DOE OFFICE OF INDIAN ENERGY

Office Overview

Lizana Pierce, Senior Engineer and Deployment Supervisor



U.S. DEPARTMENT OF ENERGY | Office of Indian Energy

November 13, 2023

Deployment Supervisor Lizana Pierce, Denver, CO

- Lizana Pierce manages the implementation of all Office of Indian Energy deployment programs: technical assistance, financial assistance, and education and capacity building.
- As Deployment Supervisor, she also serves as the principal engineering expert on these programs for the Director and Deputy Director.
  - Holds a Bachelor of Science degree in mechanical engineering
  - Brings 30 years of experience in energy technologies, project development, and management
  - Has dedicated nearly 25 years to assisting Indian tribes in developing their energy resources and building their human capacity to realize their energy visions

"One of the things that motivates me the most is the ability to touch people [and] to see how these energy projects have had a positive impact on the everyday lives of people and tribal communities."

Meet the Team

Office of
Indian Energy

Leadership

Wahleah Johns,
Director,
Washington, D.C.

David Conrad,
Deputy Director,
Washington, D.C.

Meet the Team

About Us

Office of
Indian Energy

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 right: **Seneca Nation's** (NY) 1.5-MW wind turbine, **Sokaogon Chippewa Community** (WI) Housing Project, and **Chippewa Cree Tribe's** (MT) Residential Solar.

Deployment Program

Financial Assistance

Provides funding and financing to support tribal energy development

Technical Assistance

Offers no-cost technical assistance to advance tribal energy and infrastructure projects

Education and Capacity Building

Supports internal capacity building to develop energy projects and navigate energy markets

Program Financial Assistance and Investments

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Office of Indian Energy Investments 2010–2022

- More than **$120 million invested** in over **210 tribal energy projects** across the contiguous 48 states and Alaska
- Valued at more than **$215 million**
- Leveraged by over **$93 million** in recipient cost share

For more information on funded projects, see:
energy.gov/indianenergy/tribal-energy-projects-database

Financial Assistance Results (2010-2022)

- Nearly 46 MW of new generation installed
- Nearly 13 MWh of battery storage installed
- Over $14.4 million saved every year
- Nearly $315 million saved over system lifetimes
- $3.38 saved for every DOE dollar invested
- Nearly 8,800 tribal buildings affected

Clockwise from top right: **Huslia Tribe Council (AK**) installed a community-scale biomass project to heat their community's buildings (2018); **Rosebud Sioux (SD)** solar system on low-income home (2016); **Alaska Village Electric Cooperative, Inc. (AVEC) and Bethel Native Corporation's (BNC)** installed a 900-kW turbine to power the communities of Bethel and Oscarville, AK.

Financial Assistance

All Funds Awarded Through a Competitive Process

18
funding opportunity announcements (FOA) issued

(Includes FOAs issued in 2009 for award in 2010)

Accepted nearly 690 applications valued at nearly $742 million

Funded over 32% of all applications received

(223 out of 687)

DOE average ~ 5%-10%

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.

2023 Investment in Tribal Energy Projects

In 2023, the Office of Indian Energy announced an additional $72 million for over 30 tribal energy projects across the Nation. These projects collectively are estimated to result in over 18 MW of new clean energy generation, affect 2,300 tribal buildings and save those communities $225 million over the life of those systems.

Success Stories

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Tribal Energy Successes – Solar

Winnebago Tribe (NE)
- 23 kW solar system
- Completed February 2016
- Project amounts:
  - DOE: $378,528
  - Awardee: $94,633
  - Total: $473,161

Ute Mountain Ute Tribe (CO)
- 1 MW solar system
- Completed September 2019
- Project amounts:
  - DOE: $973,820
  - Awardee: $1,196,576
  - Total: $2,170,396

San Xavier Education Building (AZ)
- 182 kW solar system
- Completed April 2022
- Project amounts:
  - DOE: $501,267
  - Awardee: $501,268
  - Total: $1,002,535

Fort Mojave Indian Tribe and Aha Macav Power Services

Community-Scale Solar System Installed in 2021 Saves Tribe More Than $250,000 Annually

Need: Provide tribal homes and businesses with reliable, lower-cost power; reduce dependence on outside power providers

Solution: 2.3-MW ground-mounted solar PV system

Total cost: $4M (DOE $3M; cost share $1M)

Benefits:

- Generates ~10% of Tribe's energy needs
- Saves $253,120 per year
- Creates jobs and provides training

Tribal Successes – Wind

Chaninink Wind Group (AK)

- Five 90 kW Wind Turbines
- Completed March 2012
- Project amounts:
  - DOE: $750,000
  - Awardee: $1,2500,000
  - Total: $2,000,000

Seneca Nation (NY)

- 1.8 MW Wind Turbine
- Completed June 2017
- Project amounts:
  - DOE: $1,500,000
  - Awardee: $4,520,125
  - Total: $6,020,125

Bethel Wind Energy Construction Project – 2017 Wind Project

75-meter wind turbine installed in Alaska to supply energy for more than 6,600 rural Alaskans

Need: Stabilize the costs of power and provide cleaner air for residents in Bethel, Oscarville, and Napakiak and reducing the use of diesel fuel

Solution: 900-kW wind turbine

Total cost: $4.1M (DOE $1M; cost share $3.1M)

Benefits:

- Generates energy for about 2,900 buildings
- Saves up to $1,106,000 in diesel fuel costs each year
- Reduces energy costs by about $18 million over 20 years

Other Tribal Energy Successes

Aleut Community Store Deep Energy Retrofit (AK)

- Retrofit energy efficient systems
- Completed November 2020
- Project amounts:
  - DOE: $494,458
  - Awardee: $501,531
  - Total: $995,989

San Pasqual Band Mission of Indians Microgrid (CA)

- 150-kW battery storage & more
- Completed October 2021
- Project amounts:
  - DOE: $703,716
  - Awardee: $703,716
  - Total: $1,406,432

Nuvista Kwethluk Energy Storage (AK)

- 500-kW battery storage system
- Planned completion September 2023
- Project amounts:
  - DOE: $447,050
  - Awardee: $447,050
  - Total: $954,100

Ishkonige Nawadide – Microgrid and Solar Project
Bad River Band of Lake Superior Tribe of Chippewa Indians

Solar microgrid provides battery storage for three vital public facilities including 100% of electric usage at Wastewater Treatment Plant & Health Clinic

Need: Mitigate and prepare for consequences of hazards and effectively respond and recover in event of an emergency or disaster after 500-year flood

Solution:
- 1,000 kWh Battery Energy Storage Systems with “smart controls”
- 3 solar systems (500 kWh) at essential tribal buildings

Total cost: $2M (DOE $1M; cost share $1M)

Benefits:
- Reduces electric bills by $841,000 over 25 years
- Solar to offset equivalent of 487 tons of CO2 emissions per year
- Independent of the grid

Technical Assistance

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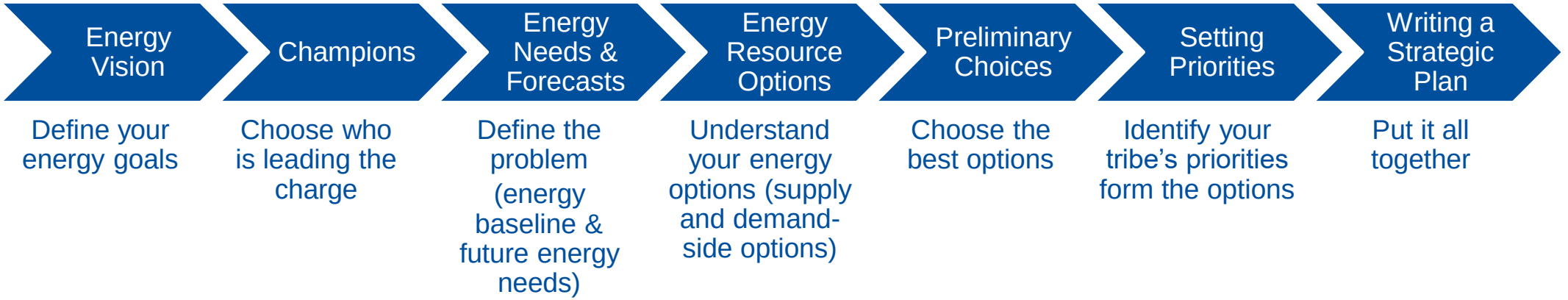
Technical Assistance

Goal: address a specific challenge or fulfill a need that is essential to a current project's successful implementation

Intended result: a **tangible product or specific deliverable** designed to help move a project forward

Strategic Energy Planning



Technical Assistance

Eligibility

The following tribal entities are eligible for on-request technical assistance:

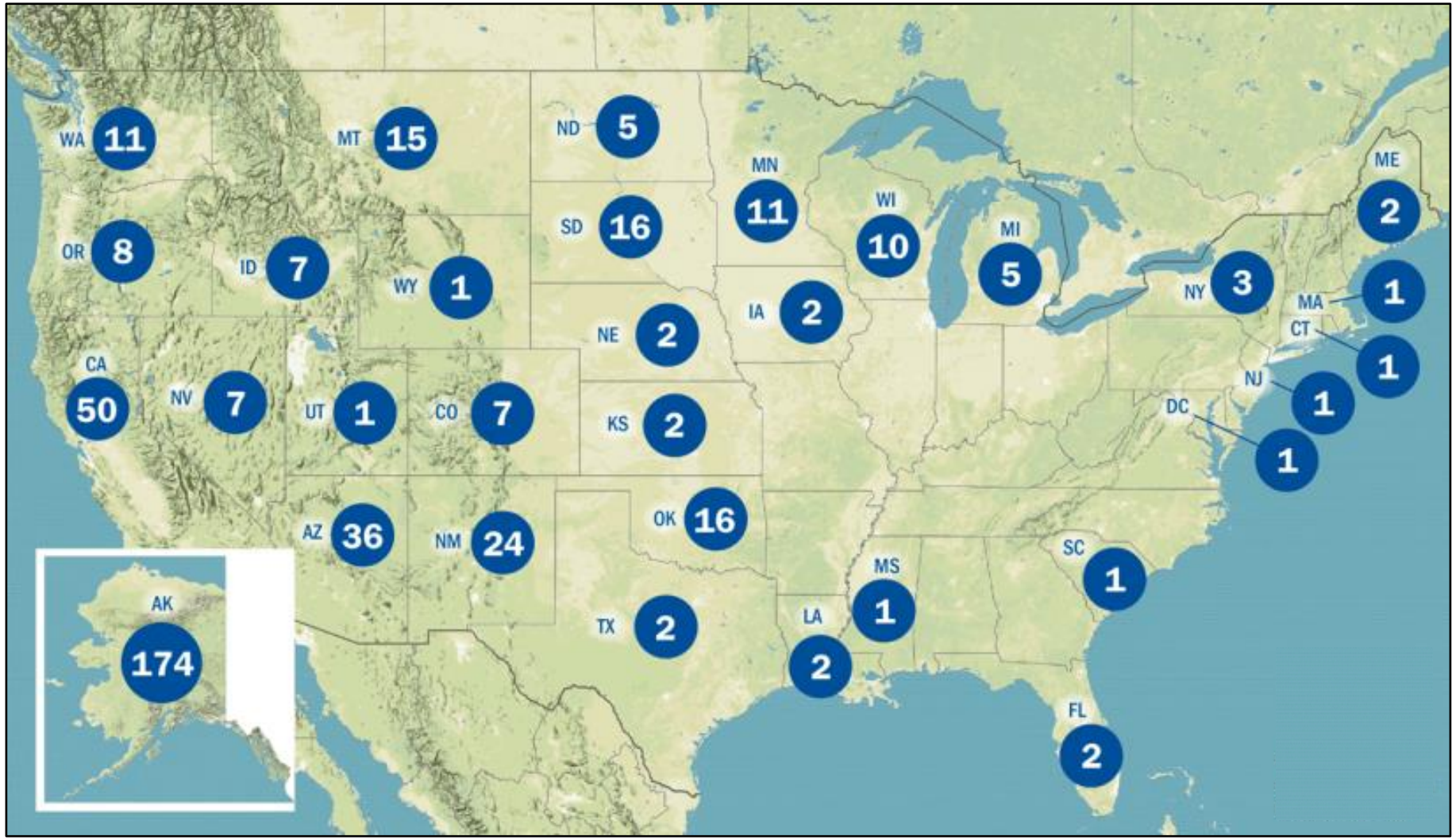
- Federally recognized Indian Tribes, including Alaska Native regional and village corporations (hereafter referred to as Tribes)
- Tribal entities, such as tribal energy development organizations, intertribal organizations, and other organized tribal groups.

Types of On-Request Technical Assistance

- Clean Energy Planning
- Energy Efficiency Assessments
- Resource Assessments
- Clean Energy Project Planning
- Building Codes and Utility Formation

Request technical assistance

Completed Technical Assistance Requests (2010-2022)



Education and Capacity Building

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Comprehensive Project Reporting

Online Tribal Energy Projects Database

- Interactive project map
- Project database (sortable)
- Project success stories
- Project summaries
  - Annual presentations
  - Final reports

Project	Tribe	State	Year	Assistance Type	Category	Technology
Agua Caliente Band of Cahuilla Indians - 2010 Project	Agua Caliente Band of Cahuilla Indians	California	2010	Feasibility	Grant	Solar
Agua Caliente Band of Cahuilla Indians - 2012 Project	Agua Caliente Band of Cahuilla Indians	California	2012	Feasibility	Grant	Renewable Energy (Multiple Technologies)
Agua Caliente Band of Cahuilla Indians-2015 Project	Agua Caliente Band of Cahuilla Indians	California	2015	Deployment	Grant	Solar
Akiachak Native Community – 2017 Project	Akiachak Native Community	Alaska	2017	First Steps (Planning)	Grant	Energy Efficiency
Akwesasne Housing Authority on behalf of St. Regis Mohawk Tribe – 2016 Project	Akwesasne Housing Authority	New York	2016	Deployment	Grant	Solar
Alaska Native Tribal Health Consortium (ANTHC) – 2016 Project	Alaska Native Tribal Health Consortium (ANTHC)	Alaska	2016	Deployment	Grant	Energy Efficiency
Alaska Native Tribal Health Consortium - 2011 Project	Alaska Native Tribal Health Consortium	Alaska	2011	Deployment	Grant	Energy Efficiency
Alaska Native Tribal Health Consortium – 2015 Project	Alaska Native Tribal Health Consortium	Alaska	2015	Planning	Grant	Energy Efficiency
Alaska Village Electric Cooperative (Joint Venture with Bethel Native Corporation) – 2017 Project	Alaska Village Electric Cooperative	Alaska	2017	Deployment	Grant	Wind

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

Office of Indian Energy Policy and Programs

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 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

Project Description

Background

Saint 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

Funding Resources

Current Funding Opportunities

- Open tribal energy related funding opportunities from federal agencies and other sources

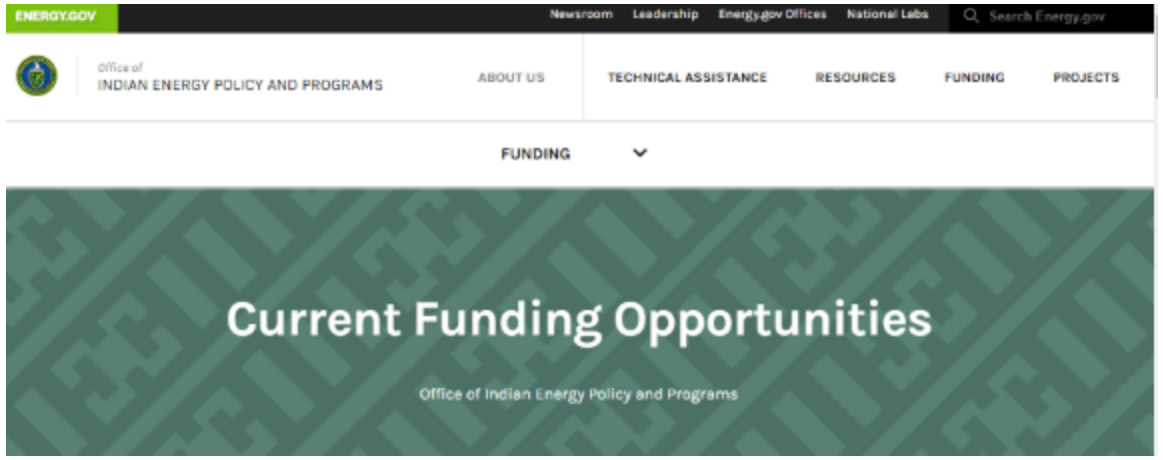
Ongoing Funding Opportunities

- Ongoing sources of funding, including grants, loans, loan guarantees, and other incentives across the federal government

Past Funding Opportunities

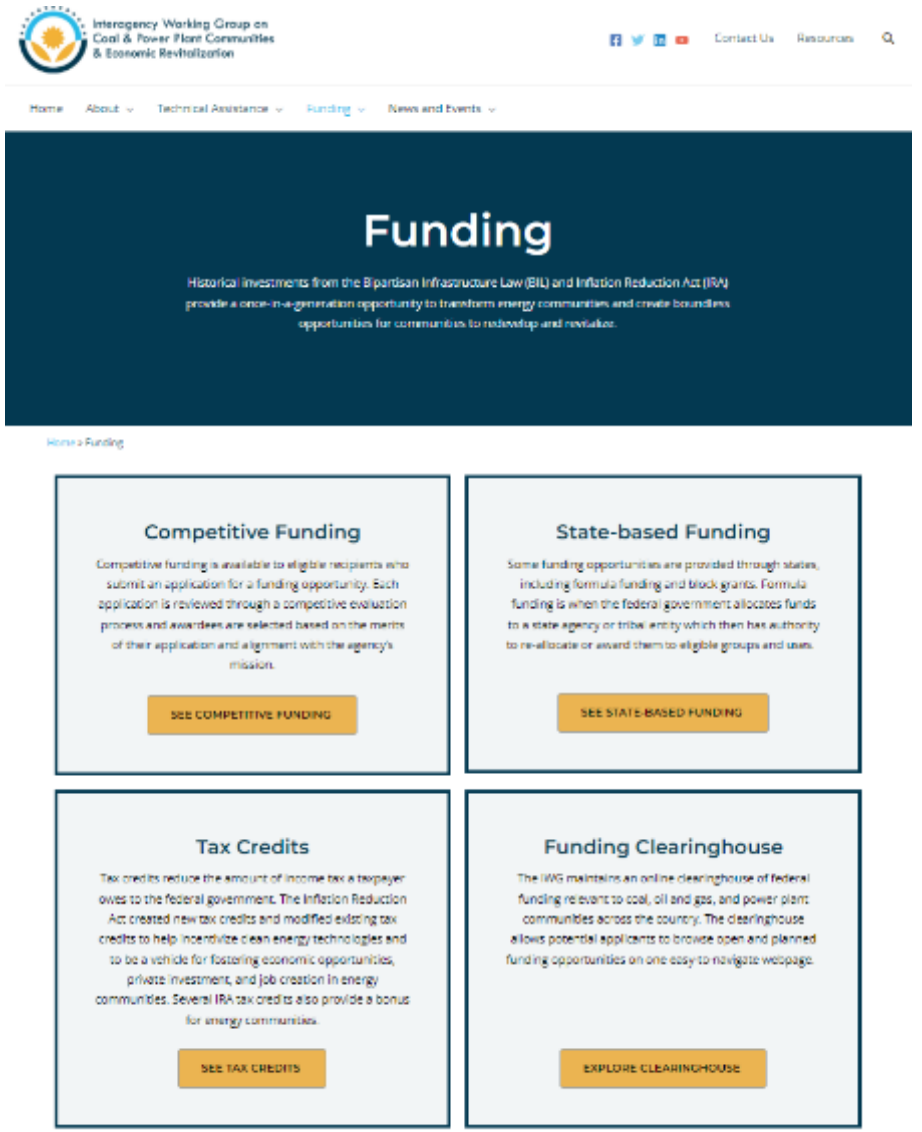
- Information on prior Office of Indian Energy funding opportunities

Funding Resources



https://www.energy.gov/indianenergy/current-funding-opportunities

https://www.energy.gov/clean-energy-infrastructure/clean-energy-infrastructure-program-and-funding-announcements



https://energycommunities.gov/funding-opportunities/

Other Funding Opportunities

Title	Description	Agency	Amount	Deadline
Energy Future Grants (EFG): Creating a Community-Led Energy Future	This grant program provides financial assistance and technical assistance to support local, state, and Tribal government-led partnership efforts that will advance clean energy program innovation. EFG seeks to enhance energy affordability and access for communities, ensuring the broad benefits of a clean energy economy—including heath, economic development and jobs and emissions reductions—flow to disadvantaged communities.	DOE State and Community Energy Programs (SCEP)	$27 million	November 10, 2023
Communities Local Energy Action Program (LEAP)	This program support efforts in disadvantaged communities and those with historical ties to fossil fuel industries to take control of their clean energy future. Communities will receive technical assistance to develop and advance locally driven energy plans to reduce local air pollution, increase energy resilience, lower utility costs and energy burdens, and create good-paying jobs.	Multiple office partnership within the DOE complex	$18 million	December 14, 2023
Tribal Electrification Program (TEP)	This program will provide financial and technical assistance to Tribes to connect homes to transmission and distribution that is powered by renewable energy; provide electricity to unelectrified Tribal homes through zero-emissions energy systems; transition electrified Tribal homes to zero-emissions energy systems; and support associated home repairs and retrofitting necessary to install the zero-emissions energy systems	U.S. Department of the Interior (DOI) Indian Affairs Office of Indian Economic Development (OIED)	$72.5 million in initial funding $150 million total funding	Full application: December 22, 2023

Other Funding Opportunities

Title	Description	Agency	Amount	Deadline
Rural Energy for America Program (REAP)	The program provides guaranteed loan financing and grant funding to agricultural producers and rural small businesses for renewable energy systems or to make energy efficiency improvements. Agricultural producers may also apply for new energy efficient equipment and new system loans for agricultural production and processing.	USDA	Renewable Energy System Grants: $1 million max per applicant Energy Efficiency Grants: $500k max per applicant	December 31, 2023
Energy Efficiency and Conservation Formula Grant Program	Formula grants are available to reduce energy use, reduce fossil fuel emissions, and improve energy efficiency.	DOE SCEP	Formula allocations	January 31, 2024
Tribal Energy Financing	This program supports Tribal investment in energy-related projects by providing direct loans or partial loan guarantees. DOE can support a broad range of projects and activities for the development of energy resources, products, and services that utilize commercial technology.	DOE Loan Programs Office (LPO)	$20 billion for loans or guarantees $80 million for associated costs	No deadline, application open

Curriculum and Resources

Information Resources

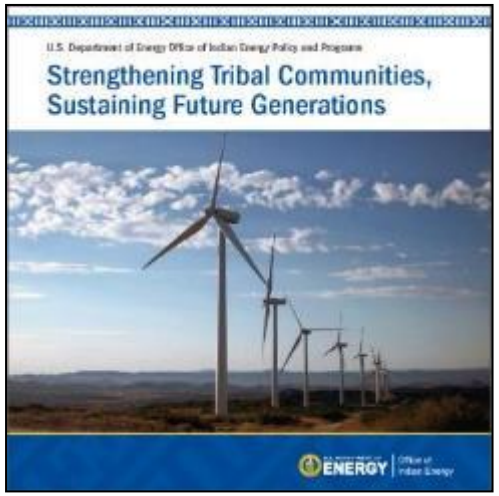
- Energy Resource Library features publications, websites, videos, and more
- Curriculum includes foundational and advanced courses, educational webinars

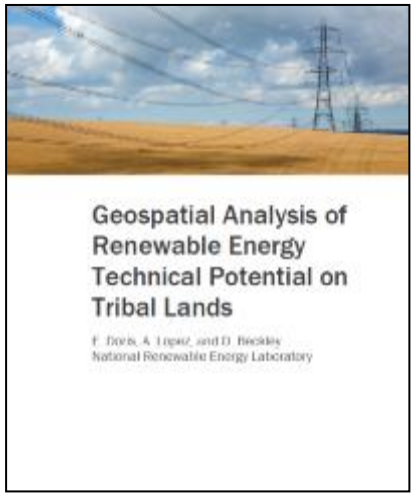
Workshops and Webinars

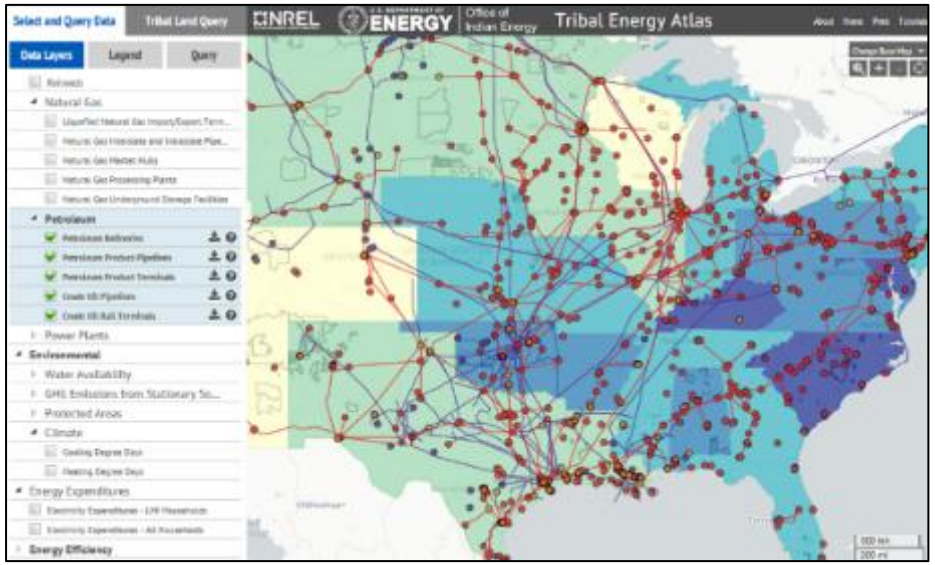
- Monthly webinars presents foundational information, resources, and case studies
- Periodic workshops address specific topics

Tribal Energy Atlas

- Interactive geospatial tool enables tribes to conduct their own data-driven analysis







Outreach and Communications

Listening Sessions

- IE/LPO Funding & Financing Listening Session, May 2021 (586 registered; 369 attendees)
- IE Energy Access & Reliability Listening Session (Congressional Report), November 2021/July 2022 (~300 attendees; majority tribal representatives)

Monthly Webinars

- Monthly webinars provide foundational information, resources, and case studies
- Statistics: 1,100+ total attendees in FY 2022;

  ~140 per webinar

Email Newsletters

- Highlight funding, upcoming events, and tribal energy related news
- Statistics: 20,000+ subscribers
  - Over 5.3k new subscribers in FY2023

Annual Program Review

Unique Tribal Forum for Sharing and Learning

- Opportunity for tribes to meet and learn from each other and to share their successes and challenges
- Networking and learning opportunity
- Learn about 40 to 50 tribal energy projects from across the country
- ~200 participants
- Typically held in November

November 13-16, 2023, in Denver, Colorado

For more, see https://www.energy.gov/indianenergy/projects/program-review

Engage With Us to Learn More

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Questions?

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Thank you!

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