

**Department of Energy –
First Steps Toward Developing Renewable Energy
and Energy Efficiency on Tribal Lands**

DOE-EE0005062

Washoe Tribe of Nevada and California

**Nevada Inter-Tribal Energy Consortium
Energy Organization Enhancement Project**

Final Report

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Executive Summary

The Washoe Tribe of Nevada and California is a federally recognized Indian Tribe organized pursuant to the Indian Reorganization Act of June 18, 1934, as amended. The Tribe's aboriginal territory extends to the west of Lake Tahoe Basin, north to Honey Lake, east in the Pine Nut Mountains and south to Antelope Valley, California. Tribal members continue to use resources within the aboriginal territory in the same manner as did their ancestors. The Tribe has four federally recognized communities (Stewart, Carson, Dresslerville, and Woodfords), three in Nevada and one in California. The Tribe also has jurisdiction over trust parcels and allotments in both Nevada and California. Each of the communities has a separate governing Community Council; overall, the Washoe Tribal Council governs the Tribe. The Washoe Environmental Protection Department (WEPD) was established in the Tribal government structure in 1998. WEPD is responsible for carrying out protection of natural and cultural resources and management for lands within the traditional territory and over 73,500 acres of trust and fee lands. It is the policy of the Washoe Tribe to protect, maintain, and enhance its natural resources for the benefit of present and future generations.

The Washoe Tribe of Nevada and California was awarded funding from the Department of Energy to complete the Nevada Inter-Tribal Energy Consortium Energy Organization Enhancement Project. The main goal of the project was to enhance the capacity of the Nevada Inter-Tribal Energy Consortium (NITEC) to effectively assist tribes within Nevada to technically manage tribal energy resources and implement tribal energy projects.

The project consisted of the following main activities which were all successfully completed:

- Creating and filling the NITEC Energy Program Manager position
- Project oversight and administration
- Preparing deliverables
- Plan, organize, and facilitate NITEC meetings
- Tracking completion of activities, tasks, and milestones
- Create and manage LISTSERV for Tribal energy contacts
- Create and manage technical energy depository
- Plan, organize, and facilitate working sessions regarding management of energy resources and strategic plans
- Collaborate with energy professionals

The Washoe Tribe selected a contractor to provide three Strategic Energy Planning Workshops to Nevada Tribes – one in Northern Nevada, one in Western Nevada, and one in Eastern Nevada. The workshops included presentations regarding:

- Review of the use and development of a Strategic Energy Plan
- Creating an Energy Vision Statement
- Determining energy needs and forecasts
- Identifying energy infrastructure
- Energy resource development options and priorities

- Discussion of potential institutional arrangements and activities necessary to meet energy goals
- Estimated timelines for implementation
- Discussion of relative budget estimates for specific activities

The Washoe Tribe successfully implemented all program objectives and activities.

Project Overview

Tribe: Washoe Tribe of Nevada and California

Location: Gardnerville, NV

Project Title: Nevada Inter-Tribal Energy Consortium Energy Organization
Enhancement Project

Type of Application: First Steps Toward Developing Renewable Energy and Energy Efficiency
on Tribal Lands

DOE Grant Number: DE-EE0005062

Award Amount:	DOE:	\$200,000.00
	Awardee:	\$0.00
	Total:	\$200,000.00

Project Status: Complete

Project Period of Performance: July 2011 through August 2014

Objectives

The Washoe Tribe has a long term energy vision and energy plan. The Washoe Tribe's Energy Vision is:

- To guarantee the availability of affordable and reliable energy to all its members.
- To further the Tribe's goals for self-sufficiency and self-determination through empowerment in the Tribe's energy interests.
- To reduce the environmental impact of the Tribe's energy consumption.
- To promote conservation and efficient use of energy.
- To produce all of the Tribe's energy needs through renewable sources by 2025.
- And to contribute to the Washoe Tribe's local economy consistent with the Tribe's overall mission which is "To achieve and ensure the integrity of an environment and way of life that is one with nature's elements, community, traditions, and values that promote health and wellness for future generations."

The long term energy goals of the Tribe include:

- Goal 1: To guarantee the availability of affordable and reliable energy to all its members.
- Goal 2: To reduce the energy bills of tribal members and administration.
- Goal 3: To further the Tribe's goals for self-sufficiency and self-determination through empowerment in the Tribe's energy interests.
- Goal 4: To minimize the environmental impact of current and/or future development.
- Goal 5: To produce all of the Tribe's energy needs through renewable sources by 2025.
- Goal 6: To build sustainable homes and make existing buildings more efficient.
- Goal 7: To contribute to the Washoe Tribe's local economy consistent with the Tribe's cultural values.

The objectives of the Nevada Inter-Tribal Energy Consortium Energy Organization Enhancement project were to:

- Assist in the development of renewable energy projects for Nevada Tribes.
- Research and coordinate technical assistance in energy related projects.
- Research and provide information on various funding sources and cooperative agreements for potential renewable energy projects.
- Seek opportunities and coordinate energy related training and job development.
- Support renewable energy product development and production for the tribes.
- Provide training and conferences on energy related topics.
- Collect and disseminate the latest energy related information and contacts to the tribes.
- Assist tribes in identifying potential projects.
- Provide assistance in economic and business development issues.
- Seek opportunities in green products and technology development.

Description of Activities Performed

The Washoe Environmental Protection Department (WEPD) completed the project goals and objectives. WEPD selected a contractor to complete the three Strategic Energy Planning Workshops.

WEPD began the project by completing a position description for the Nevada Inter-Tribal Energy Consortium (NITEC) Energy Program Manager and providing to the Tribe's Human Resource department for review. The position description was then presented to the Tribe's Personnel Committee for review and approval. The position description was then taken before Tribal Council for review and approval. Once the position description was approved by the Tribe's Personnel Committee and Tribal Council, the position was opened and advertised on the Tribe's website. Due to lack of applications for the position, the job announcement remained open for an extended amount of time. The position description was also advertised through networking media locations and at tribal colleges. Due to lack of applications for the job announcement, the Tribe requested and received a one year no-cost extension for the grant. The NITEC Energy Program Manager position was filled in June 2013.

WEPD planned, facilitated and attended monthly NITEC meetings throughout the project period. WEPD staff facilitated the meetings and provided information on energy programs, initiatives, and technical resources for the 27 Nevada Tribes. WEPD staff networked with numerous renewable energy entities to present and provide information regarding renewable energy to the Nevada Tribes at NITEC meetings. The entities also prepared and delivered trainings for the Nevada Tribes participating in NITEC. This work included:

- WEPD staff networked with the Affiliated Tribes of the Northwest Indians (ATNI) regarding energy programs. ATNI presented as a guest speaker for NITEC.
- Staff worked with the Nevada State Office of Energy regarding energy opportunities for Nevada Tribes. The Nevada State Office of Energy served as a guest speaker for NITEC and presented information on the Energy Fit Nevada incentive rebate program for residential homes.
- Staff collaborated with the Nevada Institute for Renewable Energy for Commercialization regarding energy opportunities for Nevada Tribes. The Institute participated as a guest speaker for NITEC.
- Staff worked with Black Rock Solar regarding developing and presenting a training on budgets, solar operation and maintenance, and energy auditing.
- Staff worked with the Office of Indian Energy regarding energy training for project development and financing projects.
- Staff networked with the Desert Research Institute (DRI) regarding renewable energy and environmental research. DRI presented NITEC information regarding biomass, off-grid facilities, battery storage, solar thermal, energy audits, conservation measures, and heat recovery systems.
- Staff coordinated the Community and Facility Scale Energy Development and Finance workshop at the Inter-Tribal Council of Nevada Annual Convention. The introductory workshop discussed the necessary steps and mechanisms to develop and finance community and facility scale renewable energy projects.

- Staff coordinated the Renewable Energy and Energy Efficiency training at the Inter-Tribal Council of Nevada Annual Convention. The training discussed energy costs for tribal entities and tribal members, energy efficient housing and renewable energy sources, conventional appliances, solar PV, solar thermal, insulation, wood stoves, and costs.
- Pilar Thomas, Deputy Director with the Office of Indian Energy shared renewable energy program information including grant updates, potential funding sources, the decrease in program funding due to sequestration, trainings, workshops, and webinars with NITEC.
- Sandy Wallace, Grants and Project Analyst and Sue Stephens, Energy Program Manager with the Nevada State Office of Energy served as guest speakers for NITEC. The two shared information regarding Nevada's buying power for tribes, transmission planning, current EPA and DOE funding, and status reports for Nevada's energy program.
- WEPD staff networked with the U.S. Department of Agriculture, Rural Development's Energy Program and the Natural Resource Defense Council, Lands and Wildlife Program. USDA presented information to NITEC regarding assistance for energy projects for Nevada Tribes. The Natural Resource Defense Council presented information to NITEC regarding issues for developing renewable energy sources on and around military ranges, airspace, and installations.
- Staff worked with Solar City to present NITEC information regarding the company's profile and tribal opportunities with solar applications.

WEPD staff and the Washoe Tribal Chairman met with the Nevada Tribal State Environmental Liaison regarding NITEC. The Nevada Tribal State Environmental Liaison will facilitate the NITEC meetings at the end of the grant project.

Staff participated in several workshops and conferences throughout the project. The workshops and conferences provided opportunities for collaboration and information sharing. Attendance at conferences and participation in workshops enhanced tribal involvement with energy programs. These workshops and conferences included:

- WEPD presented a case study regarding tribal apprenticeship programs with renewable energy projects at Good Jobs, Green Jobs Western Conference.
- WEPD participated in the Western Regional Partnership Energy and Tribal Committee meetings.
- WEPD presented at the Annual Renewable Energy Projects in Indian Country Conference.
- WEPD staff networked with Western Electricity Coordinating Council (WECC) Scenario Planning Steering Group regarding Cultural Resources Data workshop and how cultural resources fit into the WECC regional transmission planning process. Staff collaborated with WECC regarding Introduction to Systems Operations.
- WEPD staff attended NV Energy's Micro-hydro workshop.
- WEPD staff participated in NV Energy's Coffee Connect workshop.
- WEPD staff participated with USDA's Smart Rural Communities Roundtable. The roundtable involved a variety of private and public sectors with discussions on the future of internet connection and energy delivery throughout rural Nevada.
- WEPD staff presented at the DOE Annual Tribal Energy Program Reviews.

- Staff collaborated with Native Nations and presented at the Annual Energy Projects in Indian Country conference.
- WEPD staff collaborated with the Western Shoshone Tribes regarding the Spring Valley Wind Project. NITEC discussed concerns with the Spring Valley Wind Project at the Annual Energy Projects in Indian Country conference.
- Staff participated in the Tribal Lands and Environment Forum energy workgroup sessions.

WEPD staff collaborated with energy professionals regarding renewable energy throughout the project. Staff participated in energy related meetings and webinars to gather information regarding energy projects, energy resources, and project implementation.

- Staff conducted conference calls with the Nevada Governor's Office of Economic Development regarding the opportunities and benefits for Nevada Tribes of growing local produce via indoor agriculture.
- Staff collaborated with EN2 Resources, South Tahoe Public Utility District, Liberty Utility, El Dorado County Water Commission, Alpine County, and California Energy Commission regarding completion of a Regional Energy Exploration project.
- WEPD staff participated in numerous renewable energy related webinars.
- WEPD staff facilitated and participated in the Tribe's Alternative Energy Taskforce meetings.
- WEPD met with Sandia National Laboratory regarding 40 hour technical assistance.
- Staff participated in the Western Regional Partnerships Mojave Project.
- Staff collaborated with Redbridge, Inc regarding the 1st Annual Inter-Tribal Energy Tech Tour which provided the opportunity for approximately 60 Native American youth from 20 participating tribes to tour Native American energy and technology projects in California, Oregon, and Washington.
- WEPD provided information on NITEC and renewable energy at the Tribe's annual Earth Day events.

WEPD staff effectively implemented the project activities and was featured in the Office of Indian Energy's newsletter and featured in Indian Country Today Media Network featuring renewable energy projects.

WEPD staff selected a contractor to develop and present three Strategic Energy Planning workshops for Nevada Tribes. The contractor was approved by the Department of Energy. Staff worked with the selected contractor on completion of the Strategic Energy Planning workshops. The contractor completed the three Strategic Energy Planning workshops which included development of a Strategic Energy Plan, creation of an Energy Vision Statement, determination of energy needs, identification of energy infrastructure, and identification of energy resource options and priorities.

The Strategic Planning Workshops outlined the different types and availability of renewable energy in Nevada. The below figures were provided in the Strategic Energy Planning Workshops and discussed the potential viability of different resources for the Nevada Tribes to incorporated into their energy planning. Solar resources were discussed as a possibility for both

residential and commercial operations. Topography was addressed as an issue for development of solar resources. Wind resources were addressed and determined there is potential but need to study viability of the resource located off of the ridgetops. Biomass was addressed and determined to not be a viable resource in most of Nevada. Hydropower was discussed and shown as very limited on most Tribal properties. Class 2 Deep Enhanced Geothermal resource potential was shown to be present in many areas in Nevada.

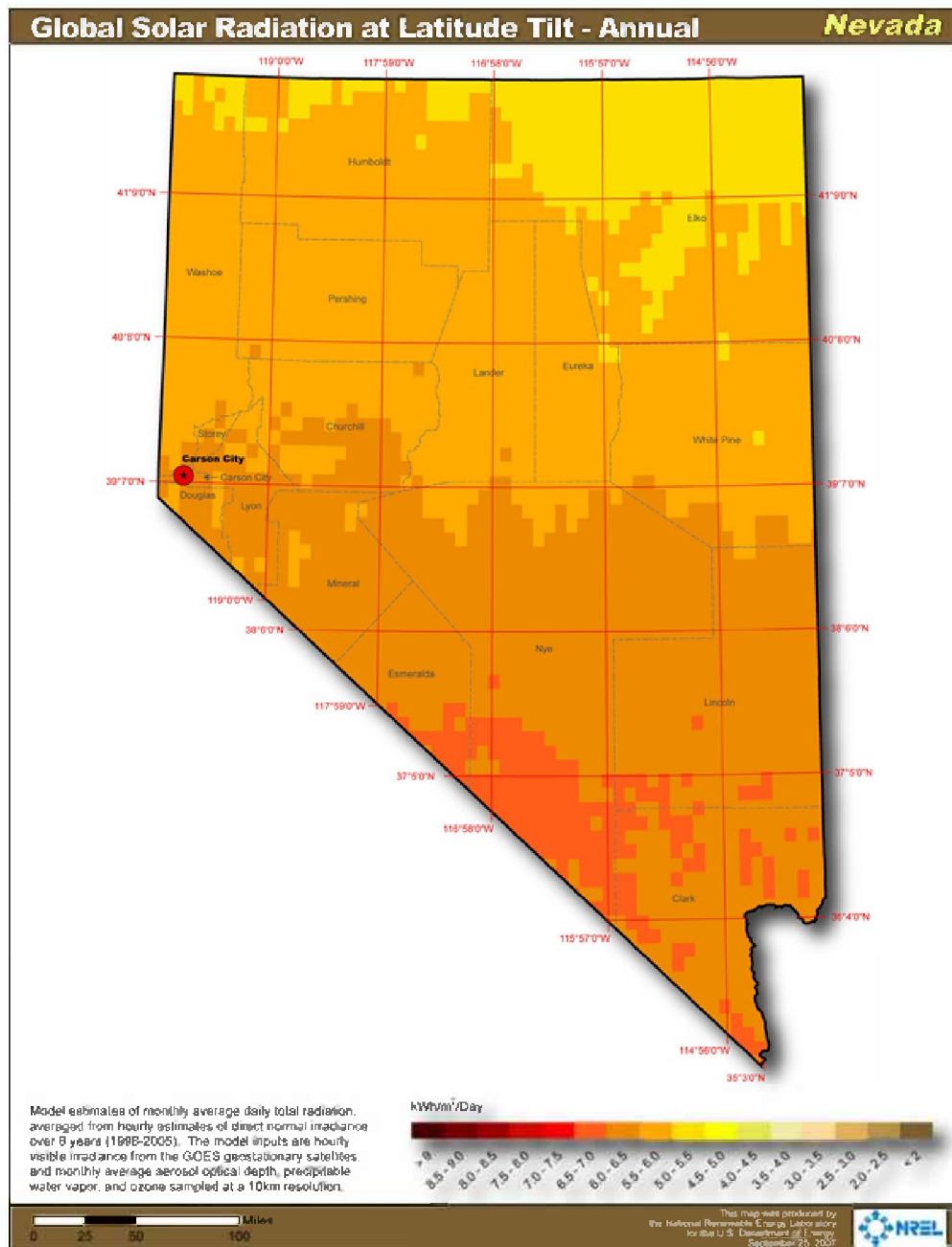


Figure 1: Solar Resources in Nevada

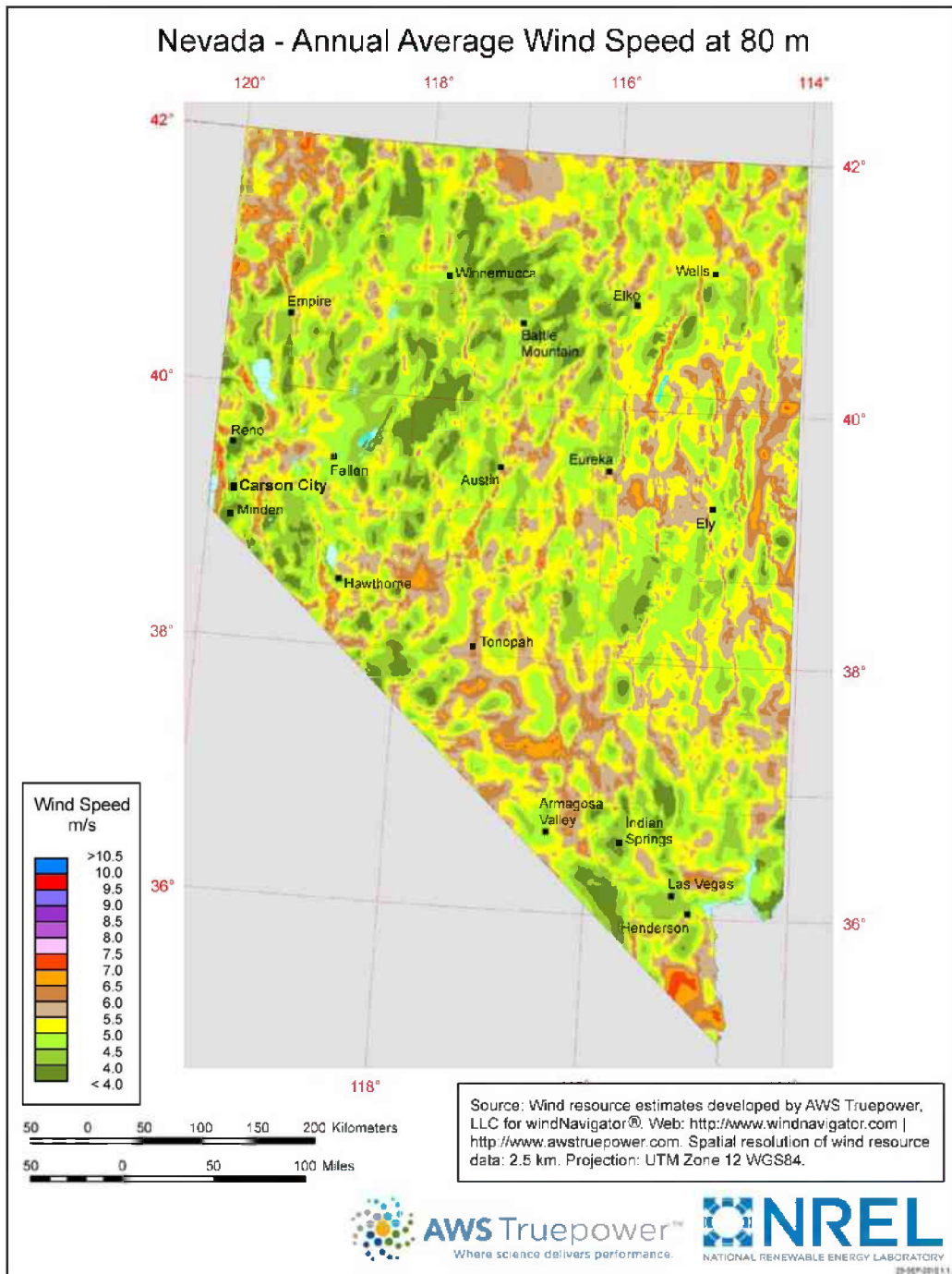


Figure 2: Wind Resources in Nevada

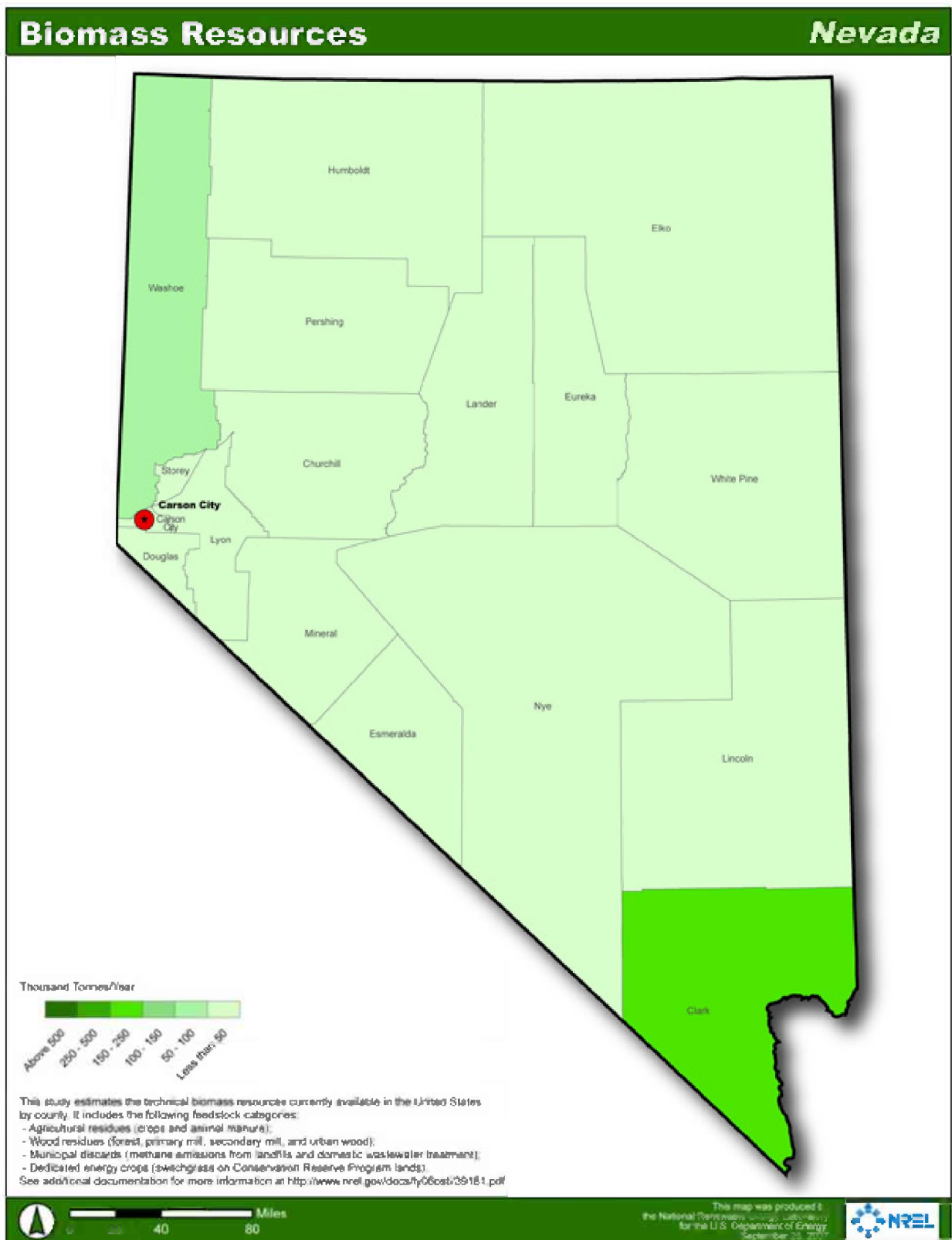


Figure 3: Biomass Resources in Nevada

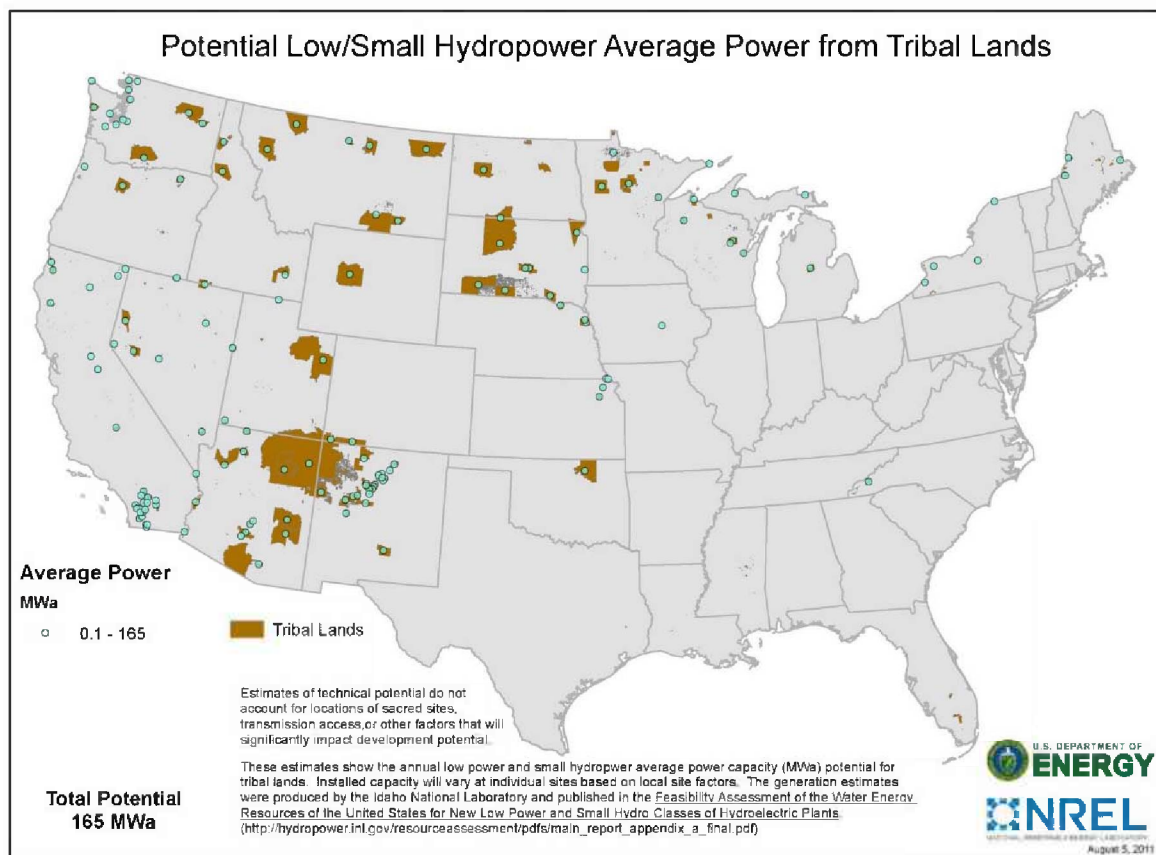


Figure 4: Hydropower Resources from Tribal Lands

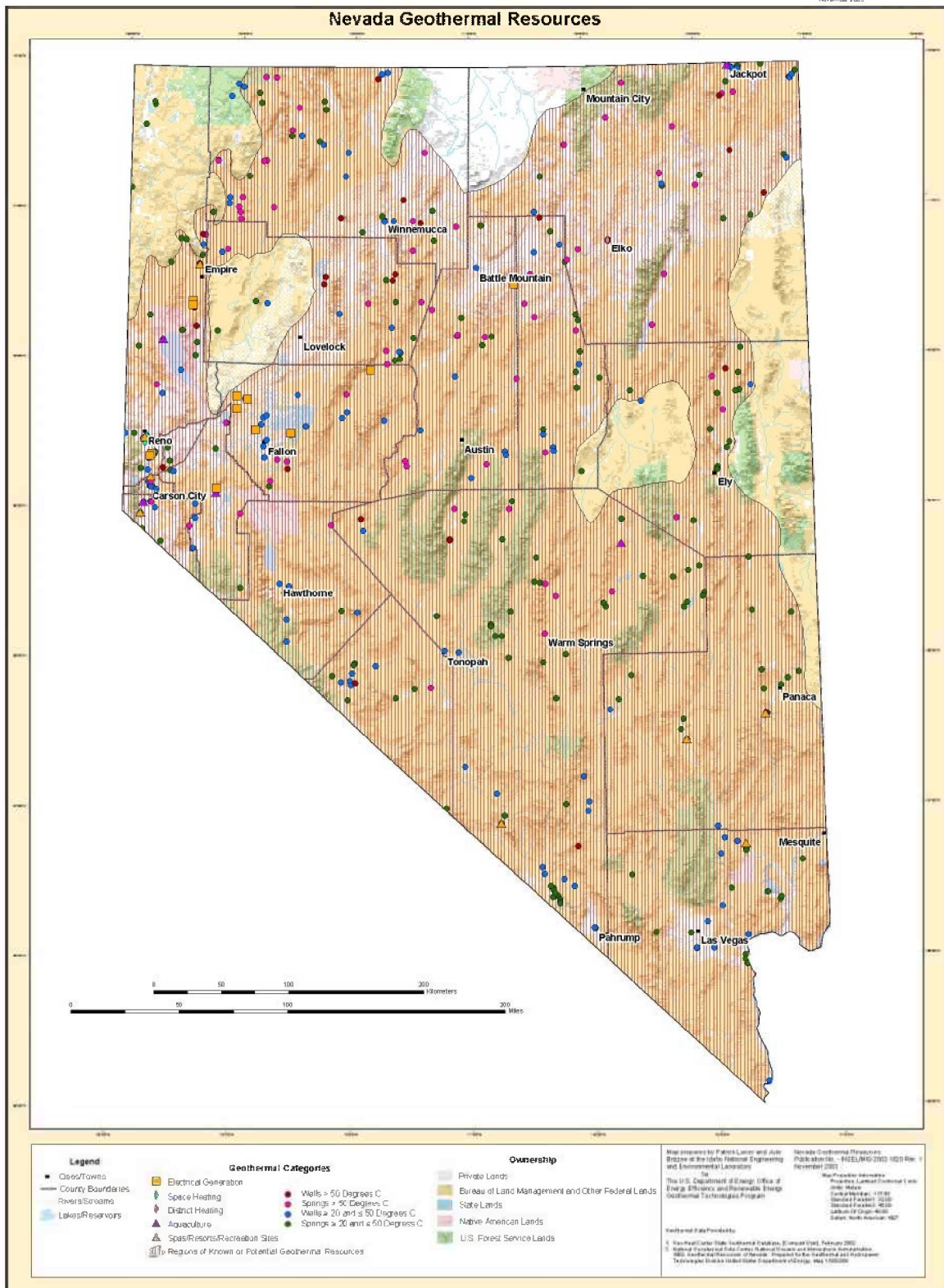


Figure 5: Geothermal Resources in Nevada

WEPD staff developed and maintained a contact database for tribes and renewable energy businesses. WEPD staff worked with the Tribe's IT department to establish a blog site for NITEC. Staff created the social networking site for the Nevada Tribes. The site contained renewable energy information including maps, on-line tools for renewable energy projects, legislative updates, and contractor information.

WEPD staff coordinated efforts with renewable energy programs, initiatives, and technical resources throughout the project. Staff completed project implementation and met all of the project objectives. All program activities were completed. The Tribal State Environmental Liaison will continue to facilitate NITEC meetings for Nevada Tribes.

Lessons Learned

The NITEC Manager position was very difficult to fill. This process took approximately 8 months longer than anticipated and resulted in very limited applicants. The time required to fill a critical position and ability to obtain applicants must be thoroughly evaluated to reduce delays in program implementation.

The NITEC project involved significant networking with Tribal and non-Tribal organizations. Networking and collaboration were critical to the project implementation. Networking with other energy organizations was important for the project success. These organizations provided energy information, education programs, and guidance regarding energy program implementation. The success of NITEC is dependent on the involvement of as many Nevada Tribes as possible and the continued networking and collaboration with other energy entities.

The project required education regarding renewable energy for the participating Tribes. There was a great need to provide and participate in workshops, conferences, and trainings with energy experts and partners regarding renewable energy and energy program implementation.

Conclusions and Recommendations

The Washoe Tribe successfully completed all project activities including program administration, energy organization enhancement and human capacity building. The project successfully planned, facilitated and attended monthly NITEC meetings providing renewable energy information to all Nevada Tribes. The completed project provided valuable information to Nevada Tribes regarding renewable energy. The project successfully conducted three Strategic Energy Planning workshops to Nevada Tribes.

The Nevada Tribal State Environmental Liaison will facilitate and continue the NITEC meetings for the Nevada Tribes.