

Grantee: Alaska Power & Telephone Company
Project Name: Tok/Chistochina Intertie
Grant # 0116-DC-2004-I4
Authority Contracting Department of Energy

Grant Project Completion Report

Background:

The village of Chistochina, with a population of 100, is approximately 91 road miles southwest of Tok on the Glenn Highway Tok Cutoff. Chistochina is located in the Chitina Recording District. The climate in Chistochina is continental, characterized by long, cold winters and relatively warm summers. Total annual precipitation averages 13 inches, with annual snowfall averaging 61 inches. Temperature extremes from a low of -62 to a high of 91 degrees Fahrenheit have been recorded

Started as an Ahtna fish camp and stopover for trapper and traders, the eventual village access road formed part of the Valdez to Eagle Trail, which was constructed by miners during the gold rush to the Eagle area in 1897. The U.S. Army Signal Corps used the trail for construction of telegraph lines from Valdez to Eagle between 1901 and 1904. Gold mining along the upper Chistochina River and ancillary creeks led to building Chistochina Lodge as a roadhouse for prospectors. Although the area was settled by homesteaders, it is a traditional Native village with 63% of the population all or part Athabascan Indian known as the Cheesh-Na Tribe.

With limited employment options in the area subsistence activities constitute major portions of the village's lifestyle. The 2000 U.S. Census showed an unemployment rate in Chistochina of 41%, although 64% of all adults were not in the work force. With a median household income of \$24,107 and per capita income of \$12,362, nearly 29% of residents live below the poverty level (per Alaska Community Database Community Information Summaries). Based on these statistics, the Denali Commission classifies Chistochina a *Distressed Community*.

Activities:

In December 2003, the Denali Commission awarded a grant of \$1,917,000 and the Department of Energy granted another \$1,917,000 to Alaska Power & Telephone Company (AP&T) to construct power lines between Chistochina and the surrounding villages of Mentasta and Slana. In May 2005, the Denali Commission awarded another \$1,967,800 to upgrade the generation equipment in Slana to power all three villages from one facility.

Construction started nearly immediately building line through area where permit and rights-of-way were readily established. This winter construction focused predominately on cross wetlands and marshy areas. Construction tended to skip around the loop as easements were established and permits issued. Crossing the Chistochina River Bridge require substantial work with Alaska Department of Transportation (AKDOT) officials developing plans to attach the new power line

to the underside of the a bridge. The underground (URD) and bridge attachment work was started in November 2005 and finished after spring breakup in 2006.

Permitting negotiations with the Bureau of Land Management (BLM), National Park Service (NPS), the Department of Natural Resources (DNR), Cheesh-Na Tribal Council, and Alaskan Native Corporation, Ahtna, Inc, for the necessary utility easement, stretched well into 2006. Subsequent to the permitting process, preliminary residential site surveys were conducted, and acquisition of the landowners required paperwork was obtained. During the third and fourth quarters of 2006, permits were awarded by U.S. Army Corps of Engineers and State of Alaska Department of Fish & Game's Division of Fish Habitat; we installed the two riser poles at the bridge, pulled the URD cable through the bridge conduit, and completed the URD attachments; a large portion of the right-of-way was flagged, cleared, and staked; and poles were delivered along the route. In 2007 the remaining right-of-way work was completed, the poles were set, and wire was strung, sagged, and clipped.

Project Cost:

Department of Energy Grant	\$1,917,000
Denali Commission Grant	3,884,800
Alaska Power & Telephone	218,393
Total Project Budget	<u>\$6,020,193</u>
Labor Costs	\$1,297,074
Direct Materials	2,265,393
Other Materials	1,315,196
Vehicle Costs	585,887
Applied G&A	556,643
Total Project Cost	<u>\$6,020,193</u>

Project Outcomes:

The construction of our line extension infrastructure eliminated the need for a large self-generation need in the area. One such case is a bed & breakfast business having waited 32 years for commercial power. Residents and business were freed of the expense and responsibilities of maintaining their own power systems. In addition, the entire area will see a reduction of noise and emissions pollution resulting from self-generation. We have heard from several residents that their family members are planning to return to the area and build homes now that commercial power is available.

Problems Encountered:

The most problematic hurdle encountered was obtaining utility easement from the various governmental agencies. Other challenges faced were obtaining AKDOT engineers' approval for our underground bridge attachment, obtaining the needed URD hanging attachment material, and our subcontractor's multiple equipment break downs during right-of-way clearing.

Two additional areas creating problems were archeological finds along the line route and materials availability and costs. Archeological studies were mandated routinely during ground

disturbing activities as part of the permit process. The studies revealed only once yield anything of interest. The line had to be rerouted around a native cache to avoid disturbing it. Materials cost and availability sky rocketed in the aftermath of the Iraqi war and again after Hurricane Katrina.

Conclusions and Recommendations:

The benefits of this project can be enjoyed and appreciated by current and future residents. While this line extension provides service to the current area residents, it is also a stepping stone to extend commercial power to businesses and residents between Chistochina and Slana in the years to come.