

DOE OFFICE OF INDIAN ENERGY

DOE Indian Energy Program Overview

Lizana Pierce, Senior Engineer and Deployment Supervisor



U.S. DEPARTMENT OF
ENERGY

Office of
Indian Energy

November 15, 2021

Deployment Supervisor – Lizana Pierce



Lizana Pierce

Senior Engineer, Deployment Supervisor, Office of Indian Energy Policy and Programs, Colorado

Lizana Pierce duty stationed in Colorado and serves as the principal engineering expert for the Director and Deputy Director on deployment programs. Mrs. Pierce is responsible for implementing the Office's Deployment Programs: Technical Assistance, Financial Assistance; and Education and Capacity Building. Ms. Pierce has 25 years of experience in energy technologies, project development, and management, and has dedicated 20 of those years to assisting Indian tribes in developing their energy resources. Ms. Pierce holds a Bachelor of Science degree in mechanical engineering from Colorado State University, and she pursued a Master's in Business Administration through the University of Northern Colorado.



Office of Indian Energy

The DOE Office of Indian Energy is charged by Congress under the **Indian Tribal Energy Development and Self Determination Act of 2005** (Title V of the Energy Policy Act of 2005) to “**provide, direct, foster, coordinate, and implement energy planning, education, management, conservation, and delivery programs that –**

- (1) **promote Indian tribal energy development, efficiency, and use;**
- (2) **reduce or stabilize energy costs;**
- (3) **enhance and strengthen Indian tribal energy and economic infrastructure relating to natural resource development and electrification; and**
- (4) **bring electrical power and service to Indian land and the homes of tribal members located on Indian lands or acquired, constructed, or improved (in whole or in part) with Federal funds.”**



Clockwise from top right: **Seneca Nation's** (NY) 1.5 MW wind turbine, **Fort Yukon's** (AK) combined heat and powerhouse, **Coeur d'Alene Tribe's** (ID) Benewah Market energy efficiency project, **Sokaogon Chippewa Community** (WI) Housing Project, and **Chippewa Cree Tribe's** (MT) Residential Solar.

Meet the Team

Office of Indian Energy

Comprised of 13 Federal employees and 9 contractors

The Director, Deputy Director, Senior Advisor, Budget Officer and Management Analyst (4 FTE's) and two (2) contractors located in Washington, DC

The Deployment Supervisor, Deployment Specialist, a Project Officer and two Engineers (5 FTE's) and seven (7) contractors' duty-stationed in Golden, Colorado. Financial assistance support received through the DOE Golden Field Office.

AK Senior Policy Advisor and two (2) Engineers duty-stationed in Alaska.



Deployment Program



Financial Assistance

We facilitate tribal energy project development through financial assistance (competitively awarded grants).



Technical Assistance

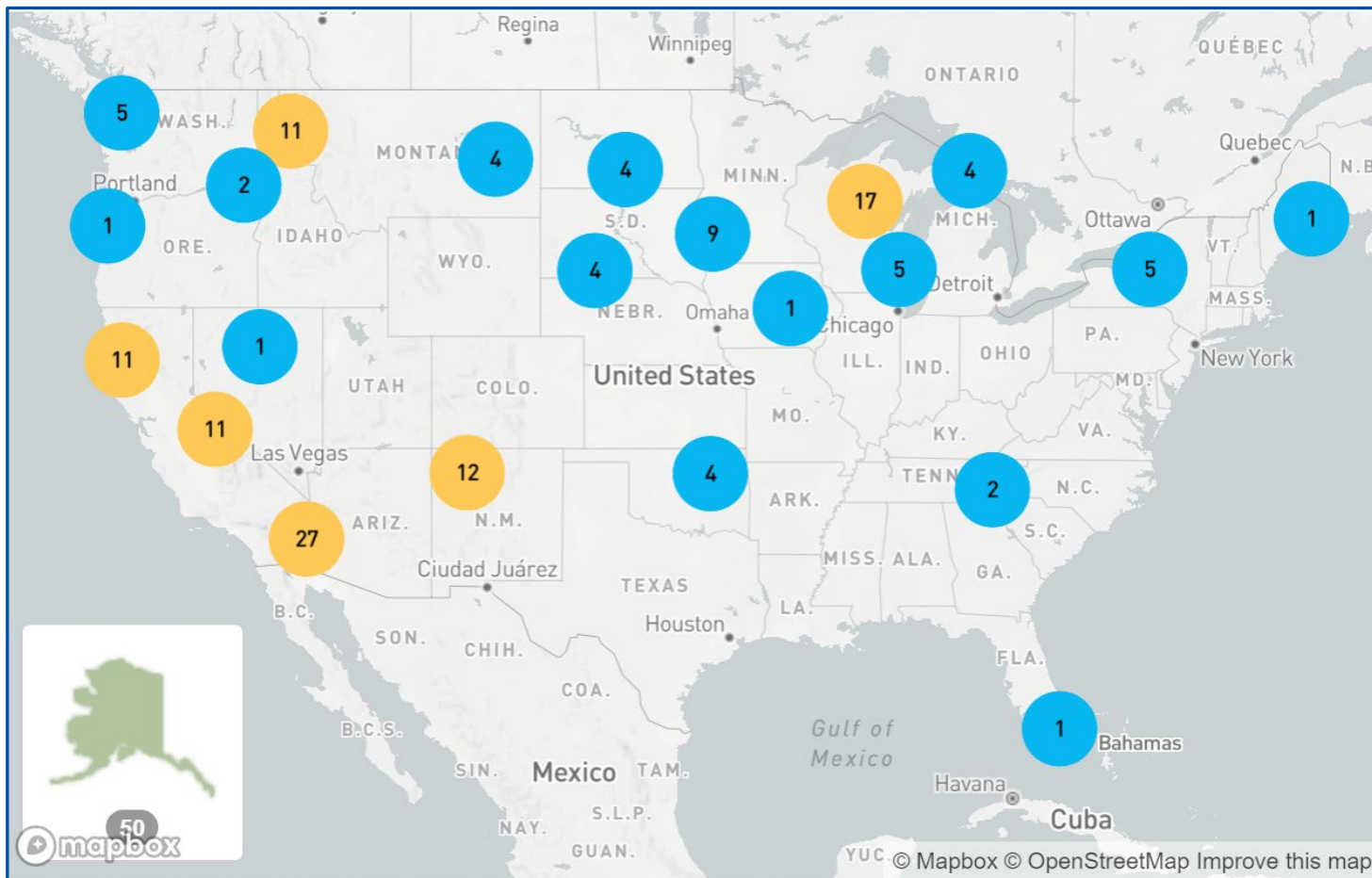
We provide federally recognized Indian tribes, including Alaska Native villages, regional and village corporations, tribal energy resource development organizations, and other tribal groups and communities, with technical assistance to advance tribal energy and infrastructure projects, at no charge.



Education and Capacity Building

Thorough regional workshops, webinars, and college student internships, we support tribal efforts to build internal capacity to develop energy projects and navigate energy markets.

Invested over \$100 million in more than 190 tribal energy projects valued at over \$180 million (2010-2020)



Financial Assistance – FY2020-FY2021

- In 2020, invested **\$5 million** in funding in **nine (9) tribal energy infrastructure projects, valued at over \$10 million.** Combined, these projects add up to over 3.7 megawatts of new installed generation that will power over 180 tribal buildings, with combined **lifetime savings of over \$24 million.**
- Provided **cost share reductions valued at \$14.8 million** to 27 grantees to provide some financial relief to Native communities struggling with COVID.



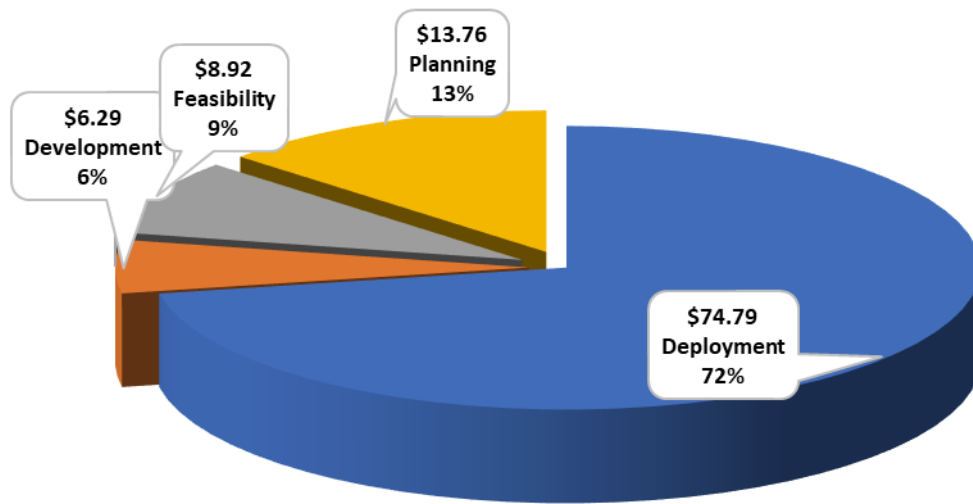
Financial Assistance – FY2020-FY2021 (Continued)

- In July 2021, an additional **\$12 million** was announced for **13 American Indian and Alaska Native communities** across the nation. Collectively, those selected projects are estimated to result in nearly 3.5 megawatts of clean energy generation and over 3.5 megawatt-hours of battery storage, **serving over 1,300 tribal buildings and saving those communities a combined \$1.8 million annually.**

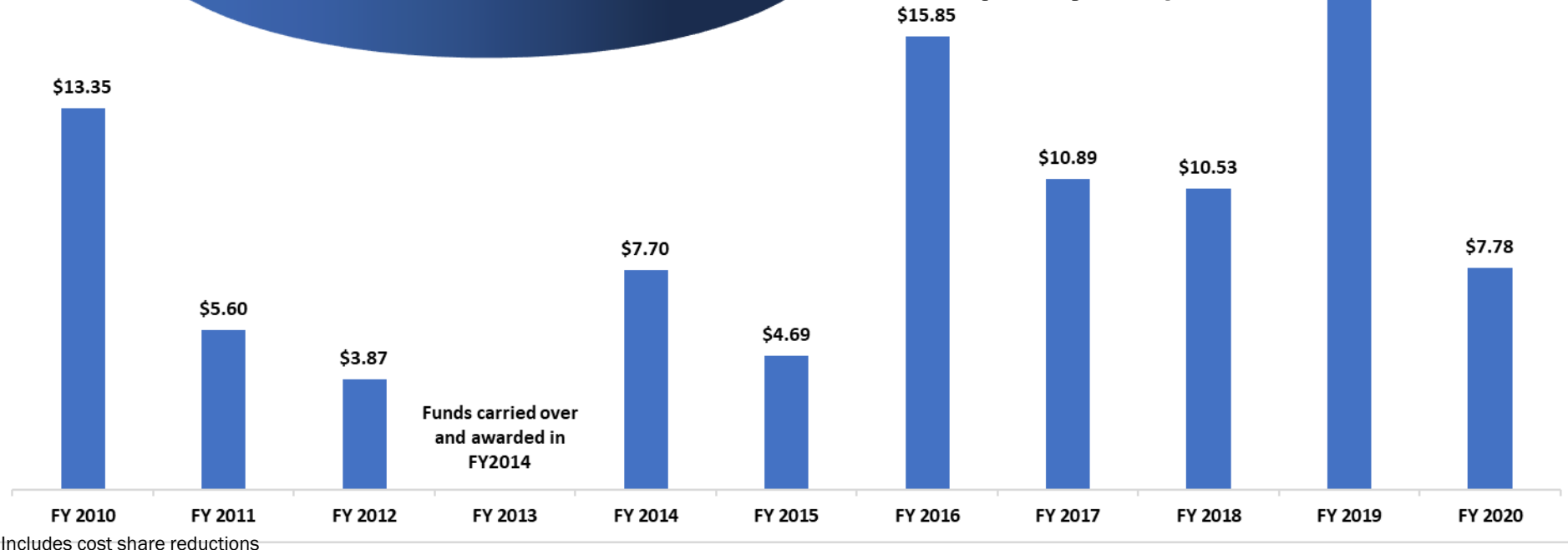
**Significant investments that
will yield tangible results**



Financial Assistance Investments (2010-2020)

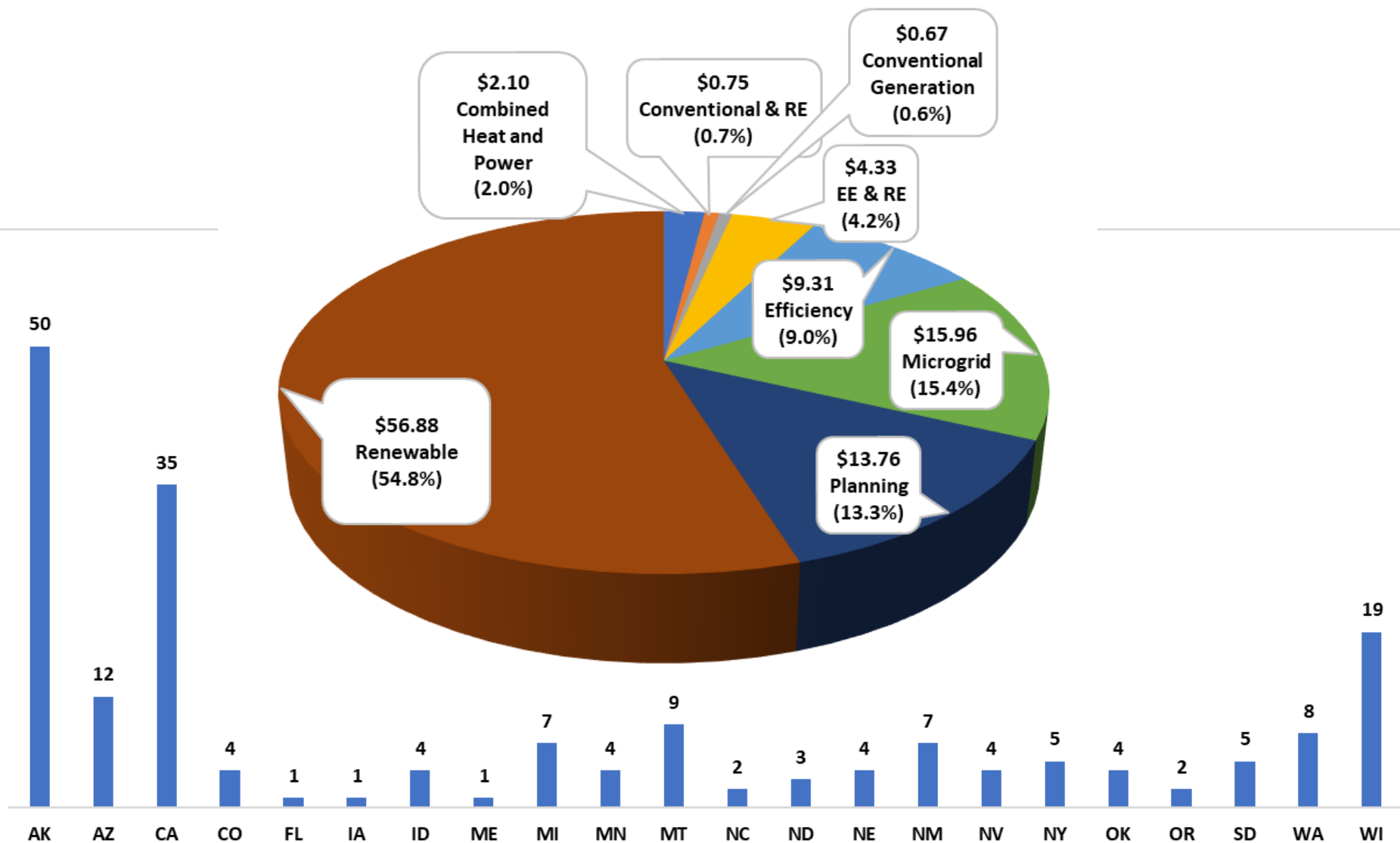



Over \$100 million
invested in more than
190 tribal energy
projects
(average of ~\$9.1M
per year)



Includes cost share reductions

Investments by Technology and State (2010-2020)





Invested nearly \$75 million in more than 90 tribal energy hardware installation projects valued at over \$140 million (2010-2020)

Tangible Results

- **More than 40 MW of New Generation Installed**
- **More than 7 MWh of Battery Storage Installed**
- **Over \$12.6 Million Saved Every Year**
- **Over \$275 Million Saved Over System Lifetimes**
- **\$3.68 Saved for Every DOE Dollar Invested**
- **Over 8,000 Tribal Buildings Affected**

Financial Assistance

Competitive Process (2010-2020)

- **17 Funding Opportunity Announcements (FOAs) issued**
(Includes FOA's issued in 2009 for award in 2010)
- **Accepted a total of 637 applications, valued at nearly \$667 million**
- **Funded nearly 31% of all applications received** (196 out of 637)
DOE average ~5 to 10%

All Funds Awarded through a Competitive Process

The Office of Indian Energy has primarily fulfilled the requirements under 42 U.S.C. § 7144e by providing cost shared federal funding to Indian tribes and tribal entities through competitive financial assistance awards.

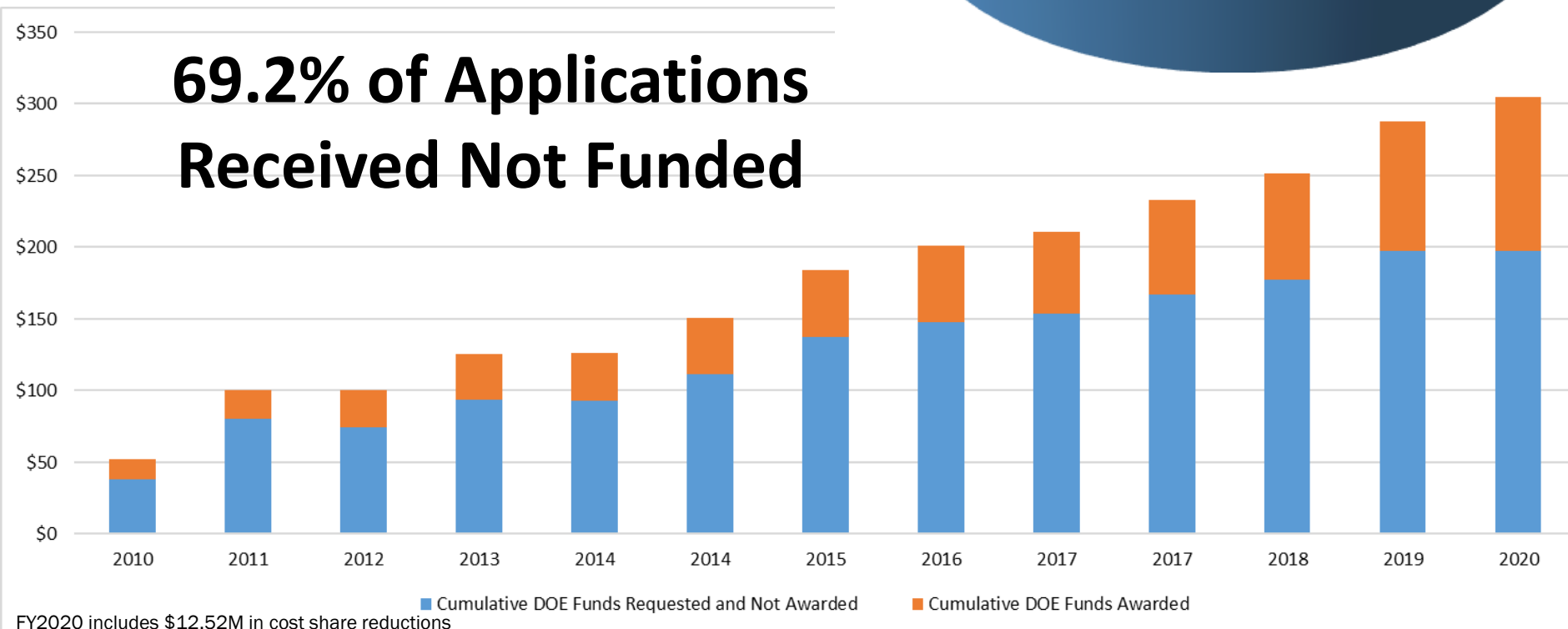
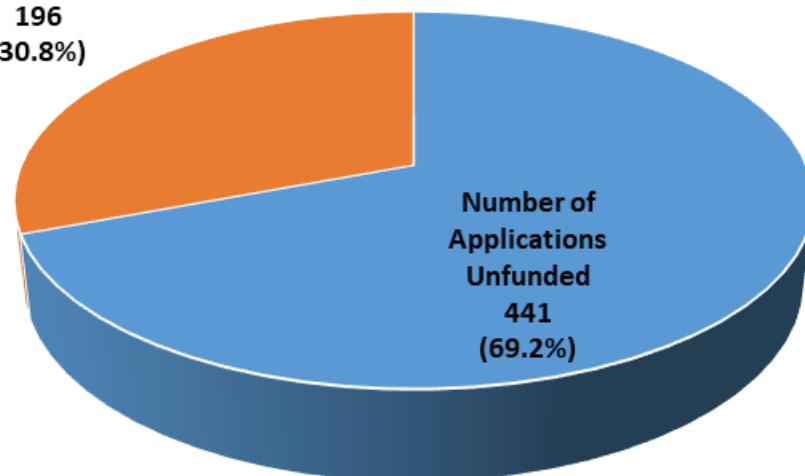
Financial Assistance

Nearly \$200M in
Unfunded Requests

69.2% of Applications
Received Not Funded

Applications Funded by Count

Number of
Applications
Awarded
196
(30.8%)



Tribal Energy Successes



Clockwise from top right: Ute Mountain Ute Tribe's (CO) 1 MW solar system; San Xavier (AZ) solar installation at their Education building (2021); Winnebago Tribe's (NE) solar installation; Igiugig Village's (AK) 35 kW RivGen system and energy storage microgrid.

Tribal Energy Successes



Clockwise from the right: Hughes Village (AK) 150 kW solar system (2018); Tolowa Dee-ni' Nations (OR) Fish Hatchery 114 kW solar project (2020); Flandreau Santee Sioux Tribe's (NE) Solar Installation (2020).

Tribal Energy Successes



Clockwise from top right: Fort Mojave Tribe and Aha Macav Power Services (AZ) 2.3 MW solar installation (2020); Blackfeet /Community College (MT) 53.2 kW solar installation (2021); Nuvista Kwethluk (AK) 670 kWh Energy Storage Project (2021)

Funding Resources

- **Current Funding Opportunities**
List of open tribal energy related funding opportunities from federal agencies and other sources
- **Ongoing Funding Opportunities**
Provides ongoing sources of funding including grants, loans, loan guarantees and other incentives across the Federal government
- **Past IE Funding Opportunities**
Provides information on prior Office of Indian Energy funding opportunities

<http://energy.gov/indianenergy>

Current Funding Opportunities

Office of Indian Energy Policy and Programs

Office of Indian Energy Policy and Programs » Funding » Current Funding Opportunities

Current funding opportunities from federal agencies and other entities for tribal energy projects development and deployment.

Also, see information about other ongoing funding opportunities and the Office of Indian Energy's past funding opportunities.

For other assistance, see technical assistance. For policies and financial incentives by state, visit DSIRE®.

CLOSE DATE	ORGANIZATION
9/30/21	DOE
10/19/2021	EDA
10/05/2021	EPA
10/18/2021	DOC

Ongoing Funding Opportunities

Office of Indian Energy Policy and Programs » Funding » Ongoing Funding Opportunities

This table provides information on funding, financing, and incentives for tribal energy development and deployment from the U.S. Department of Energy (DOE) and other federal agencies and entities.

Also, see information about current funding opportunities and the Office of Indian Energy's past funding opportunities.

For other assistance, see technical assistance. For policies and financial incentives by state, visit DSIRE®.

Search:

Type of Assistance

- ☐ Grants
- ☐ Loan and loan guarantee programs
- ☐ Tax credits

SEARCH RESULTS

Showing 1 to 10 of 41 entries

PROGRAM	AGENCY	DESCRIPTION	TYPE OF ASSISTANCE	ELIGIBILITY
Weatherization Assistance Program	Department of Energy: Energy Efficiency and Renewable Energy	Enables low-income families to permanently reduce their energy bills by making their homes more energy efficient.	Grants	Federally recognized Tribes and tribal governments; Alaska Native and tribal corporations; Alaska Native villages; Tribal universities, utilities, and other organized tribal groups; State recognized-only Tribes; Tribal universities, utilities, and other organized tribal groups; Tribal nonprofit organizations (501-C(3)); Tribal energy resource development organizations
Indian Land Tenure Foundation Grantoff	Indian Land Tenure Foundation	Provides grants for land-related initiatives in education, cultural awareness, economic opportunity and legal reform.	Grants	Indian tribes (including Alaska Native Regional Corporations) and Tribal Energy Resource Development Organizations
Alaska Funding Opportunity Announcements	Department of Health and Human Services: ACF/Administration for Native Americans	Support locally determined projects designed to reduce or eliminate community problems and achieve community goals.	Grants	Federally recognized Tribes and tribal governments; Alaska Native and tribal corporations; Alaska Native villages; Tribal universities, utilities, and other organized tribal groups; State recognized-only Tribes; Tribal universities, utilities, and other organized tribal groups; Tribal nonprofit organizations (501-C(3)); Tribal energy resource development organizations
Energy and Mineral	Department of the Interior: The Office of	Provides an opportunity to receive financial assistance to realize the energy and	Grants	Federally recognized Tribes and tribal governments; Alaska Native and tribal



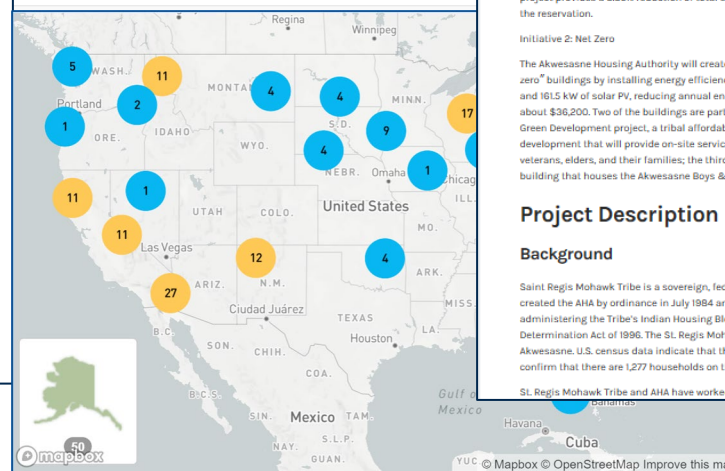
Tribal Energy Investment Transparency

Online Tribal Energy Projects Database

- Project Map (Interactive Map)
- Project Database (Sortable)
- Project Successes
- Project Summaries
 - Annual Presentations
 - Final Reports

Show 10 entries

Project	Tribal	State	Year
Agua Caliente Band of Cahuilla Indians - 2010 Project	Agua Caliente Band of Cahuilla Indians	California	2010
Agua Caliente Band of Cahuilla Indians - 2012 Project	Agua Caliente Band of Cahuilla Indians	California	2012
Agua Caliente Band of Cahuilla Indians-2015 Project	Agua Caliente Band of Cahuilla Indians	California	2015
Ahtna Intertribal Resource Commission - 2016 Project	Ahtna Intertribal Resource Commission	Alaska	2016
Akiachak Native Community - 2017 Project	Akiachak Native Community	Alaska	2017
Akwesasne Housing Authority on behalf of St. Regis Mohawk Tribe - 2016 Project	Akwesasne Housing Authority	New York	2016



PROJECT SUCCESSES

Can Solar Work in Alaska? Hughes Village Says Yes.

The Native Village of Hughes just installed the bones of a 120-kilowatt solar photovoltaic system that will cut diesel use and costs.

FEBRUARY 6, 2019

The Confederated Tribes of the Umatilla Indian Reservation Trap the Sun to Offset Energy Costs

The Tribe turned a strip of its land in Oregon into nearly \$12,000 in annual energy cost savings.

AUGUST 27, 2018

Pala Band of Mission Indians Sees Savings from Solar-Powered Fire Station, Looks Ahead to Continued Energy Development

The Tribe has turned to renewable energy as a means of lowering energy costs and gaining independence from the grid.

JUNE 8, 2018

Community Solar to Meet 100% of Energy Costs for New Mexico Tribe

A DOE co-funded 1-megawatt community solar array will offset the cost of the entire energy load of Picuris Pueblo.

JANUARY 11, 2018

Akwesasne Housing Authority on behalf of St. Regis Mohawk Tribe – 2016 Project

Office of Indian Energy Policy and Programs

Home • Akwesasne Housing Authority on behalf of St. Regis Mohawk Tribe – 2016 Project

Summary

Initiative 1: Go Solar

Under the Community-Scale Akwesasne Housing Authority (AHA) Go Solar Initiative, the St. Regis Mohawk AHA will install approximately 614.74 kilowatts (kW) of solar photovoltaic (PV) systems in Franklin County, New York, to serve 159 housing-related buildings on the Tribe's reservation. The ground-mounted PV systems will be installed on a 25-acre parcel owned by the Tribe, and the generated electrical power will be utilized under National Grid's net metering programs to offset energy use and costs for AHA's buildings and tribal members' residences.

This project will serve 5% of the total tribal community's residential energy load and 4% of the total electrical energy usage including governmental and commercial buildings. When considering all fuels used on the reservation, the project provides a 3.35% reduction of total energy load on the reservation.

Initiative 2: Net Zero

The Akwesasne Housing Authority will create three "net-zero" buildings by installing energy efficiency measures and 161.5 kW of solar PV, reducing annual energy costs by about \$36,200. Two of the buildings are part of the Sunrise Green Development project, a tribal affordable housing development that will provide on-site services to tribal veterans, elders, and their families; the third is an existing building that houses the Akwesasne Boys & Girls Club.

Project Description

Background

St. Regis Mohawk Tribe is a sovereign, federally acknowledged Indian tribe. The Tribal Council created the AHA by ordinance in July 1984 and has designated the AHA as its agency for purposes of administering the Tribe's Indian Housing Block Grant under the Native American Housing and Self-Determination Act of 1996. The St. Regis Mohawk Reservation is also known by its Mohawk name Akwesasne. U.S. census data indicate that the total population is 2,919, and U.S. Post Office data confirm that there are 1,277 households on the reservation.

St. Regis Mohawk Tribe and AHA have worked together to develop a 10-Year Tribal Strategic Energy

Project Overview

Tribe/Awardee

Akwesasne Housing Authority

Location

Hogansburg, NY

Project Title

Community-Scale AHA Go Solar Initiative and Net Zero Initiative

Type of Application

Deployment

DOE Grant Number

DE-EE0000038

Project Amounts

DOE: \$1,500,000

Awardee: \$1,837,831

Total: \$3,337,831

Project Status

See project status

Project Period of Performance

Start: July 2016

End: June 2019

Technical Assistance

The goal of technical assistance is to **address a specific challenge or fulfill a need that is essential** to a current project's successful implementation.

The intended result of this technical assistance is a **tangible product or specific deliverable** designed to help move a project forward.

<http://energy.gov/indianenergy>

“This is government money well spent. This assistance is **helping our people afford to live in the village**. Thank you!”

Types of Technical Assistance

Technical Analysis



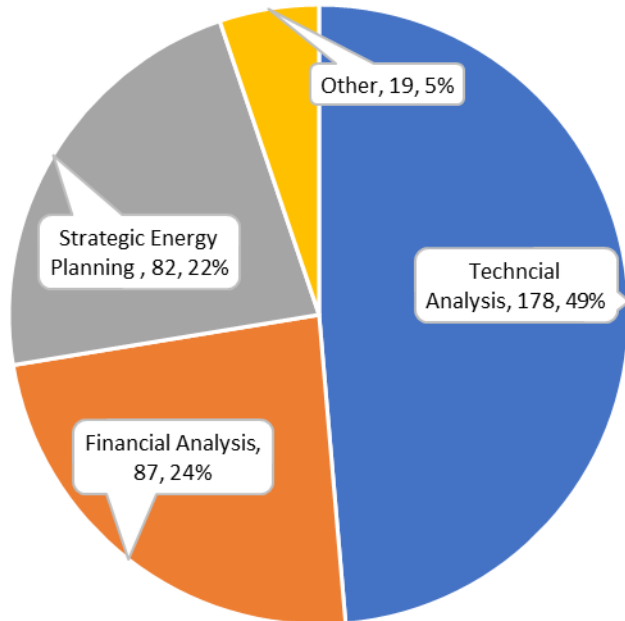
Financial Analysis



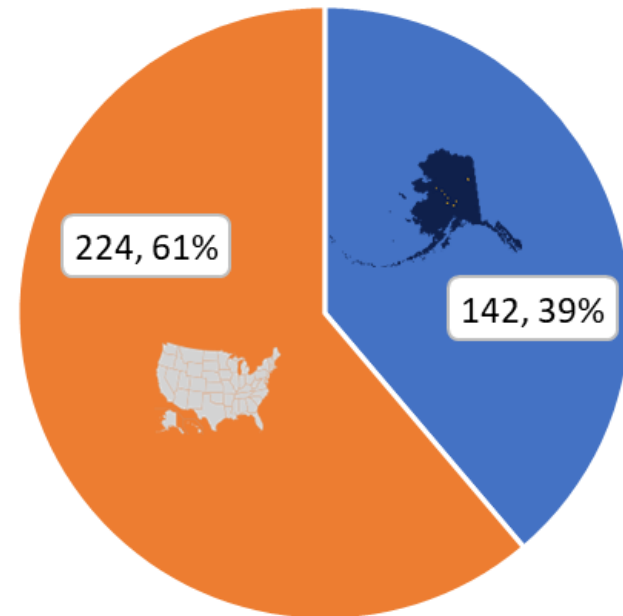
Strategic Energy Planning

Completed Technical Assistance Requests (2010-2020)

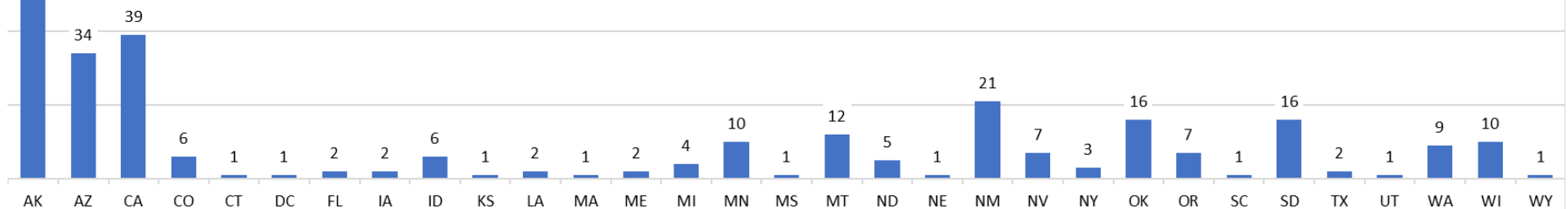
Topic Areas of Completed Technical Assistance Requests (366) (2010-2020)



Geographic Distribution Completed Technical Assistance (366) (2010-2020)



Completed Technical Assistance Requests (366) By State (2010-2020)



Total Technical Assistance Requests (2010-2020)

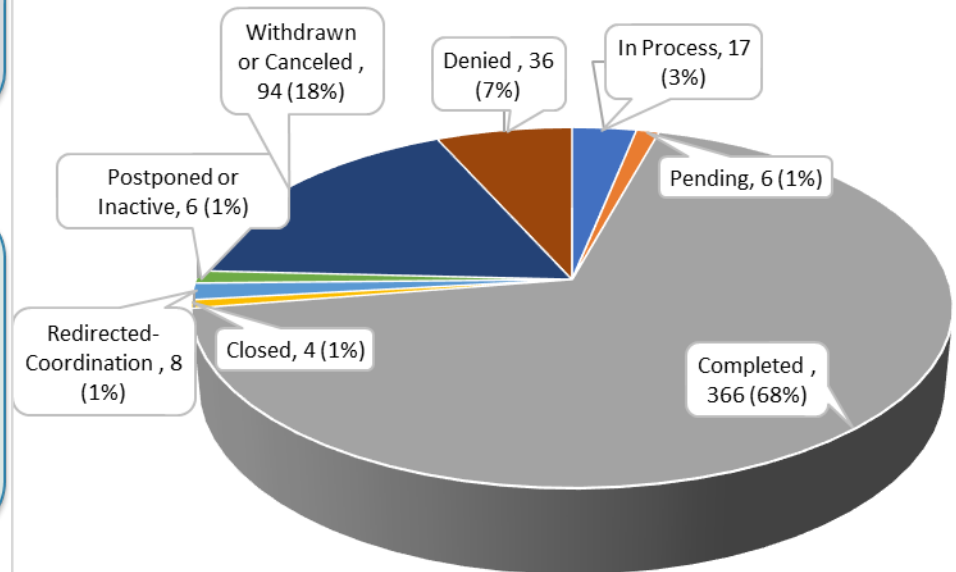
This is government money well spent. This assistance is helping our people afford to live in the village. Thank you!

"This was perfect assistance. NREL and AEA helped us find the problems and correct them. Thank you for your help."

"This was so good for us! We are saving more money now so we can buy more gas to go hunting and fishing."

"The workshop was very good. We knew we had energy resources but not how many! This also helped us understand how to better plan for our future energy needs."

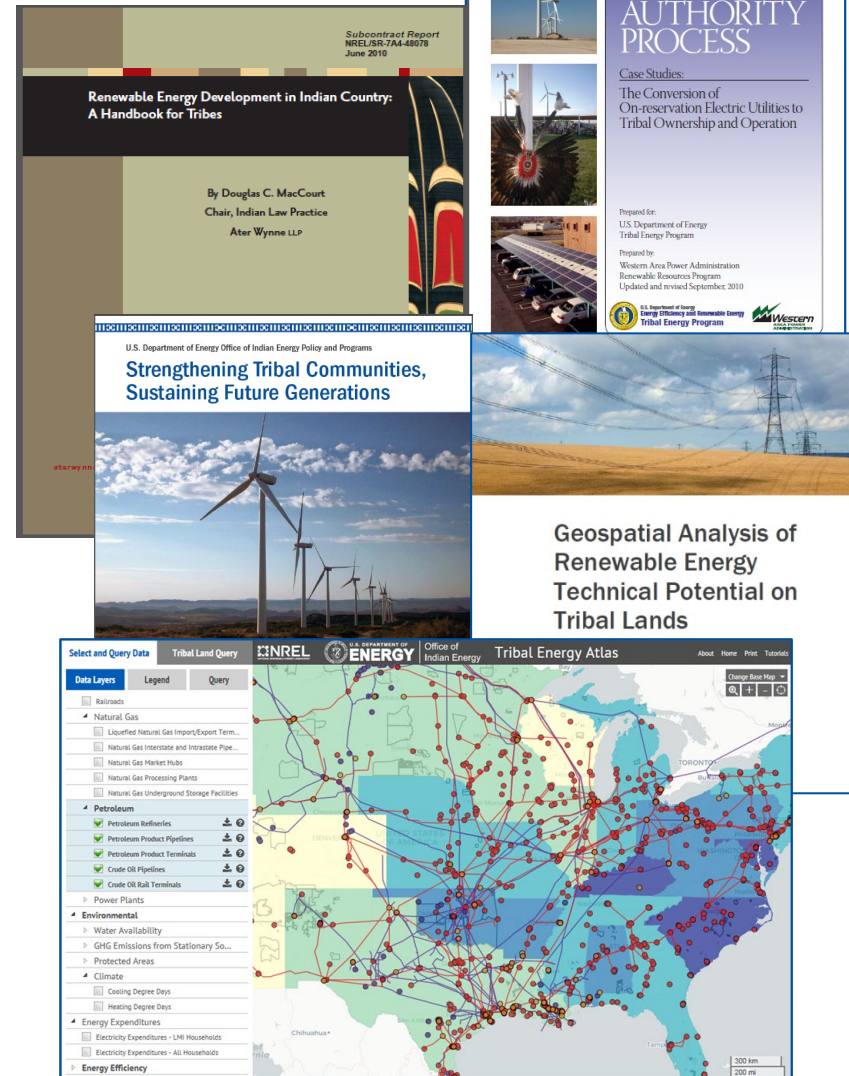
**Technical Assistance Requests
Received 537 (2010-2020)**



Informational Resources

- **Information Resources**
 - **Energy Resource Library**
publications, websites, videos, and more.
 - **Curriculum Foundational and Advanced Courses**
Educational webinars
- **Workshops & Webinars**
 - **Monthly Webinars**
Monthly webinars provide foundational information, resources and case studies
 - **Periodic Workshops**
Workshop on specific topics
- **Tribal Energy Atlas**
 - **Interactive Geospatial Tool**

<http://energy.gov/indianenergy>



Assisting Tribes Achieve Their Energy Vision



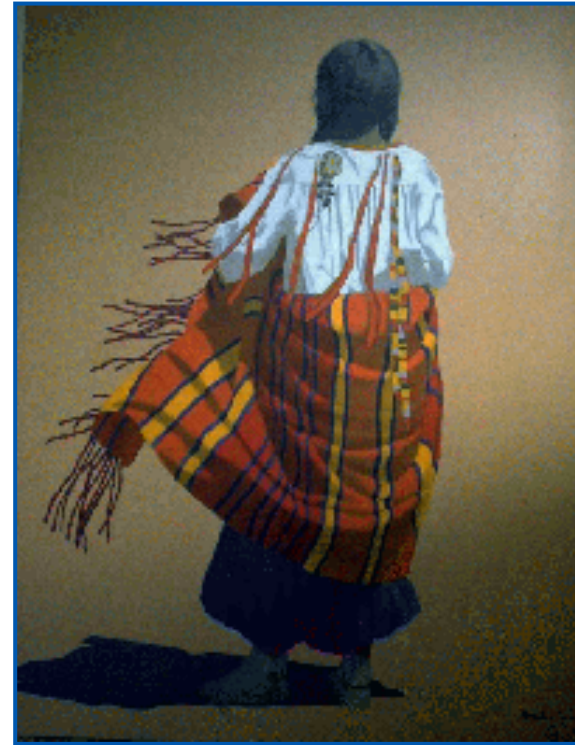
Clockwise from top right: **Nunamiut people** of Anaktuvuk Pass (AK); **Assiniboine & Sioux Tribes** (MT); **Picuris Pueblo** (NM); **Tonto Apache Tribe** (AZ); **Chaninik Wind Group** (AK); **Assiniboine & Sioux Tribes** (MT); and in the center, **Pueblo of Laguna** (NM).

DOE Office of Indian Energy

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