

Alaska Rural Energy Federal Program

FY2006 Request: \$1,000,000

Reference No: AMD 40603

AP/AL: Appropriation

Project Type: Planning

Category: Natural Resources

Location: Statewide

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House District: Statewide (HD 1-40)

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Estimated Project Dates: 07/01/2005 - 06/30/2007

Brief Summary and Statement of Need:

The Alaska Rural Energy Program will evaluate alternative energy sources and develop a detailed database of the geologic, hydrologic and geographic characteristics for remote Alaska communities that may benefit from these energy sources to replace conventional diesel fuel, including shallow gas, geothermal, solar or wind. The program may drill and assess the shallow gas potential at high potential sites. This project seeks to meet the department's goal of encouraging resource development that ensures economic growth in all regions of the state and create new Alaska jobs. Remote communities would reduce their dependence on imported diesel fuel by utilizing local energy sources.

Funding:	<u>FY2006</u>	<u>FY2007</u>	<u>FY2008</u>	<u>FY2009</u>	<u>FY2010</u>	<u>FY2011</u>	<u>Total</u>
Fed Rcpts	\$1,000,000	\$1,000,000	\$1,000,000				\$3,000,000
Total:	\$1,000,000	\$1,000,000	\$1,000,000	\$0	\$0	\$0	\$3,000,000

<input type="checkbox"/> State Match Required	<input type="checkbox"/> One-Time Project	<input checked="" type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input checked="" type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

Operating & Maintenance Costs:

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	0
Totals:	0	0

Additional Information / Prior Funding History:

This is a new project request. Previously, a federal and state consortium purchased a slim-hole coring drill rig to evaluate shallow gas resources. This drill rig can be utilized in this project and in future years

Project Description/Justification:

- ? The Alaska Rural Energy project will survey and determine the possibilities for the development of alternative energy resources in remote areas of the state for local use by communities or mine sites. The project meets statutory responsibility (AS 41.08.020) of the Division of Geological & Geophysical Surveys to determine the potential of Alaskan land for production of fuels and to conduct surveys and investigations that will advance knowledge of the geology of the state.
- ? Alaska contains enormous potential reserves of shallow coalbed methane and shalebed methane resources in remote areas of the state. Coalbed gas is a low cost, clean burning fuel that is comparable in heating value (~1,000 Btu/scf) to conventional natural gas. Up to 40 rural communities are located on or near coal deposits. The proximity of coal seams at shallow depths near these communities both reduces the drilling costs and the expense of building a pipeline to the nearby town should producible amounts of coalbed methane be present. Despite all these prospective local energy sources, rural Alaska communities still depend on partially subsidized and costly diesel fuel for heating and electrical power generation, and this program seeks to replace that method by evaluating cost-effective and cleaner local energy supplies. To sustain a village through the entire winter, large oil storage facilities hold the diesel fuel delivered by barges or air transport during the summer, presenting the

potential for catastrophic fuel spills during transportation, and surface and ground-water pollution from leaking storage tanks. Where economically feasible to produce local gas resources, eliminating large fuel storage tanks with natural underground shallow gas reserves will reduce the health risk from contaminated water supplies.

- ? The power cost equalization (PCE) program provides economic assistance to customers in 181 rural communities to equalize the power cost per kilowatt-hour statewide at a cost of over \$15M per year. Where successful, economic production of alternative energy resources in rural communities could provide less costly heat and power and reduce state PCE subsidies, thereby reducing state operating costs.
- ? This project seeks to meet the goal of encouraging resource development that would reduce rural communities' dependence on imported diesel fuel by utilizing local energy sources. A small shallow gas field in a remote basin, sub-commercial by industry standards, could represent an economically viable, long-term energy resource for a small village or major mine site. For development to occur, the costs of exploration, development and production of coalbed gas must compare favorably to the existing cost of supporting the current diesel fuel based system. This project will identify and quantify new shallow gas resources available for private sector development that would provide new income and create new private jobs from within the region in the sale of a locally produced energy commodity.
- ? The total project costs are based on estimates of helicopter-based field examinations and drilling of shallow gas resources in remote sedimentary basins.

Why is this Project Needed Now:

The cost of diesel fuel required for heating and electrical power generation in rural Alaska has increased significantly over the past several years due to the increasingly high cost of diesel fuel. Conducting this study now will provide new information that can be used to develop and provide alternative sources of energy in rural areas. Where alternative energy resources are found and developed at a lower cost to the rural consumer, state subsidies through PCE can be reduced. The impacts of not conducting this project are continued high rural energy costs in areas where other local energy resources may be available.

Specific Spending Detail:Line Item Expenditures:

Personal Services \$150.0 Description- salary and benefits for a geologist for two years at \$75K per year.
Travel \$50.0 Description - Airfare and helicopter-based field studies of shallow gas basins.
Services \$750.0 Description - Helicopter contracts, transportation of drill rig and supplies, drilling costs.
Commodities \$50.0 Description- Computer software maintenance agreements, office and plotter supplies

Project Support:

Support and advocacy is expected from the Arctic Slope Regional Corporation, North Slope Borough, Bristol Bay Native Corporation, Bristol Bay Native Association, Lake & Peninsula Borough, Doyon Limited, Tanana Chiefs Conference, city and tribal governments and Native village corporations of Wainwright and Chignik, other regional corporations, University of Alaska Fairbanks.