

Nushagak Area Hydropower Project

Grantees	Nushagak Electric and Telephone Cooperative (Utility-Cooperative)
Technology Type	HYDRO
Region	Bristol Bay
AEDG Project Code	10009

REF Grants Received

Round	App	Grant Title	Grant #	AEA Project #	Phase	Start Date	End Date	Status
1	6	Nushagak Area Hydropower Project	2195419	407035	Feasibility	8/20/08	6/30/14	Closed
3	435	Nushagak Area Hydropower Project 2	7030005	407069	Feasibility	7/1/10	7/31/10	Active

Grant 2195419: Nushagak Area Hydropower Project

Project Scope: The project scope is being amended to account for a change in the licensing process and to increase the budgets for several already approved tasks. The project originally was found to be non-jurisdictional by the Federal Energy Regulatory Commission (FERC). However, in the Spring of 2012, the licensing approach was changed to voluntarily fall under FERC's licensing process to provide for more certainty of process and timely responses from resource agencies. Nushagak Electric and Telephone Cooperative (NETC) has requested to use the Alternative Licensing Process. They received a FERC Preliminary Permit for the project in April 2012. The amendment increases the allocated grant budget by \$1,005,000 to a new total of \$2,030,000. The balance of the grant funding remains unallocated at \$2,001,500. The following task budgets are increased by this amendment: Phase 1 Feasibility Study Lake Elva & Grant Lake (\$200,000), site control (\$5,000), stream gauging (\$100,000), meetings (\$25,000), resource study recon (\$35,000) and environmental studies (\$640,000). The increase in environment study funding will benefit the following resource-specific studies: fisheries, water quality, bathymetry, instream flow, wildlife and cultural resources. The engineering budget increase will support more in depth analysis based upon improved hydrology and environmental data, and be expanded to include operations modeling, LIDAR surveys and a detailed transmission line feasibility study. It is expected all deliverables for the expanded budget tasks will be completed by January 2013, at which time a go-no-go decision point will be made to evaluate the future direction for this project.

Project Status: The Conceptual Feasibility Study (October 2013) has been completed and results indicated that both of the Grant Lake Project Alternatives analyzed would be economically feasible (Benefit/Cost Ratio greater than 1.0), under the economic conditions analyzed. The Lake Elva Project, however, would not be economically feasible (Benefit/Cost Ratio less than 1.0) under any of the base conditions analyzed.

Recommendations for additional work include assessing load growth, integration with wind and other sources of generation, continue with the FERC licensing of the Grant Lake Project, conduct additional geotechnical investigations, and perform additional hydrological analysis particularly for winter flows.

The study includes a transmission study that contradicts the finding of feasibility in the main report. Also the economical assumptions are limited to a single case that has an unrealistic growth rate for fuel cost. Overall the feasibility effort appears flawed in the scope of analysis, assumptions, conclusions, and recommendations.

Enabling legislation was enacted authorizing these projects in the Wood-Tikchik State Park prior to the completion of this study and the Chikuminuk study which has been shown to be a more economical project. Further action on these projects is not expected at this time.

As of Nov. 30, 2013	Budget	Expenditures
Renewable Energy Funding	\$1,873,223.18	\$1,873,223.18
Other State Funding	\$25,000.00	\$25,000.00
Total State	\$1,898,223.18	\$1,898,223.18
Required Local Match	\$0.00	\$0.00
Federal Grant Funding	\$0.00	\$0.00
Total Project Costs	\$1,898,223.18	\$1,898,223.18

Grant 7030005: Nushagak Area Hydropower Project 2

Project Scope: The scope of work for this grant was added and funded with uncommitted funds remaining in the existing Nushagak Hydropower Project grant, 2195419.

Project Status: \$700,000 of the uncommitted Round I funds, 2195419, were made available for completion of feasibility activities; therefore, this grant was cancelled before grant award.