



Northern Cheyenne Tribe: A Climate Showcase Community

The Northern Cheyenne Tribe of southeastern Montana takes climate change seriously and is doing something about it. The tribe has been progressing on a showcase demonstration project on the Northern Cheyenne Indian Reservation to reduce its greenhouse gas (GHG) emissions by 30 metric tons CO₂e annually through energy retrofits of the Tribal Environmental Protection Department (EPD) building. This project is supported by a \$200,000, two-year grant provided by the U.S. Environmental Protection Agency in 2010 through its Climate Showcase Community Program.

The primary goals of the project are to reduce greenhouse gas emissions and energy use by the tribe and to serve as a model for other tribes and additional projects on the reservation. Additionally, the tribe has been using this project as a training tool to develop energy efficiency and building-retrofitting skills among students and community members while raising community awareness about climate change, renewable energy, and energy efficiency.

The Northern Cheyenne Tribe has deeply rooted cultural and historic connections to the land, wildlife, and water on the reservation. The tribe's dedication to sustainability practices, commitment to protecting its resources, and awareness of the necessity of a healthy ecosystem for the well being and health of people are driving forces behind the desire to reduce its carbon footprint. The project also provides the tribe with opportunities to align its energy needs and use with its ecological and cultural values while providing many additional benefits.



The Northern Cheyenne Indian Reservation.

About EPA's Climate Showcase Community Program

In 2009 and 2010, the U.S. Environmental Protection Agency (EPA) awarded \$20 million in competitive grants to help local and tribal governments establish and implement climate change initiatives. The overall goal of the Climate Showcase Communities Program is to create replicable models of cost-effective and persistent greenhouse gas reductions that will catalyze broader local and tribal government actions to stabilize the climate and improve environmental, economic, health, and social conditions. Tribes that received the grants are Santa Ynez Band of Chumash Indians, Choctaw Nation of Oklahoma, Confederated Tribes of Siletz Indians, Gila River Indian Community, Northern Cheyenne Tribe, and Tanana Chiefs Conference. EPA does not anticipate issuing future funding solicitations for the Climate Showcase Communities program.

The tribe will see cost savings as buildings become more efficient through improved weatherization and energy efficiency, reducing the amount of electricity used for heating and cooling. Environmentally, greenhouse gas emissions will be reduced as the tribe lessens its dependence on fossil fuel. Additionally, the tribe will increase its use of sustainability measures and enhance its long-standing commitment to protecting and preserving the natural environment.

Providing job opportunities for tribal members is a major priority, especially given the tribe's high unemployment rates (about 50-70%). The building efficiency and retrofit projects provide training to students and community members, giving them marketable skills that are transferable to the growing green job market. Through the development of training programs and budding partnerships with community colleges and local organizations, community members and recent graduates will find more reasons to stay on the reservation, giving back to their community and helping to develop the local economy.



Participants in one of the trainings.

Project Implementation and Progress

Collaborative partnerships have been tremendously helpful in developing and implementing the building retrofit program. To date, the tribe has achieved many of its project goals.

Completed tasks include:

- Performing a feasibility study on the EPD building, including the goals for green building strategies, architectural building plans, and code and cost analysis. The feasibility study is a key component in the construction bidding process.
- Retrofits, including the installation of energy efficient windows and a tankless water heater.
- Developing an energy efficiency and strawbale building course. The course will be offered by Chief Dull Knife College to train students on energy-efficient straw bale building techniques.
- Contracting with local organizations/businesses to conduct three training courses for interested students and community members. Topics include energy audits, energy efficiency, and small-scale renewable energy. Results included the installation of 10 solar air heating systems in private residences.
- Conducting community education and outreach events to inform community members of the EPD building efficiency retrofit project.

The tribe has accomplished much in a short time and plans to continue moving forward in its efforts. Some of their future goals include:

- Updating the insulation in the walls and roof of the EPD building.
- Installing composting toilets and a greywater system for outdoor irrigation to reduce water consumption.
- Installing photovoltaic panels on the EPD building roof to supply renewable solar energy.

Challenges and Lessons Learned

In addition to the project's successes, there have been challenges and lessons learned. Regardless of the amount of planning, it is impossible to anticipate every obstacle, and the EPD building retrofit project was no exception. One challenge emerged as the project moved from the conceptualization and planning phase to the building and installation phase. Initially, the project team had no Green Building guidelines in place, making it difficult for contractors to work collectively toward a common goal. However, out of this came one of their best accomplishments—a building feasibility study that was completed in October 2011. Developed in collaboration with contracted architects, the feasibility study created a useful roadmap of codes, plans, and ideas. The study also helped enhance the building's eligibility for the highest LEED building certification level, LEED Platinum.



Participant in energy efficiency training gets hands-on experience.

Another obstacle the project team encountered was an unanticipated low turnout for the energy-audit training course. On the other hand, the training sessions on solar heating and energy efficiency were well attended. In retrospect, the tribe attributes the initial low response to insufficient advertising, which reduced awareness of the training opportunity among community members.

Key Partners

Implementation of the project has been highly dependent on collaborative partnerships among many tribal departments, the local tribal college, non-profit organizations, and others. Without these relationships, completing the project would have been a daunting task. Partners in the project include:

- **Chief Dull Knife College:** The tribe worked closely with the college president, board members, instructors, and students to discuss the grant, project goals, and potential student participation. They developed a straw bale building course for students, as well as training courses on energy efficiency, small-scale renewable energy, and energy auditing for interested students and community members.
- **National Wildlife Federation's Tribal Lands Conservation Program (NWF):** The NWF, an organization experienced in partnering and working with tribes on climate change issues, is playing a key role in helping the tribe develop and implement its weatherization and energy efficiency programs.
- **Intertribal Council On Utility Policy:** Intertribal COUP is conducting workshops on energy efficiency, energy planning, and renewable energy.
- **Lakota Solar Enterprises:** Lakota Solar Enterprises is one of the first 100% Native American-owned and operated renewable energy companies. The organization is

helping to teach students and community members how to manufacture solar air heaters for use in tribally owned buildings.

- **Tongue River Electric Cooperative (TRECo):** TRECo is conducting pre- and post-retrofit energy audits on the EPD building. They are also providing technical assistance regarding energy retrofits and usage as well as summaries detailing the building's post-retrofit energy use.

About the Northern Cheyenne Tribe

The Northern Cheyenne resided in the Great Lakes region before making a long journey westward to settle in the Northern Plains. The Fort Laramie Treaty of 1851 assigned a vast territory of the Plains east of the Rocky Mountains to the Cheyenne and Arapahoe tribes. In 1868, some of the Cheyenne and Lakota signed a treaty that created the Great Sioux Reservation, which included much of today's Montana, Wyoming, Nebraska, and portions of the Dakotas. However, neither side abided by the treaty. In the 1870s, the Northern Cheyenne were taken to Oklahoma to live with the Southern Cheyenne. They didn't adjust well to the hot, muggy climate and inadequate rations and left in 1878 on a long trek north. The Tongue River Indian Reservation, now known as the Northern Cheyenne Indian Reservation, was created in 1884. The reservation is in southeastern Montana. It now comprises about 440,000 acres, with 99% tribal ownership. There are approximately 9,970 enrolled tribal members, about half residing on the reservation, which is located in a rural area and is surrounded by ranching and energy development activity (coal). The tribe was concerned about the impacts of coal activity on the quality of their air, and in the 1970s, designated its reservation as a Class I attainment area. This is the most stringent level of clean air under the Clean Air Act, giving its air quality the same level of protection as national parks and wilderness areas. The tribe was the first government—state, local, or tribal—in the country to choose the Class I designation.



Resources and References

Northern Cheyenne Tribe: www.cheyennenation.com/

U.S. EPA's Northern Cheyenne Tribe project webpage:
www.epa.gov/statelocalclimate/local/showcase/cheyenne-tribe.html

U.S. EPA's Climate Showcase Community Program:
www.epa.gov/statelocalclimate/local/showcase/index.html

Ambler, M. et al. 2008. *We, the Northern Cheyenne People: our land, our history, our culture*. Lame Deer, Montana: Chief Dull Knife College. www.archive.org/details/wenortherncheyen2008amblich

Native Languages of the Americas: Cheyenne: www.native-languages.org/cheyenne.htm

Chief Dull Knife College: www.cdkc.edu/

Intertribal Council on Utility Policy: www.intertribalcoup.org/

National Wildlife Federation's Tribal Lands Conservation Program: www.nwf.org/Wildlife/What-We-Do/Tribal-Lands.aspx

Lakota Solar Enterprises: www.lakotasolarenterprises.com/

Tongue River Electric Cooperative (TRECco): www.tongueriverelectric.com/

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Photos in this profile are courtesy of the Northern Cheyenne Tribe.

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The tribal climate change profiles featured on the Tribes & Climate Change website are intended as a pathway to increasing knowledge among tribal and non-tribal organizations about climate change mitigation and adaptation efforts.

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