

DOE OFFICE OF INDIAN ENERGY

Tribal Electricity Access and Reliability Congressional Report - Listening Session

Wahleah Johns, Director

Lizana Pierce, Senior Engineer, Deployment Supervisor

Dr. Tommy Jones, Deployment Specialist



U.S. DEPARTMENT OF
ENERGY

Office of
Indian Energy

November 4, 2021

Agenda

Introductions and About the Office

Purpose and Background

Electric Generation, Transmission, and Distribution

Price of Electricity

Workforce

Electricity Access and Reliability

Distributed Energy Potential

Tribally-Owned Utility Potential

Roundtable Discussion



Director – W. Johns

Wahleah Johns

Director, Washington DC

Wahleah Johns is Senior Advisor for the U.S. Department of Energy (DOE) Office of Indian Energy Policy and Programs. She is responsible for upholding and advancing the Office of Indian Energy's mission to maximize the development and deployment of energy solutions for the benefit of American Indians and Alaska Natives.

Johns is a member of the Navajo (Dine) tribe and comes from northeastern Arizona. Her background is in renewable energy and community organizing, having co-founded Native Renewables, a nonprofit that builds renewable energy tribal capacity while addressing energy access. Her work with the Black Mesa Water Coalition and Navajo Green Economy Coalition has led to groundbreaking legislative victories for groundwater protection, green jobs, and environmental justice. In 2019, she was awarded the Nathan Cummings Foundation Fellowship.

Johns is deeply honored to work with the Office of Indian Energy to help native communities lead the way in the transition to clean energy.



Deployment Supervisor – L. Pierce



Lizana Pierce **Senior Engineer, Deployment** **Supervisor, 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.



Deployment Specialist – T. Jones



Dr. Tommy Jones Deployment Specialist, Colorado

As a Deployment Specialist, Thomas ('Tommy') is responsible for assisting the Deployment Supervisor with implementing the Office's Deployment Programs: Technical Assistance, Financial Assistance, and Education and Capacity Building. Dr. Jones, is from Jones, Oklahoma and is an enrolled citizen of the Cherokee Nation of Oklahoma, Naknek Native Village, and a Native shareholder of Bristol Bay Native Corporation of Alaska. He has separate bachelor's degrees in Biology and Spanish, a Master's degree in Conservation Biology and Environmental Science, and a Ph.D. in Natural Resources and American Indian Studies.



Meet the Team

Office of Indian Energy

Comprised of 12 Federal employees and 9 contractors

The 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.



The **Indian Country Energy and Infrastructure Working Group (ICEIWG)** works collaboratively with the DOE Office of Indian Energy to assist in surveys, analysis, and recommendations related to program and policy initiatives that fulfill DOE's statutory authorizations and requirements.



May 2018 ICEIWG meeting at Sandia National Laboratories

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.

Deployment Program



Financial Assistance

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



Technical Assistance

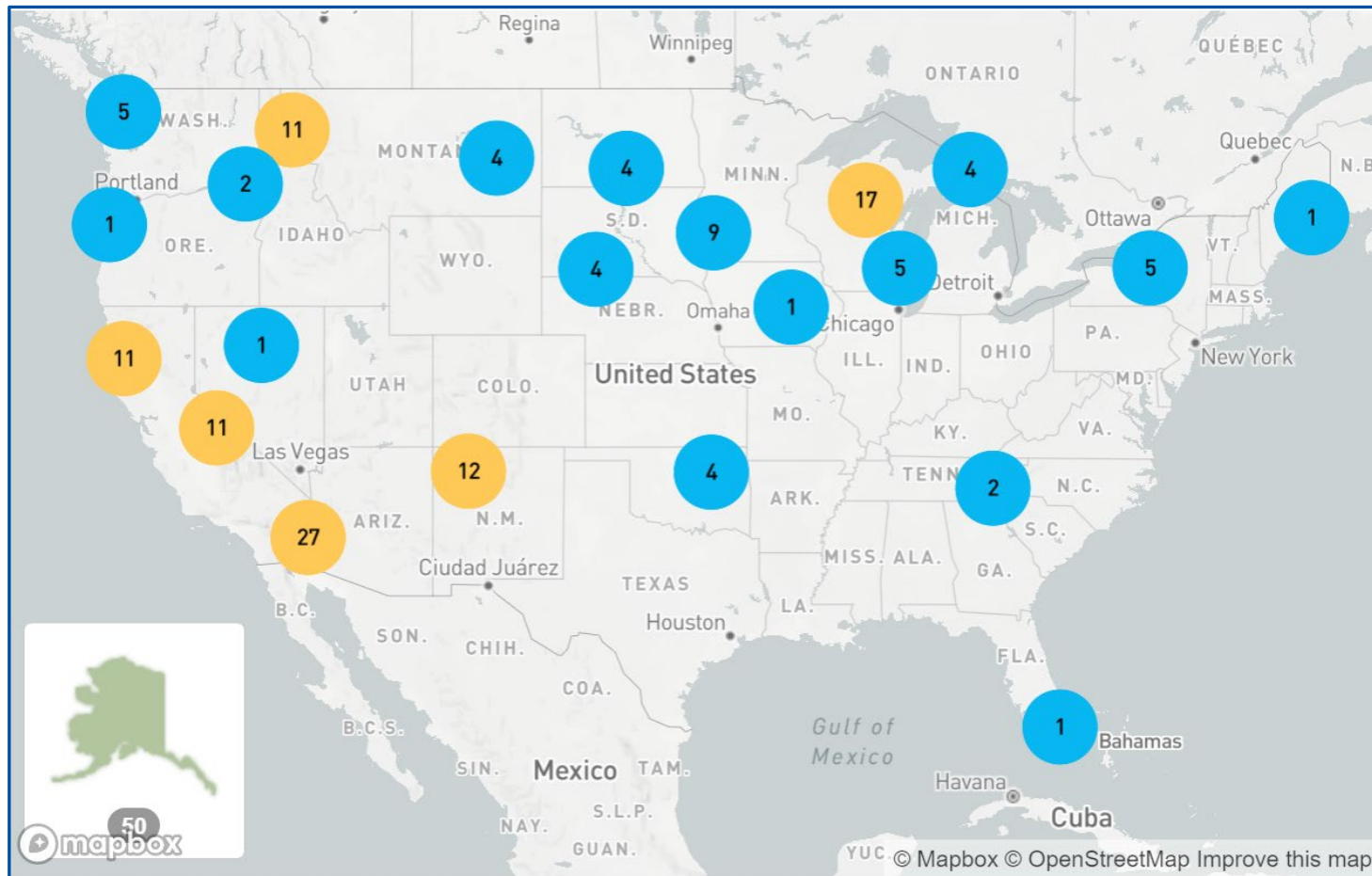
We provide federally recognized Indian tribes, including Alaska Native villages, regional and village corporations, tribal energy resource development organizations, and other tribal groups and communities, with technical assistance to advance tribal energy and infrastructure projects, at no charge.



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)



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**

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

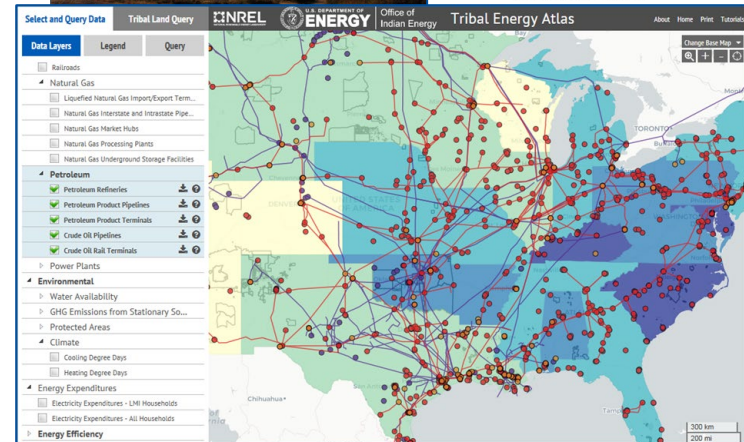
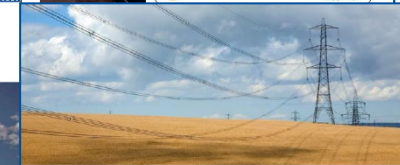
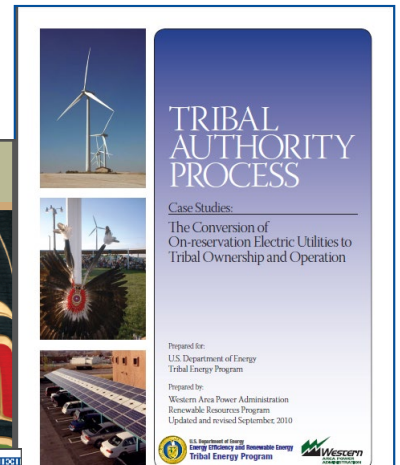
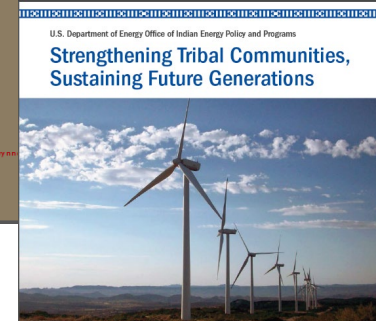
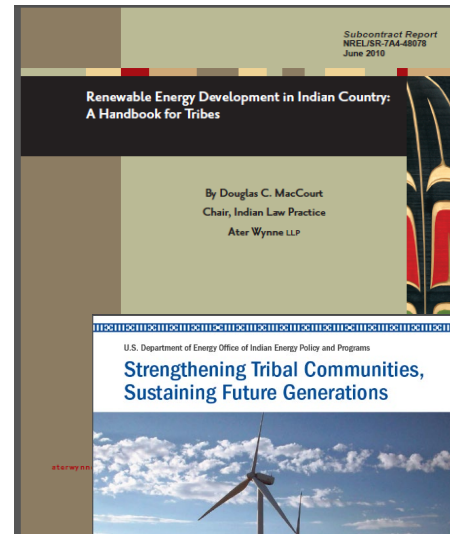


Strategic Energy Planning

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>



Tribal Energy Successes



Clockwise from top right: Seneca Nation's 1.5 MW turbine (2017) (NY); Rosebud Sioux (SD) solar system on low-income home (2016); Chaninik Wind Group (AK) thermal stove install (2013); Southern Ute (CO) 1.3 MW Oxford Solar Project (2017).; Huslia Tribal Council's (AK) Biomass Project (2018); and in the top middle, Oneida Nation (WI) installed 800 kilowatts of solar photovoltaic for 6 buildings (2017)

Assisting Tribes Achieve Their Energy Vision



Clockwise from top right: **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; **Northway Village (AK)** resiliency through energy efficiency and solar; **Soboba Band of Luiseño Indians (CA)** install 1 MW solar; **Menominee Tribal Enterprise (WI)** install a biomass combined heat and power system; **Picuris Pueblo (NM)** install 1MW solar; and in the middle, **Gwichyaa Zhee Gwich'in Tribal Government (AK)** installed 18 kW solar system on the Tribal Office.

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 and challenges
- Networking & learning opportunity
- Hear about 40 to 50 Tribal energy from across the country
- ~200 participants



Sheraton Denver West Hotel in Lakewood, Colorado

Virtually November 15-18, 2021

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

Purpose and Background - Congressional Report

1 **DIVISION Z—ENERGY ACT OF**
2 **2020**

3 **SEC. 101. SHORT TITLE; TABLE OF CONTENTS.**

4 (a) **SHORT TITLE.**—This division may be cited as the
5 “Energy Act of 2020”.

6 (b) **TABLE OF CONTENTS.**—The table of contents for
7 this Act is as follows:

DIVISION Z—ENERGY ACT OF 2020

15 **SEC. 8014. REPORT ON ELECTRICITY ACCESS AND RELI-**
16 **ABILITY.**

17 (a) **ASSESSMENT.**—The Secretary of Energy shall
18 conduct an assessment of the status of access to electricity
19 by households residing in Tribal communities or on Indian
20 land, and the reliability of electric service available to

Why does this matter? How could this impact my community? What happens from here?



SEC. 8014. REPORT ON ELECTRICITY ACCESS AND RELIABILITY

- (a) ASSESSMENT.—The Secretary of Energy shall conduct an assessment of the status of access to electricity by households residing in Tribal communities or on Indian land, and the reliability of electric service available to households residing in Tribal communities or on Indian land, as compared to the status of access to and reliability of electricity within neighboring States or within the State in which Indian land is located.
- b) CONSULTATION.—The Secretary of Energy shall consult with Indian Tribes, Tribal organizations, the North American Electricity Reliability Corporation, and the Federal Energy Regulatory Commission in the development and conduct of the assessment under subsection (a). Indian Tribes and Tribal organizations shall have the opportunity to review and make recommendations regarding the development of the assessment and the findings of the assessment, prior to the submission of the report under subsection (c).



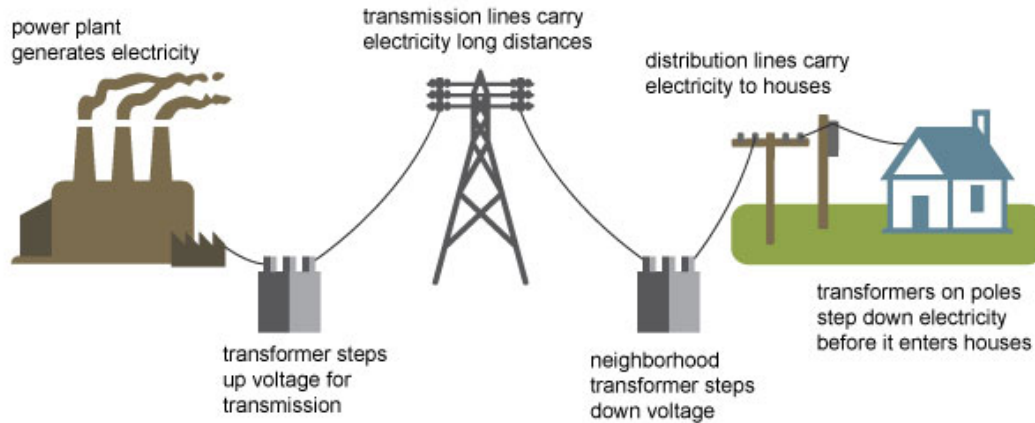
Section 1: Generation, Transmission, and Distribution Assets Available

(c) REPORT.—Not later than 18 months after the date of enactment of this Act, the Secretary of Energy shall submit to the Committee on Energy and Commerce of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a report on the results of the assessment conducted under subsection (a), which shall include— (1) **a description of generation, transmission, and distribution assets available to provide electricity to households residing in Tribal communities or on Indian land;**



Section 1: Generation, Transmission, and Distribution Assets Available

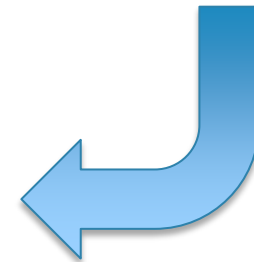
Electricity generation, transmission, and distribution



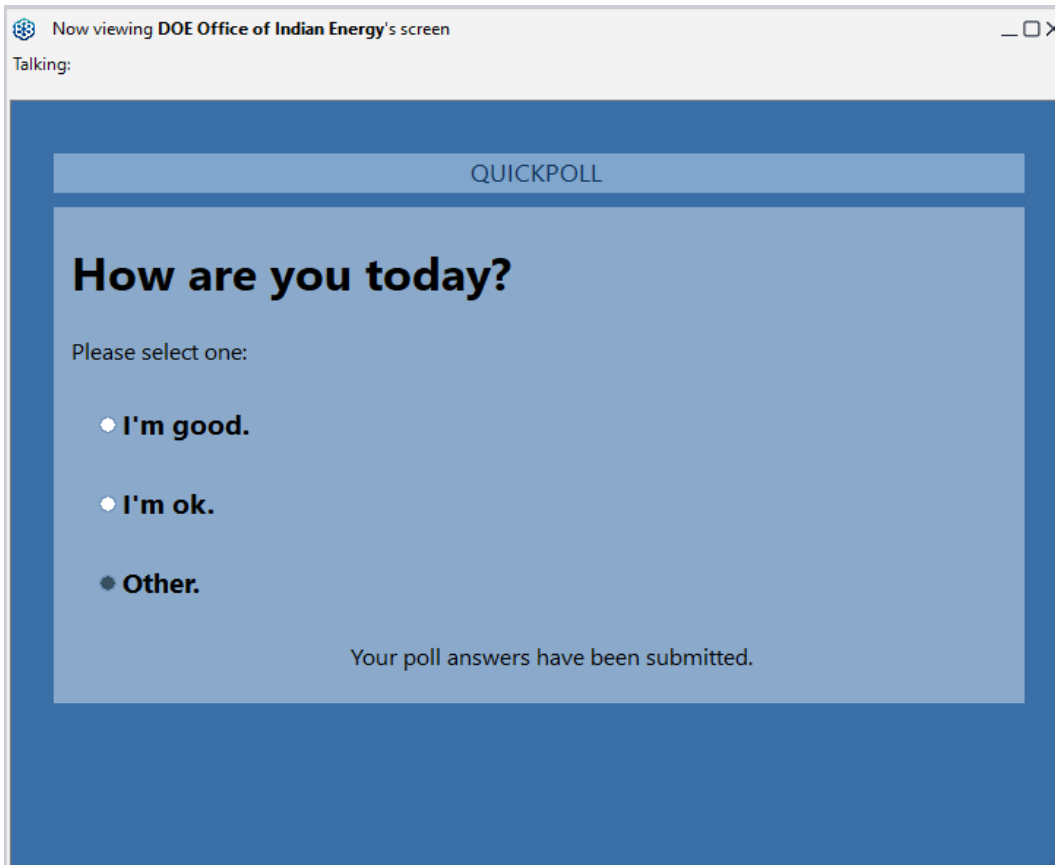
Source: Adapted from National Energy Education Development Project (public domain)



How to expand navigator and undock Question feature



Using the Polling Feature

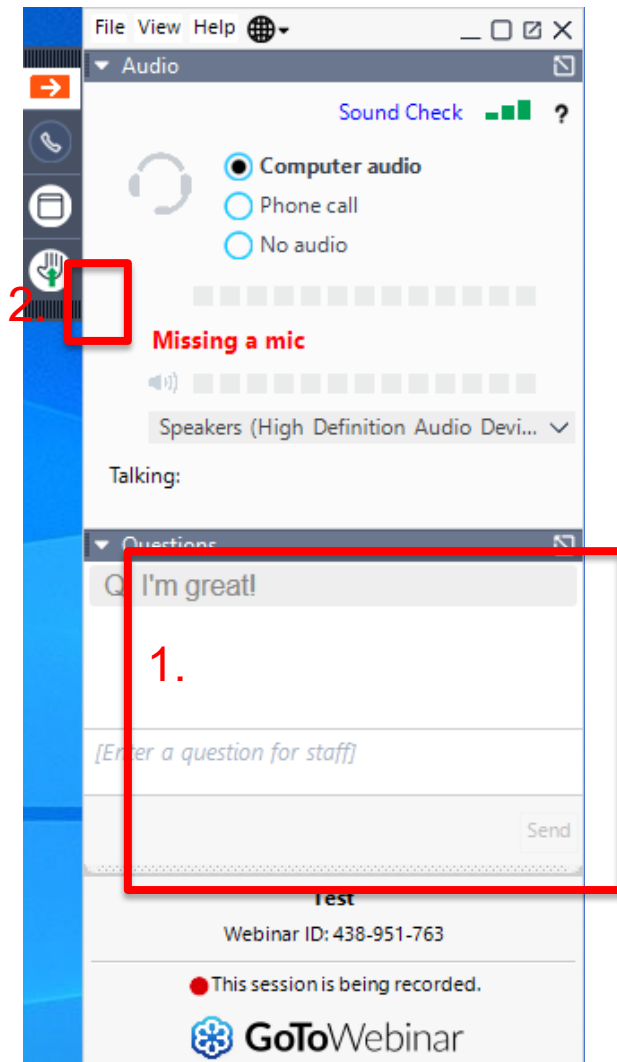


Today's listening session will use Polling.

Polls will show up in your GoToWebinar Viewer.

To answer, click on the choices in the Viewer.

How to Submit “Other” Responses

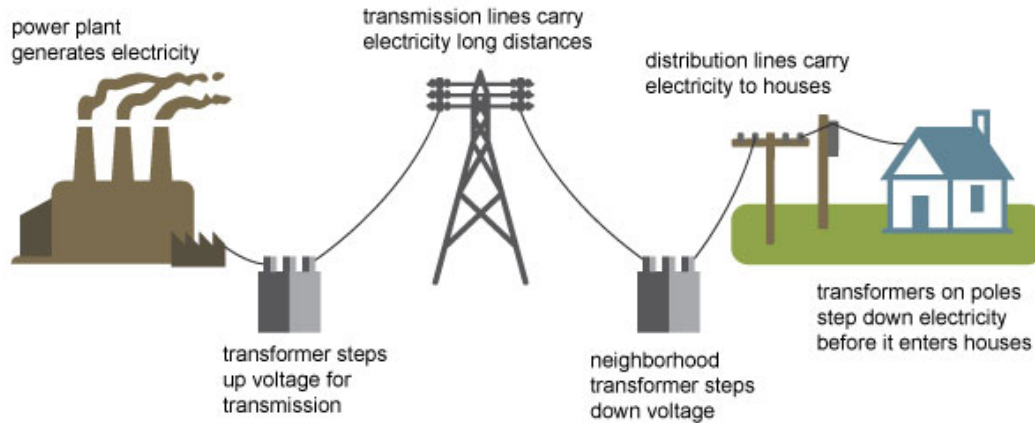


1. If responding “other,” please submit a comment in the Questions tab and enter the number of the question before responding i.e. 1. Hello

Technology troubles? Please send questions to IndianEnergy@hq.doe.gov.

Section 1: Generation, Transmission, and Distribution Assets Available

Electricity generation, transmission, and distribution



Source: Adapted from National Energy Education Development Project (public domain)



Section 2: Price of Electricity

(2) a survey of the retail and wholesale prices of electricity available to households residing in Tribal communities or on Indian land

~14¢/kWh
National Average



Section 3: Workforce

(3) a description of participation of Tribal members in the electric utility workforce, including the workforce for construction and maintenance of renewable energy resources and distributed energy resources



Section 4: Electricity Access

(4) the percentage of households residing in Tribal communities or on Indian land that do not have access to electricity



Section 5: Distributed Energy Potential

(5) the potential of distributed energy resources to provide electricity to households residing in Tribal communities or on Indian land

Local sources that are grid connected, decentralized, and community-generated energy

- i.e. rooftop solar PV units, natural gas turbines, microturbines, wind turbines, biomass generators, fuel cells, tri-generation units, battery storage, electric vehicles (EV) and EV chargers, and demand response applications



Section 6: Tribally-Owned Utility Potential

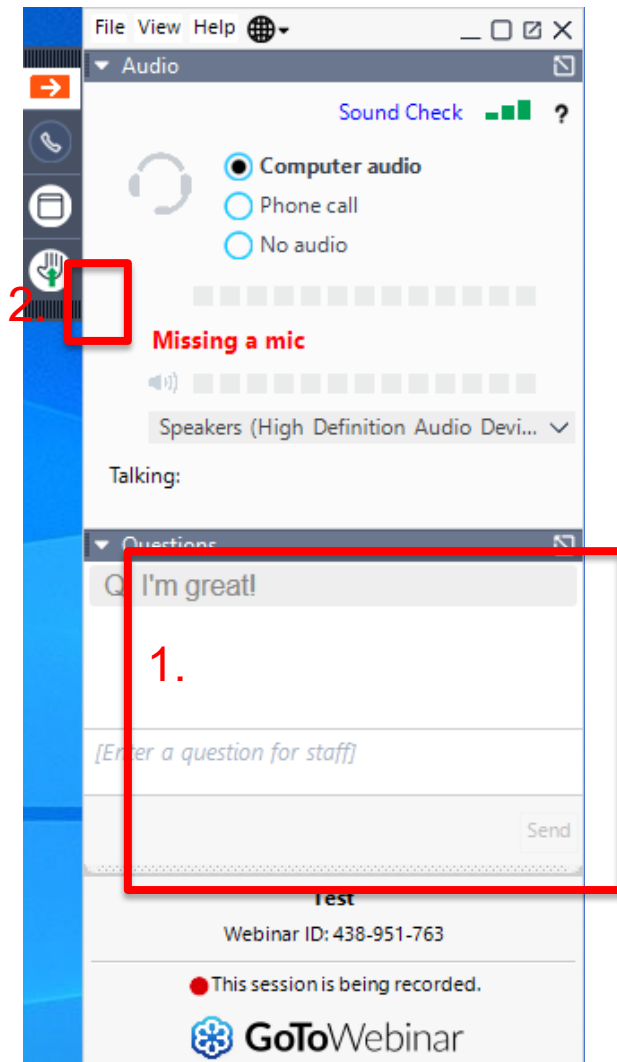
(6) the potential for tribally-owned electric utilities or electric utility assets to participate in or benefit from regional electricity markets



Roundtable Discussion



How to Submit Your Responses



1. Please submit responses in the Questions tab.
2. Please format responses to include question number i.e. “21. Hello”
3. Please raise your hand to be unmuted.

Technology troubles? Please send questions to IndianEnergy@hq.doe.gov.

Tribal Utility Formation

20. Do you have plans to develop a tribal utility to provide electricity to your community?

- a. Yes
- b. No
- c. Maybe with more information

Right-of-Way Leases

21. When are right-of-way leases for electricity transmission or distribution set to expire?

- a. 1 year or less
- b. 2-5 years
- c. 5-10 years
- d. 10+ years
- e. Don't know

Community Member Electricity Assistance

22. Does the tribe or tribal members within your community receive outside assistance to pay electricity bills?

- a. Yes
- b. No
- c. Don't know

Types of Community Electricity Assistance

23. If you receive assistance to pay for electricity bills, what type of assistance? (Select all that apply)

- a. Bill payment assistance
- b. Energy efficiency and/or weatherization
- c. On-bill financing for efficiency upgrades
- d. Other (please clarify in chat box)
- e. NA

New Housing and/or building construction

24. Will new housing and/or building construction be:

- a. Connected to the electrical grid
- b. Connected to a local microgrid
- c. Other (please clarify in chat box)
- d. Will not be connected to the electric grid or local micro-grid

Renewable Energy Incentives

25. Are there any programs or policies that exist in your community that support the deployment of renewable energy (e.g., net-metering, education programs, rebates)?

- a. Yes
- b. No
- c. Don't know

Renewable Energy Incentives

26. If programs or policies exist, what types of programs and/or policies exist locally that support the deployment of renewable energy technologies? (Select all that apply)

- a. Net-metering
- b. Financial such as rebates or tax credits
- c. Third-party ownership
- d. Local codes
- e. Education and/or training
- f. Other (please clarify in chat box)

Homes that are not Grid-Connected

27. Are there households in your community that are not connected to the electric grid but have their own electricity sources (e.g., solar electric, wind or other distributed resource such as diesel generators)?

- a. Yes
- b. No
- c. Don't know

Diesel Generators

28. How many individual households use diesel generators as their primary source of electricity?

- a. 0
- b. 1-20
- c. 21-50
- d. 51-100
- e. 100+
- f. Don't know
- g. If exact or estimated numbers are known, please enter into the chat box

Strategic Energy Plans

29. Does your community have a strategic energy plan in place?

- a. Yes
- b. No
- c. In-Process
- d. Don't know

Western Area Power Administration Allocations

30. Does your community have a Western Area Power Administration (WAPA) electricity allocation?

a. Yes

b. No

c. Don't know



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