

Alternative Energy and Energy Efficiency Programs

FY2014 Request: \$2,000,000

Reference No: 49735

AP/AL: Appropriation

Project Type: Energy

Category: Development

Location: Statewide

House District: Statewide (HD 1-40)

Impact House District: Statewide (HD 1-40)

Contact: Sara Fisher-Goad

Estimated Project Dates: 07/01/2013 - 06/30/2018

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Brief Summary and Statement of Need:

This project is for the development of alternative energy research and development, resource assessments, regulatory and permitting issues, outreach and stakeholder involvement for alternative energy programs.

Funding:	<u>FY2014</u>	<u>FY2015</u>	<u>FY2016</u>	<u>FY2017</u>	<u>FY2018</u>	<u>FY2019</u>	<u>Total</u>
Gen Fund	\$2,000,000						\$2,000,000
Total:	\$2,000,000	\$0	\$0	\$0	\$0	\$0	\$2,000,000

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

Prior Funding History / Additional Information:

Project Description/Justification:

The Alternative Energy and Energy Efficiency (AEEE) programs provide strategic critical support for the Renewable Energy Fund that makes the funds more effective and identifies high-quality potential projects for the fund. This capital project provides funds for reconnaissance level studies to help identify locations and projects where these renewable energy sources exist and could be used cost effectively. It is a cost effective way to establish base-line information of a resource area without multiple individual applicants to the Renewable Energy Fund requesting funds for redundant studies. Just this year, eight round-six Renewable Energy Fund biomass applications were a direct result of these high-quality feasibility studies. The Delta school, Tok school, and Thorne Bay biomass projects are all successful results of the reconnaissance studies feeding into the Renewable Energy Fund.

In addition to providing a quality "pipeline" of qualified projects to the Renewable Energy Fund, this program also knocks down barriers and solves problems in each of the different renewable energy technology types. Each program area (hydroelectric, wind, biomass, heat recovery, hydrokinetic, and geothermal) works on statewide resource assessments, regulatory and permitting issues, and outreach and stakeholder involvement in order to advance effective renewable energy in Alaska.

The Alternative Energy and Energy Efficiency programs provide the foundation upon which the Renewable Energy Fund operates and is critical to both the fund's effectiveness as well as critical for

proper development of renewable energy technologies. Two million dollars in general funds will support the continuation of the AEEE programs. State funds will be used to provide support for these programs where federal funding is not available.

The AEEE program includes the following focuses and projects:

AEA's biomass energy program focuses on developing wood-fired systems that displace fuel oil for heating public facilities, assessing opportunities for developing liquid fuels such as biodiesel, and recovering energy from municipal solid waste.

Combined heat and power project development activities, including "waste" heat recovery, are supported through a U.S. Department of Energy (USDOE) cost-share program. AEA routinely includes heat recovery in Rural Power Systems Upgrade (RPSU) projects.

Energy Data Inventory program activities include preparation of the Alaska Energy Statistics publication and maintenance and expansion of the web-based geographic information system <http://akenergyinventory.org/> that houses renewable and fossil resource, energy production and use, and energy infrastructure data.

Geothermal energy program assists communities in identifying and planning geo-power and direct heating projects. AEA coordinates the statewide Geothermal Working Group of industry, academic, and government officials interested in geothermal development.

Hydroelectric Power project development work includes inventorying and scanning hydro feasibility reports and performing site-specific assessments of potential hydroelectric projects in partnership with the U.S. Army Corps of Engineers.

Ocean and River energy program assesses tidal, in-stream flow and wave energy resources and technology options for power production. USDOE and other federal agencies are anticipated co-funding sources through the federal Marine Energy Technology Advancement Program.

Wind Energy development activities include wind resource mapping and assessment, technical assistance and training, AEA's meteorological tower loan program for onsite assessment, project siting and bird habitat impact assessment, conceptual design and technology analysis for hybrid wind-diesel systems, and evaluation of field results from operating systems required for additional federal construction funds.

AEA's energy efficiency programs focus on public buildings, commercial buildings, and small industrial facilities such as seafood processing plants, and public infrastructure such as street lighting and water/sewer infrastructure. AEA's core efficiency programs are focused on two primary goals: 1) achieving the most energy efficiency gain for the dollar, and 2) providing services where energy costs are critically high. AEA coordinates closely with AHFC, which provides the residential programs and a complimentary public building program.