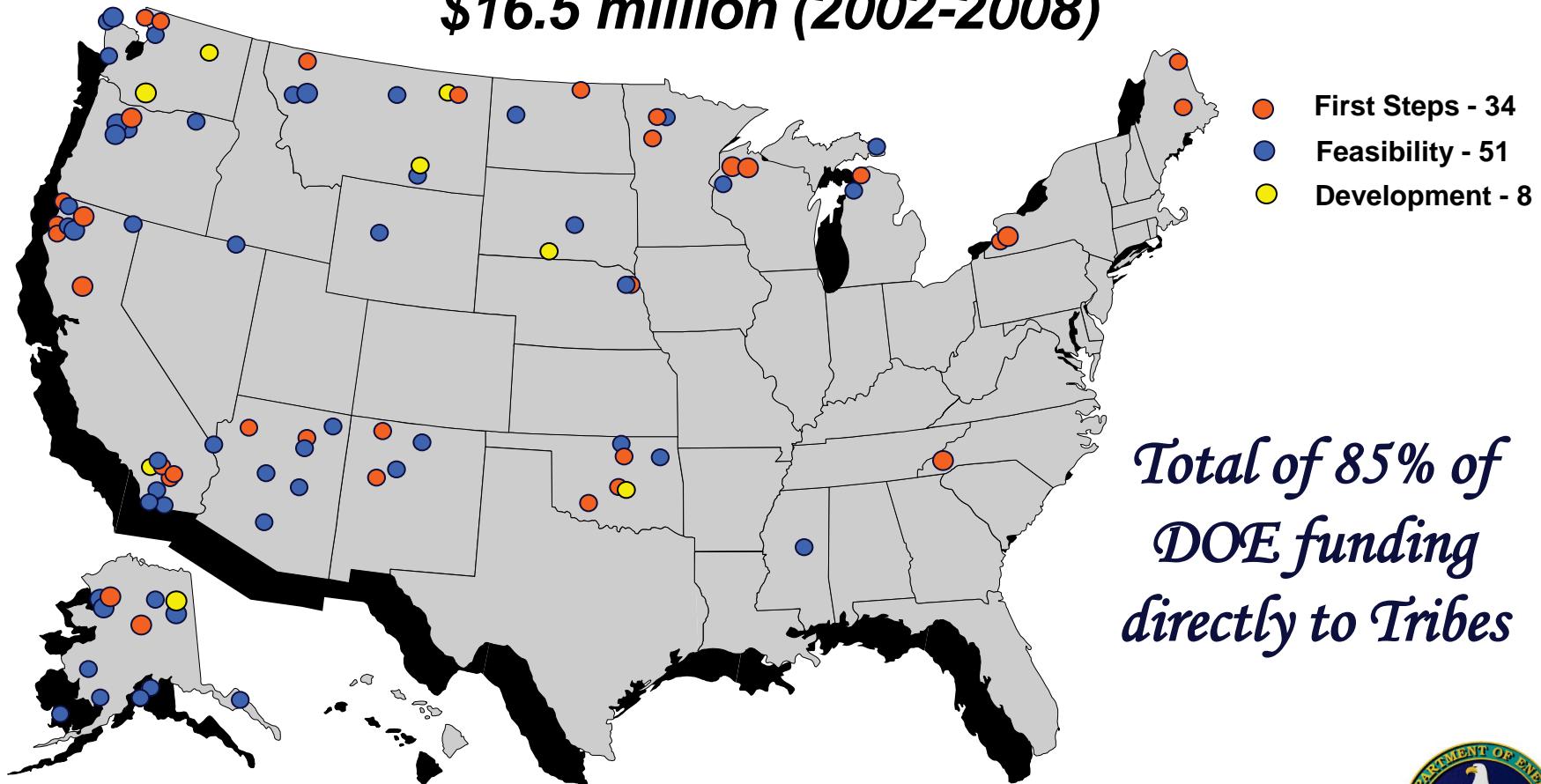
Funds Awarded through a Competitive Process





DOE's Tribal Energy Program

*DOE has funded 93 tribal energy projects totaling
\$16.5 million (2002-2008)*



*Total of 85% of
DOE funding
directly to Tribes*

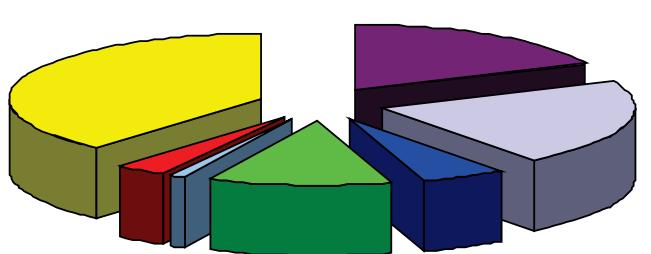
Tribes cost-shared \$6.4 million





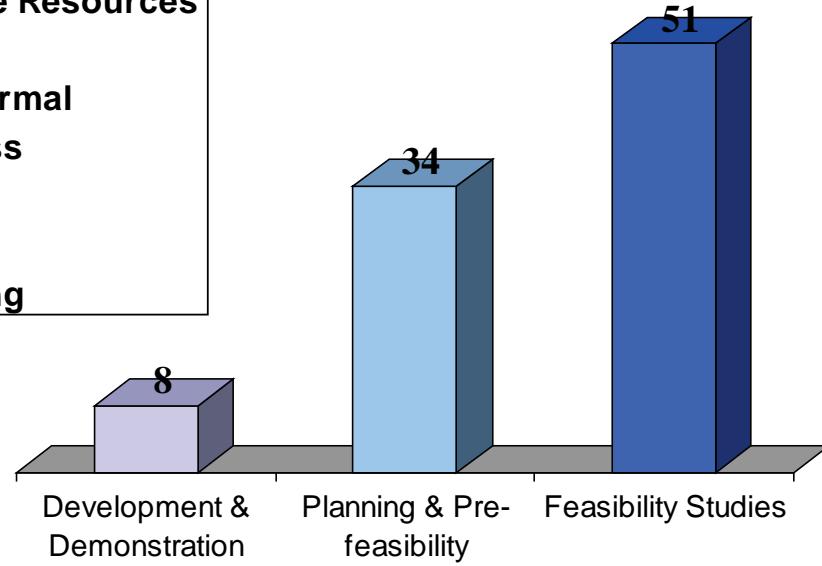
DOE's Tribal Energy Program Project Pipeline

Assisting Tribes Fulfill Their Energy Vision



- Multiple Resources
- Wind
- Geothermal
- Biomass
- Solar
- Hydro
- Planning

*Diversity of Renewable
Energy Technologies
being Pursued*



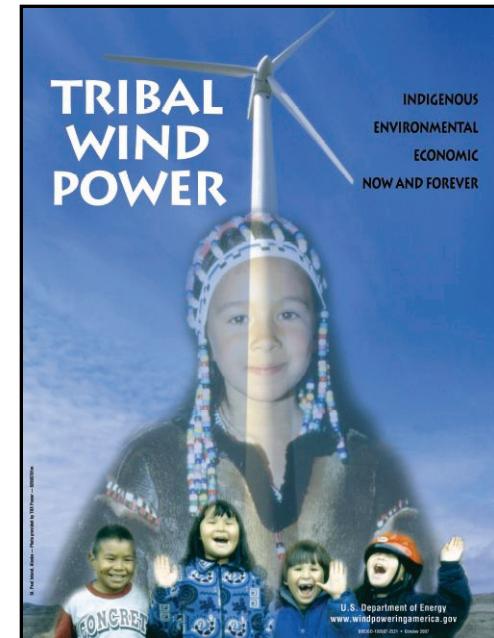


DOE's Tribal Energy Program

FY2009 Financial Assistance

Financial Assistance to Spur Deployment in Indian Country

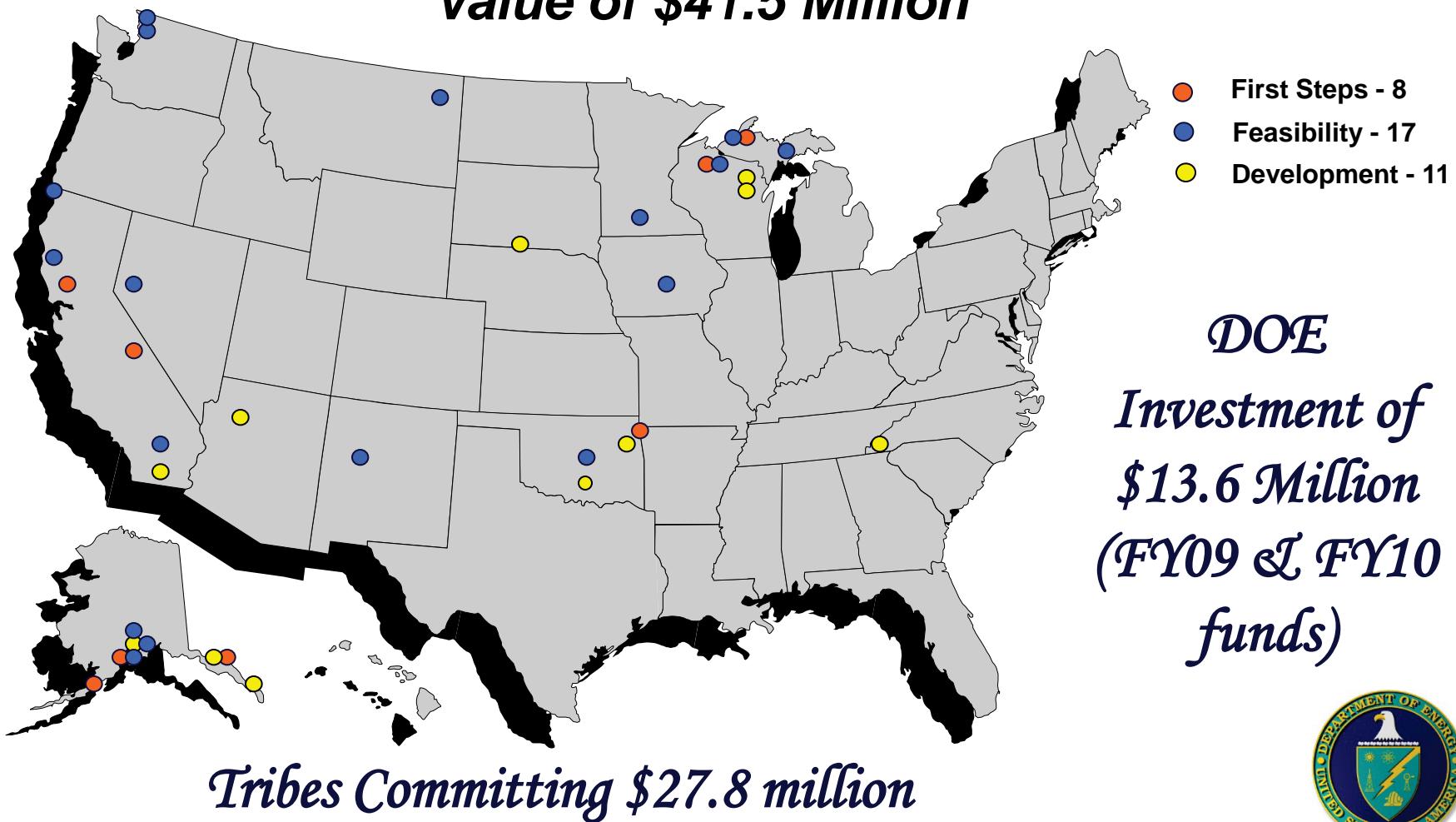
- **Assessing the Feasibility of Renewable Energy Development and Energy Efficiency Deployment on Tribal Lands**
 - Building Efficiency, plus renewable heating and cooling
 - Renewable Energy
- **Renewable Energy and Energy Efficiency Deployment on Tribal Lands**
 - Building Efficiency, plus renewable heating and cooling
 - Pre-construction activities for renewable energy projects
 - Construction of renewable energy projects for power production
- **First Steps Toward Tribal Weatherization – Human Capacity Development**





DOE's Tribal Energy Program

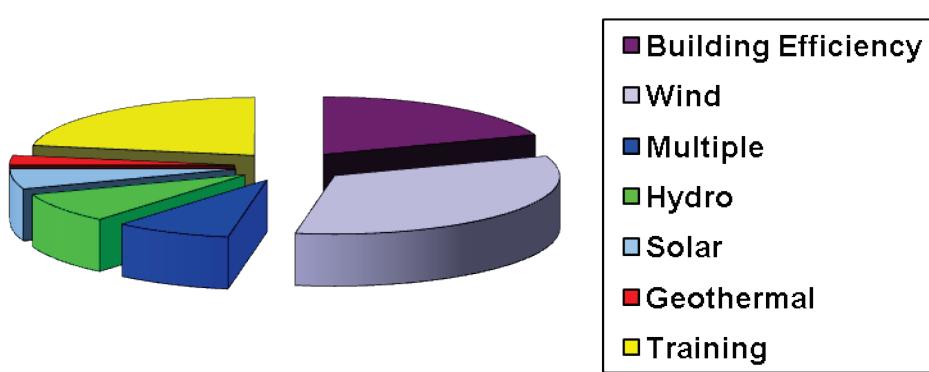
**Thirty-six (36) Tribal Energy Projects Selected for Award
Value of \$41.5 Million**



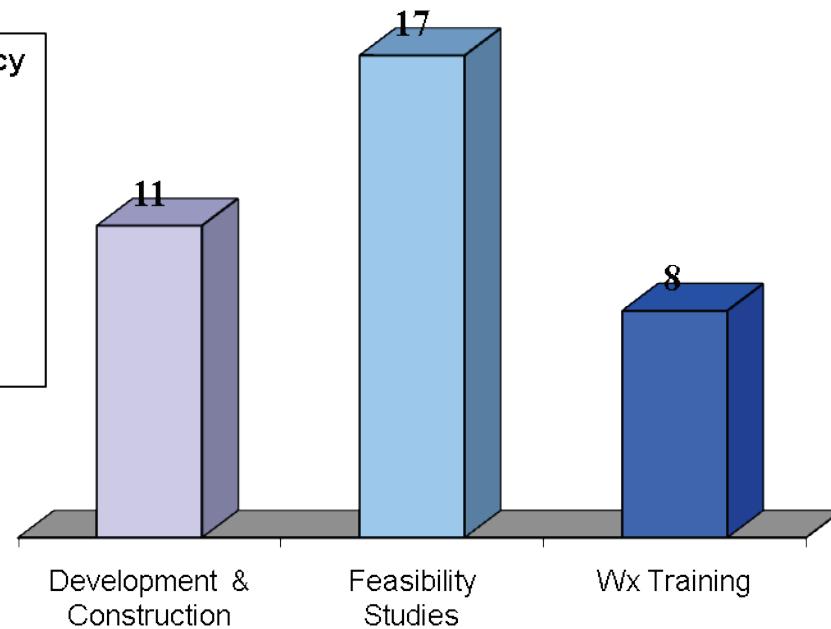


DOE's Tribal Energy Program New Project Pipeline

Using Indigenous Resources & Efficiency



*Includes Building
Efficiency and
Weatherization Training*





DOE's Tribal Energy Program

Three Pronged Approach

**Financial
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*Success through
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**Technical
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*Leveraged through
Intergovernmental
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Information & Education

*Leveraged with Intra-
governmental
Coordination*





DOE's Tribal Energy Program

Providing Technical Assistance

Technical Assistance

- Technology Advice
- Models and Tools
- Resource Maps
- Strategic Energy Planning
- Pre-Feasibility Transmission Studies
- Project Support
- Economic Evaluation
- Design Review
- Special Studies



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



Assisting Tribes with expertise from
DOE's National Laboratories





DOE's Tribal Energy Program

Technical Assistance Requests for Tribes

- The application process is quick and easy: complete the request form and forward it to tribal@go.doe.gov. Soon to be web-based.

- 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.

The form is titled "DOE's Tribal Energy Program REQUEST FOR TECHNICAL ASSISTANCE". It has three main sections: "CONTACT INFORMATION", "DESCRIPTION OF REQUESTED ASSISTANCE", and "BACKGROUND INFORMATION". The "CONTACT INFORMATION" section includes fields for First & Last Name, Tribe/Affiliation, Title, Address 1, Address 2 (State/Province), City, Zip Code, Phone, Fax, and E-mail. The "DESCRIPTION OF REQUESTED ASSISTANCE" section asks for a description of the technical scope of activities requested and the timeline of needed assistance. The "BACKGROUND INFORMATION" section asks for background on the reservation, renewable energy resources, existing projects, and past efforts. At the bottom, it says "Return form to Lizana Pierce via e-mail at lizana.pierce@go.doe.gov or facsimile at (303) 275-4753".

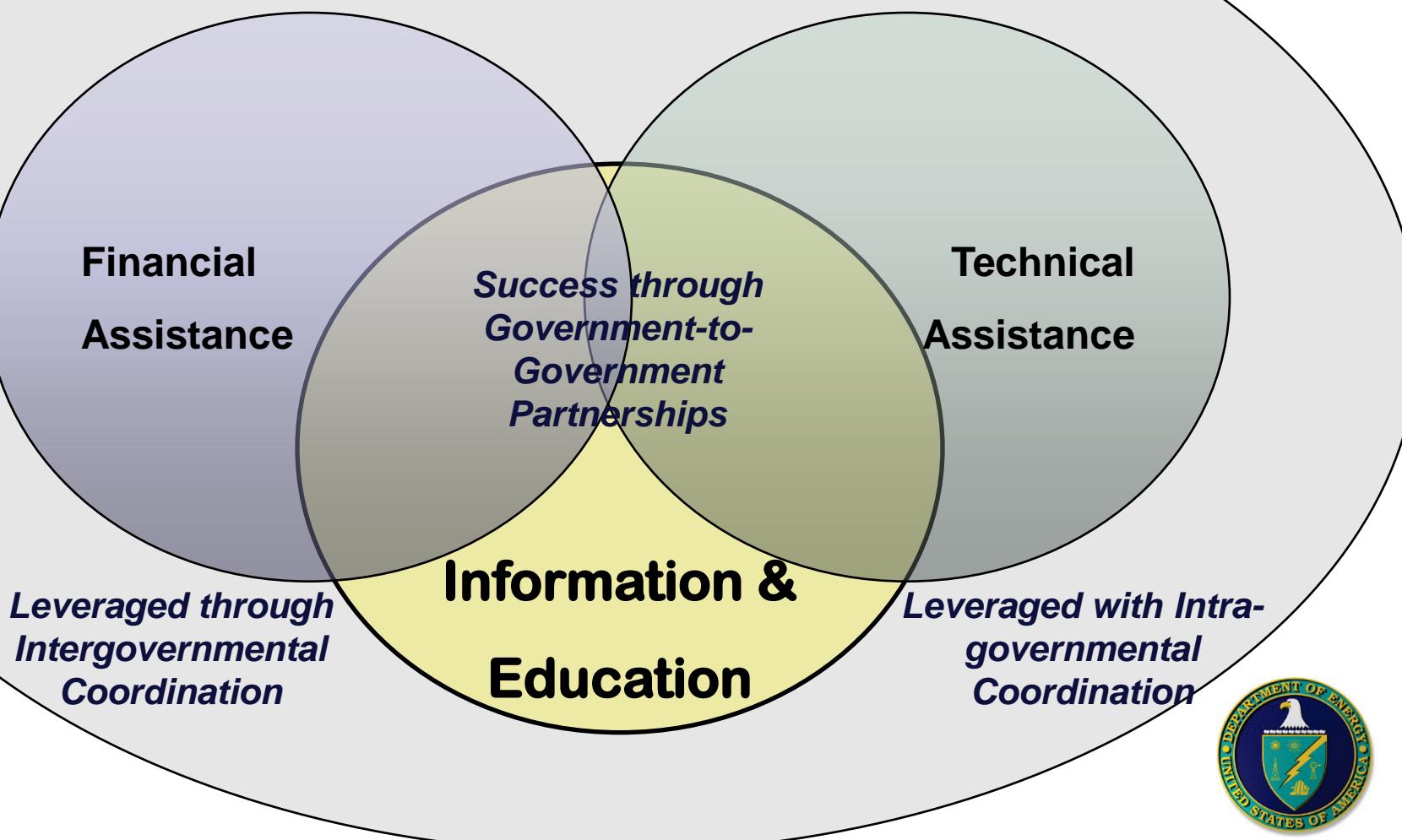
Technical Assistance Request Form at
www.eere.energy.gov/tribalenergy/tech_assistance.cfm





DOE's Tribal Energy Program

Three Pronged Approach





DOE's Tribal Energy Program

Annual Program Review

Unique Tribal Forum for Sharing and Learning

- Forum for Tribes to meet and learn from other Tribes pursuing energy sufficiency through renewable energy and energy efficiency, and share in their successes
- Networking & learning opportunity
- Tribal project presentations – lessons learned.
- Forty to fifty (40-50) tribal energy projects represented
- Typically 150-200 participants



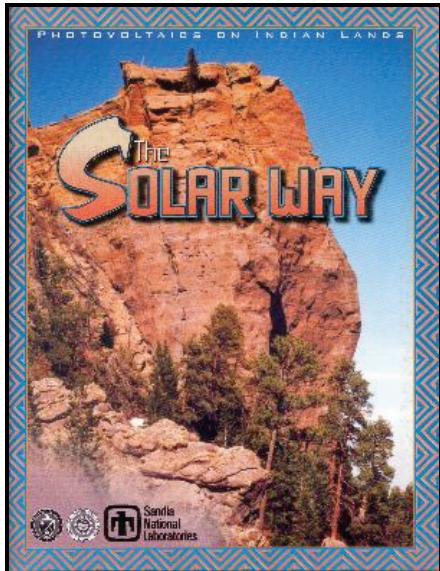
Held Annually in November (Denver, CO)





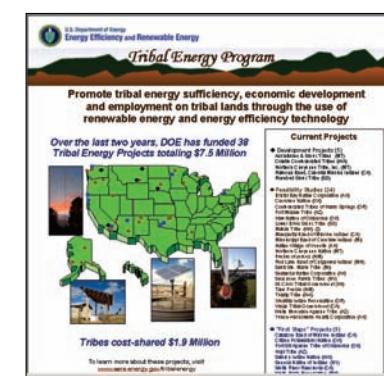
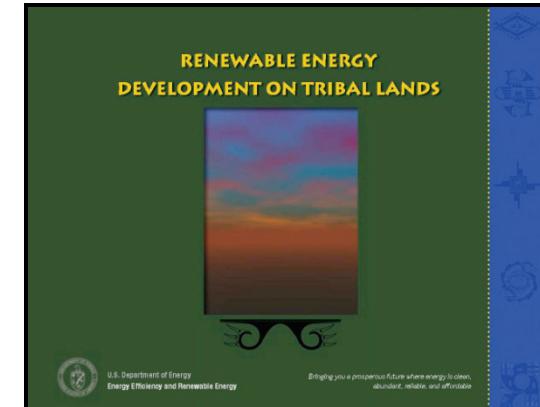
DOE's Tribal Energy Program

Information Resources



Tribal Energy Website

Guide to Tribal Energy Development



Join Our Email List

For Information on funding opportunities, workshops & training, and other tribal energy information

Email tribal@go.doe.gov





DOE's Tribal Energy Program

Student Internships – Applications Due February 19th for Summer 2010

Requirements

- Must be a U.S. citizen and a **Native American**, defined as a member of a federally recognized tribe, Alaska Village, or Alaska Corporation

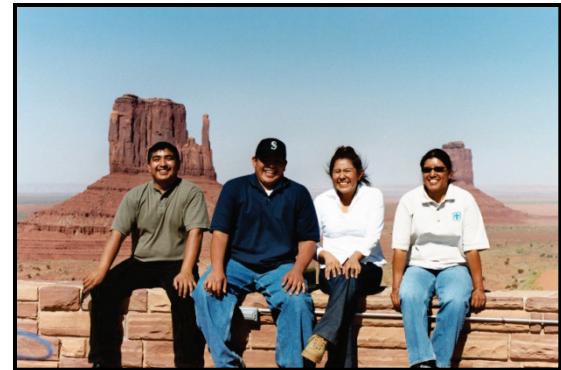
Application Process

- Applications due in February
- 12 week internships at Sandia National Laboratories (NM)
- Contact Sandra Begay-Campbell at (505) 844-5418 or skbegay@sandia.gov
- Application form posted on TEP website annually

Interns

- Seventeen (17) interns sponsored since 2002

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



Summer Interns on the Navajo Reservation (2003)

Summer Interns on a windy day (2004)





DOE's Tribal Energy Program

Assisting Tribes Achieve Their Energy Vision



First 750 kW Turbine on
Tribal Lands in the
Contiguous U.S.



Solar arrays on Navajo home



Solar Installations at Pueblo of Laguna's
Majors Ranch



Jicarilla Apache Reservation PV
array on Dulce High School





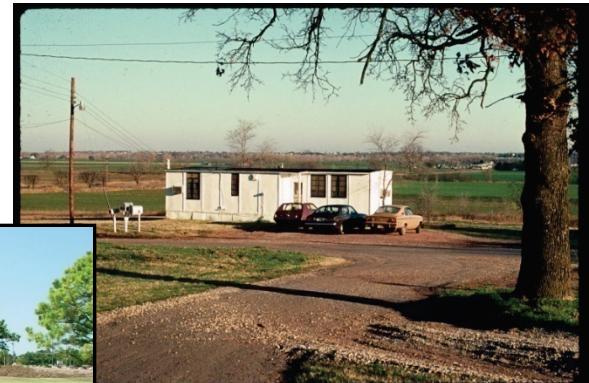
DOE's Tribal Energy Program

Energy Enabling Economic Development

Citizen Potawatomi Nation (Oklahoma)

- Committed to using the earth (geothermal ground source heat pumps) to heat and cool their hotel/casino and member homes.

Humble Beginnings (1970)





DOE's Tribal Energy Program

Alaska Native Accomplishments



"Powering Remote Northern Villages with the Midnight Sun"

The villages of Venetie and Arctic, located above the Arctic Circle in northeast Alaska, studied the feasibility of powering the villages using renewable solar energy during the season of the midnight sun.

Native Village of Venetie Elders have chosen to:

- Adopt renewable energy and efficiency; and
- Banish oil dependency

Worlds Northern most Tribally owned Solar tracker



Arctic Village Solar Arrays



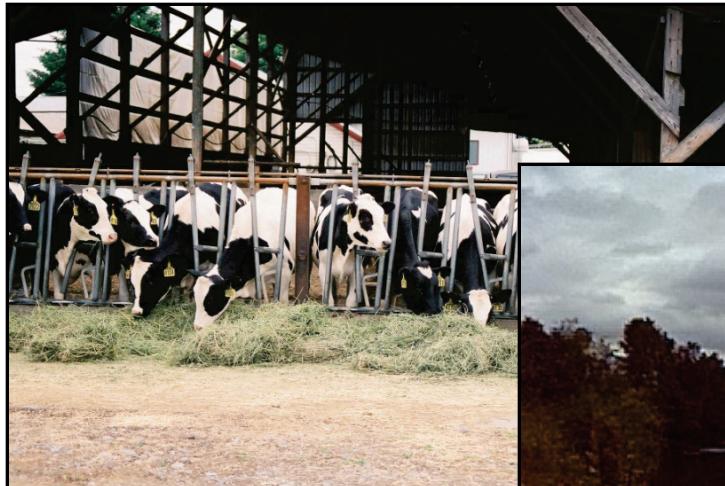
Solar System Maintenance in Alaska



DOE's Tribal Energy Program Success through Partnerships

Tulalip Tribes (Washington)

- Anaerobic digester to use dairy waste to reduce groundwater and salmon stream pollution from dairy operations - converting manure into electricity



Cooperative between:

- Sno/Sky Agricultural Alliance, a farmer's cooperative
- Quil Ceda Power, subsidiary of the Tulalip Tribes
- Northwest Chinook Recovery, non-profit organization to preserve, restore and enhance salmon habitat in the Puget Sound region





DOE's Tribal Energy Program

Making a Commitment to the Future

Augustine Band of Cahuilla Indians (California)

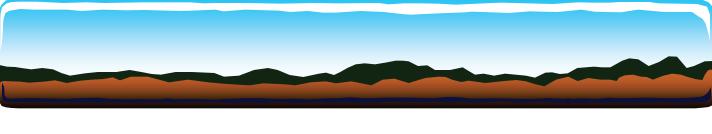
- Installed the “largest” (1.1 MW) solar electric system in Indian Country (February 2009)



“It's an important component of the tribe's effort to eliminate its overall energy footprint, and is consistent with our centuries-old commitment to living in harmony with nature,” Chairwoman Green said in a statement.

After receiving a DOE “First Steps” grant to develop an energy plan, the Tribe moved forward with the installation of this \$7 million system.





DOE's Tribal Energy Program

Alternative Energy Powering a Reservation

Ramona Band (California)

- Renewable power for the Tribe's ecotourism business – Planned as the first Reservation to be completely off-grid





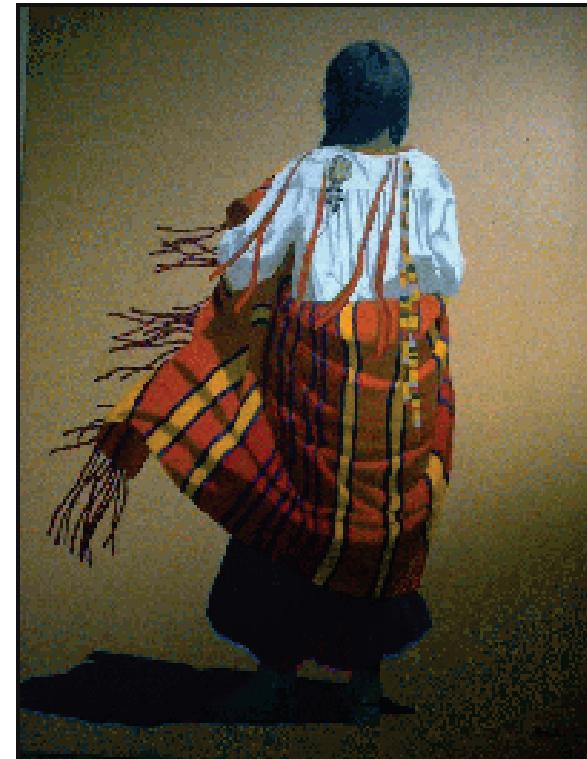
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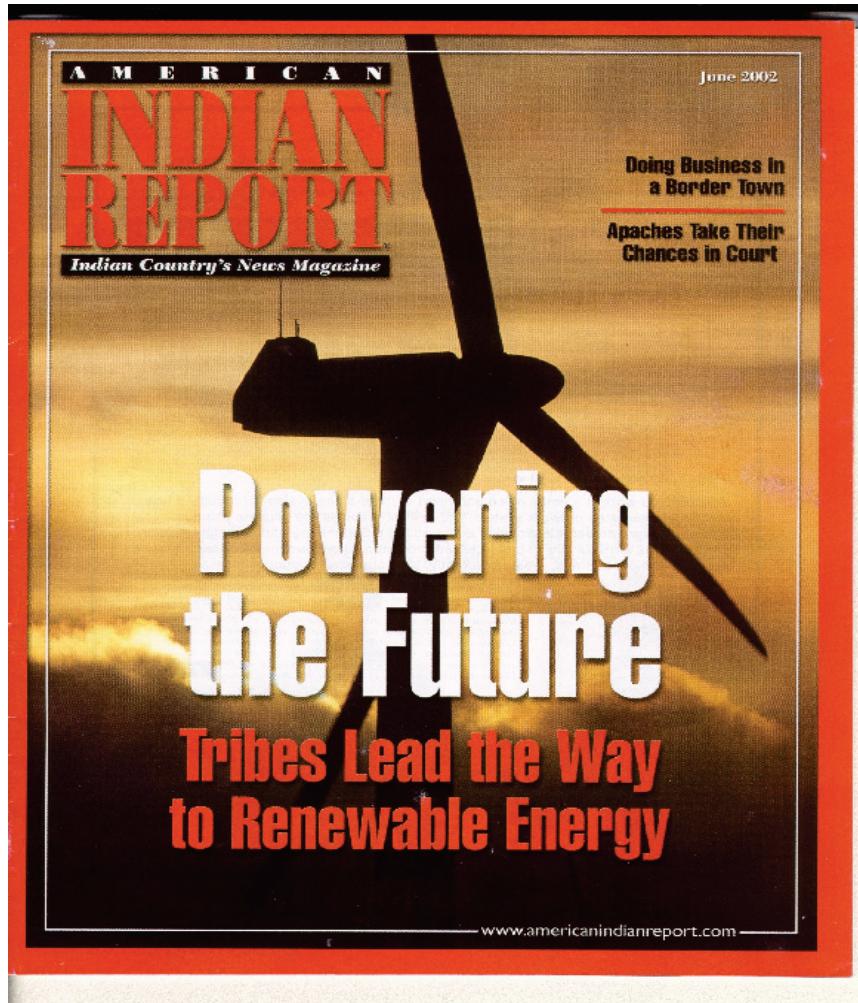
Contact Information

Lizana Pierce, Project Manager
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Golden Field Office
Telephone: (303) 275-4727
Fax: (303) 275-4753
Email: lizana.pierce@go.doe.gov

To receive periodic email information on funding opportunities, upcoming workshops and training, and other tribal energy information

“Join Our Email” list by sending your contact information to tribal@go.doe.gov





Questions

“Tribes Lead the Way to Renewable Energy”

American Indian Report
June 2002

