

Tribal Clean Energy Resource Center at Northern Arizona University



For many Native American tribes, unemployment is over 50%.¹ The poverty rate for American Indians is over 22%, compared with about 15% for all Americans.² More than 14% of American Indian households on reservations lack electricity compared to less than 1.5% of non-native households.³ At the same time, Native American-held lands in the United States have immense developable wind and solar resources; the solar resources could meet all national electricity needs,⁴ and the wind resources on the land of the Plains tribes alone could provide power to more than 50,000 homes.⁵

Clearly, renewable and clean energy can be a source of economic development and independence for Tribes.⁶ Native American lands have enormous potential

for solar, wind, geothermal and other renewable energy development, but in many cases, tribal staff in natural resource or economic government agencies are tasked with managing energy policy and programs for their tribes, with little in the way of resources or support.

NAU's Tribal Clean Energy Resource Center (TCERC) was established to meet the clean energy assessment, research, training and development needs of partner tribes and native villages in the Southwest and across the United States. TCERC is housed at NAU's Institute for Tribal Environmental Professionals (ITEP), and builds on ITEP's successful work over the last two decades providing technical training and expertise to tribal environmental agencies and their staff. TCERC aims to help tribal professionals develop expertise and capacity in the clean and renewable energy fields, and through individual initiatives and technical support projects to advance the development of clean and renewable energy sources on tribal lands.

TCERC's mission is to foster the transition of Native American Tribes and Alaskan Native Villages from fossil fuel to renewable and clean energy. Through technical assistance, policy and planning support, internships and education opportunities, and targeted training events, TCERC staff and its network of partners support Tribes and Villages in developing and achieving their own clean energy goals.

¹US Census Bureau (2000). *US Census FactFinder*. Washington, DC: US Census Bureau.

²National Center for Education Statistics (2008). *Statistical Trends in the Education of American Indians and Alaska Natives*. Washington, DC: US Department of Education.

³Arizona Town Hall: Arizona's Energy Future: http://aipi.clas.asu.edu/files/u1/1_Tribes_and_Energy_within_Arizona_3-15-12.pdf referring to: US Department of Energy "Energy Consumption and Renewable Energy Development on Indian Lands" 2000

⁴U.S. House of Representatives Natural Resources Committee: Native American-held territory receives enough sunlight in a year to provide for double the country's current energy consumption, an estimated annual PV output of more than 9.2 million megawatt-hours of electricity. From: <http://www.getsolar.com/News/Solar-Energy-Facts/General/Solar-Power-on-Native-American-Lands-800861536>

⁵Intertribal Council on Utility Policy, <http://intertribalcoup.org/mission/index.html#Page:%204>

⁶See, for example:

<http://www.geni.org/globalenergy/research/renewable-energy-on-tribal-lands/Renewable-Energy-on-Tribal-Lands.pdf>

http://aipi.clas.asu.edu/files/u1/1_Tribes_and_Energy_within_Arizona_3-15-12.pdf

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TCERC's work meets a critical need that has been expressed by many tribes, offering a suite of tools for economic development of a known tribal resource. Each of these tools meet specific tribal needs by tapping into areas of strength that ITEP has developed internally and with partners on- and off-campus over its 20-year history.

Tribes can work with TCERC staff to obtain technical and economic assessments of renewable energy resources and specific project development options. For example, TCERC can help tribes to obtain resource assessments for solar or wind, or evaluate the viability of project ideas such as combining a renewable energy project with wastewater treatment. By scientifically measuring the wind resource in a particular location on tribal land, or by obtaining an economic analysis of the costs and benefits of various

wastewater treatment options, tribes can make more informed decisions about strategic clean energy planning and can pursue financial partners with confidence in their proposed developments.

TCERC provides tribal governments with workshops for energy planning and policy development. Agency staff can attend TCERC trainings or webinars for their own professional development, advancing their knowledge of energy technologies and policies for the benefit of their agencies and tribes. From basic energy literacy to specialized trainings on renewable energy project development or energy policy planning, TCERC workshops and trainings provide tribal leaders with information resources tailored to meet critical current needs.

Native American students can work with TCERC to obtain internships in the energy industry or national laboratories to pursue careers in clean energy. Industry and laboratory partners are interested in working with Native American students, and some have established programs to help students pursue their own development as clean energy professionals who can remain in industry or return to work in tribal government as energy specialists.

TCERC works in collaboration with a number of partners at NAU, and in fact builds on the work of these institutes and centers. The Center for American Indian Economic Development (CAIED) serves as a technical resource for tribes on a wide range of economic development issues, including renewable energy development and manufacturing. The Institute for Sustainable Energy Solutions (ISES) provides expertise on sustainable energy technologies and successful business implementation for employing those technologies. Through these collaborative partners and others, TCERC strives to build partnerships with faculty and staff to address critical issues tribes face when addressing their renewable energy development needs.

Support of NAU's TCERC initiative fosters the advancement of clean energy development and professional expertise at partner tribes. For more information and to make a contribution to support the Tribal Clean Energy Resource Center at Northern Arizona University please contact Ann Marie Chischilly and visit the TCERC program website: <http://www4.nau.edu/itep/tcerc/index.asp>

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