

Renewable Energy Fund Round 1 projects

Alaska Energy Authority

LB&A Report

2/25/2010

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February 25, 2010

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Introduction

Project Development and Grant Progress

Grants Progress

To date AEA has issued grants for 60 Round 1 projects. Grants have not been issued for 13 projects. Applicants have decided not to proceed on two projects: Nikolaevsk Wind Farm final design and Galena Wood Heating construction. AEA is reallocating funds for these projects to the Takatz Lake Hydro feasibility project as directed by the Legislative Budget and Audit Committee.

Maximum funding amounts of \$4 million and \$2 million were established in high and low energy cost communities respectively in order to achieve a wider geographic distribution of projects. Although the funding caps did enhance geographic spreading, they also resulted in delaying construction of five projects totaling \$15.7 million. They are as follows:

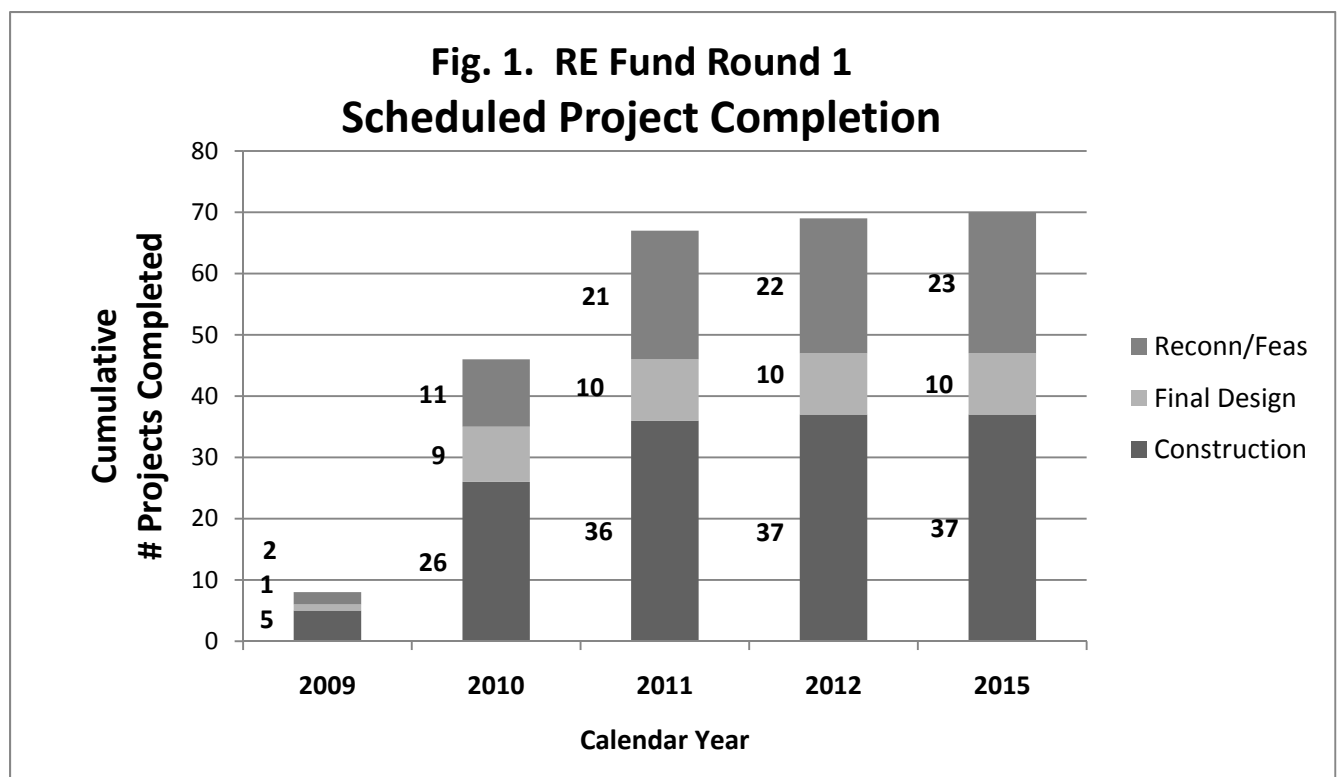
1. Kotzebue Electric Association Wind Farm Expansion (\$4 million). KEA and AEA staff are working to modify scope of work to address the decreased available funding. KEA has submitted an application in Round 3 that is recommended for funding.
2. Nome Joint Utilities Newton Peak Wind Farm Construction (\$4 million). NJUS and AEA staff working to modify the scope to address the decreased funding and the need to integrate the new Banner Ridge wind farm.
3. Haida Corporation and Alaska Power and Telephone Reynolds Creek Hydroelectric Construction (\$2 million). Haida Corp and AP&T are requesting a Round 3 grant and financing from the Power Project Loan Fund for the balance of the project.
4. Delta Greeley School District Wood Chip Boiler Heating System (\$2 million). Delta Greeley SD has requested funding from Round 3 for the balance of funding for the project. A grant is in place for Round 1 funds.
5. Nushagak Cooperative's Lake Elva Hydroelectric (\$4,006,500) also has construction funds but insufficient financing. A grant is in place, with \$300,000 available for preconstruction activities with the remainder reserved for construction. In Round 3 AEA has recommended reallocation of \$700,000 of these funds for preconstruction activities for Grant Lake Hydro, a related project.

Progress on Projects

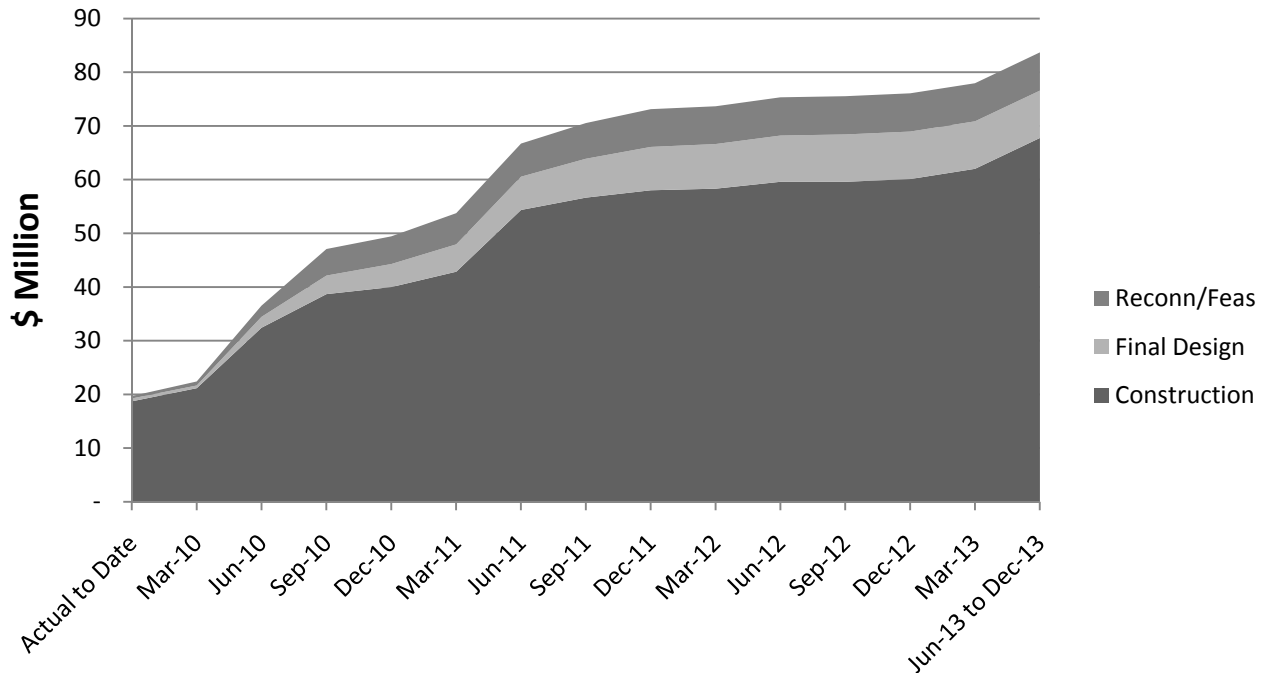
This section provides a summary of the progress of the projects.

Figure 1 summarizes expected progress on completing Round 1 projects broken down by the of project development phase (Reconnaissance/Feasibility, Final Design/Permitting, and Construction. By the end of calendar year 2010, AEA expects that 46 projects will be completed. Most of the remaining projects are expected to be completed by the end of calendar year 2011.

Figure 2 provides a cumulative projected drawdown of grant funds by quarter to the end of calendar year 2013. By the end of 2010 AEA anticipates disbursing approximately \$50 million to grantees for Round 1 projects. AEA anticipates disbursing approximately \$73 million by the end of 2011. 81% or the total disbursements will be for construction projects.



**Fig. 2. RE Fund Round 1
Estimated Grant Drawdown (Cumulative)**



Cost Savings

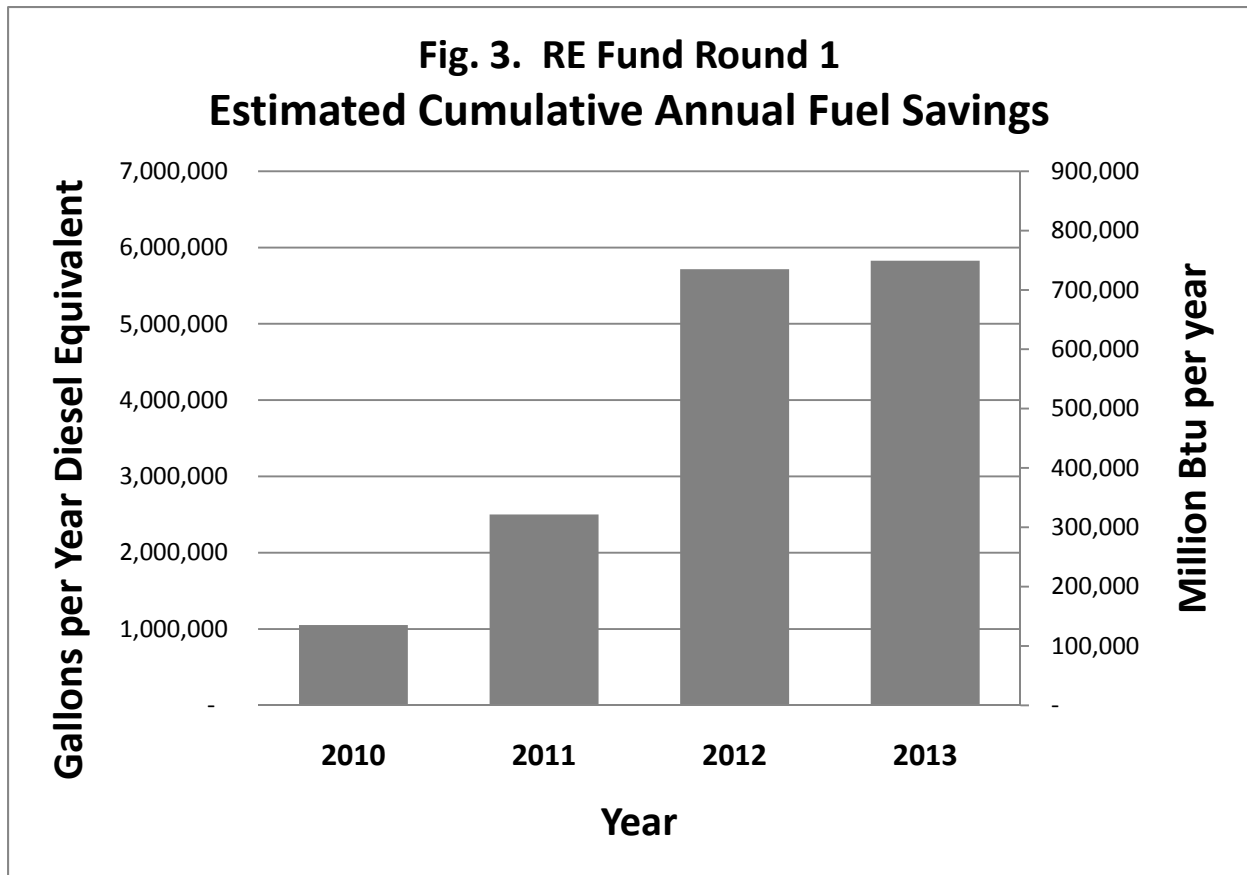
Cost savings can only be assessed after projects are in operation and have enough performance data to provide a realistic picture of fuel savings and operation and maintenance costs. Fuel price will also have a very great impact on savings.

Currently two Round 1 projects have been completed and in operation long enough to assess savings. AEA provided the following information on cost savings for Kodiak Electric's Pillar Mountain wind project and Gustavus Electric Company's Fall Creek Hydro Project in September 25, 2009. No new factors have arisen that change the observed savings.

1. Pillar Mountain Wind Farm. KEA estimates savings of 5.8 cents per kWh of power generated by wind, assuming the current displaced fuel price of \$2.10 per gallon. They estimate savings of 12.7 cents per kWh of power generated by wind if the fuel price rises to \$3.00 per gallon. The estimated annual wind production is 12.2 million kWh, giving a community savings of approximately \$708,000 per year at \$2.10 per gallon fuel and \$1,549,000 per year at \$3.00 per gallon fuel. Savings are translated to a lower cost of power adjustment (fuel adjustment) on the consumers' bills.
2. Falls Creek Hydroelectric. GEC estimates savings of 29.3 cents per kWh of hydropower assuming a displaced fuel price of \$3.00 per gallon. The hydro plant is expected to generate almost all of the community's electric energy. Given sales of 1,572,316 kWh in fy08, this translates to total savings of over \$460,000 per year (before PCE). Savings will increase as fuel costs increase.

In the meantime, the best data available for assessing savings of other Round 1 projects is based on material submitted by applicants and evaluated by AEA, UAA Institute of Social and Economic Research, and private economists during proposal review. Figure 3 provides an estimate of cumulative yearly diesel and natural gas fuel savings over the next several years. The analysis assumes that savings will accrue during the year following completion of construction. Units are given in million Btu or diesel gallon equivalent for simplicity.

By the end of 2010 fuel savings are expected to be approximately one million gallon equivalent per year. By the end of 2011 savings are anticipated to be 2.5 million gallons per year. By the end of 2012 savings are estimated at 5.8 million gallons per year. Actual savings to the consumer will be assessed through collection of detailed data through a monitoring program.



Appendix: Renewable Energy Fund Round 1, Project Status

Alaska Power & Telephone Co

North Prince of Wales Island Intertie Project

PBO 318; Grant No: 2195360; Project No: 409018

RE Fund Grant:	\$3,752,181	Project Type:	TRANSMISSION
Match:		Applicant Type:	Utility
Other Funding Sources:	2,402,838	Region:	SOUTHEAST
Total Project Cost:	\$6,155,019		
RE FUND EXPENDED	\$824,626	As of 2/15/2010	

Project Description:

AP&T will construct a line extension to the communities of Coffman Cove and Naukati Bay, placing these communities on the Prince of Wales Island (POW) electric grid which is supplied with hydroelectric power from two projects. The total line is to be 48 miles (Coffman Cove = 37 miles; Naukati Bay = 11 miles) of overhead 3-phase 34.5 kV line. Milestones consist of 1) Reconnaissance, 2) Feasibility and Conceptual Design, 3) Final Design and Permitting, and 4) Construction. The project is also being funded by the Denali Commission under the Energy Cost Reduction Program.

Project Status:

AP&T has completed reconnaissance, feasibility, and design. AP&T has received power poles, distributed them along the first 15.9 miles of the line, and begun installation.

The project will be delayed 3 months due to unexpected permitting delays from USFS. AP&T is in discussion with the State Historic Preservation Office on whether an archaeological survey is necessary for this project.

The project will be delayed 3 months due to unexpected permitting delays from USFS. AP&T is in discussion with the State Historic Preservation Office on whether an archaeological survey is necessary for this project. Permits are required for state Department of Transportation land. These permits have been filed and posted. In this phase permits will be acquired, acquiring legal access to lands, and final design for the construction phase including a final survey of the route. Project completion is anticipated in 2012.

Alaska Environmental Power

Delta Area Wind Turbines-Construction

PBO 328; Grant No: 2195370; Project No: 410027

RE Fund Grant:	\$2,000,000	Project Type:	WIND
Match:	801,500	Applicant Type:	IPP
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$2,801,500		
RE FUND EXPENDED	\$2,000,000	As of 2/15/2010	

Project Description:

This project consists of construction of 1MW of wind power capacity near Delta Junction.

Project Status:

The wind project is nearly complete; both the 100kW and 900kW turbines have been erected. The 100kW turbine is producing power and the 900kW turbine has been commissioned but still needs to be interconnected to the Golden valley Electric Association grid. Alaska Environmental Power will sell the energy to GVEA at a cost-based rate. This rate is currently being determined with the assistance of an independent consultant hired by AEA. The project should be fully operational by spring of this year.

Alaska Gateway School District

Tok Wood Heating Construction

PBO 377; Grant No: 2195417; Project No: 402038

RE Fund Grant:	\$3,245,349	Project Type:	BIOMASS
Match:	15,000	Applicant Type:	Government
Other Funding Sources:		Region:	YUKON- KOYUKUK/UPPER TANANA
Total Project Cost:	<u>\$3,260,349</u>		
RE FUND EXPENDED	<u>\$394,387</u>	As of 2/15/2010	

Project Description:

This project will provide the final design and construction of biomass boilers to heat the approximately 75,000 sq. ft. school with wood chips. The project will consist of a separate building to contain the wood chip boiler and the wood chip storage/delivery system. The wood chip boiler will be connected to the schools primary oil fired boilers that will be kept on stand-by at all times.

Project Status:

The project is 100% designed and is currently out to bid for construction. It is scheduled to be completed late fall of 2010.

Alaska Green Energy, LLC

California Creek Hydroelectric Feasibility

PBO 381; Grant No: 2195422; Project No: 407052

RE Fund Grant:	\$47,625	Project Type:	HYDRO
Match:	4,825	Applicant Type:	IPP
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$52,450		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

These grant funds will be used to prepare a preliminary feasibility study of a micro-hydro system on California Creek in the Girdwood Valley. The following tasks will be accomplished: (1) surveying and mapping, (2) hydrology, hydraulics and geotechnical investigations, (3) electro-mechanical conceptual design, (4) preliminary environmental review, and (5) final report.

Project Status:

Grant activities are planned to begin in January and be completed in September 2010.

Alaska Village Electric Coop

Ambler Solar PV Construction

PBO00371; Grant No: 2195412; Project No: 411002

RE Fund Grant:	\$550,000	Project Type:	SOLAR
Match:	55,000	Applicant Type:	Utility
Other Funding Sources:		Region:	NW ARCTIC
Total Project Cost:	\$605,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

The project consists of the design and construction of a 15 kW photovoltaic array to be connected to the community powerhouse. The scope includes site visits to the villages of Ambler, Shungnak and Noatak to collect solar data and site specific foundation conditions. Preliminary designs will be evaluated and final system design, equipment specifications and construction estimates will be developed. Equipment will be procured and construction on one of the sites will lead to integration of the solar array into the community power system.

Project Status:

Currently the grant document remains in draft. AVEC held meetings and site visits in the communities to refine the locations proposed. Based on these meetings and a preliminary on-site engineering report, AVEC is proposing to modify the size and location of the proposed project based on security and shading concerns of the original locations. AVEC will submit the scope to AEA for finalization with a goal of construction in summer 2010. The anticipated project completion date is September 2010.

Alaska Village Electric Coop

Cosmos Hills Hydroelectric Feasibility Study

PBO00372; Grant No: 2195413; Project No: 407040

RE Fund Grant:	\$1,025,000	Project Type:	HYDRO
Match:	50,625	Applicant Type:	Utility
Other Funding Sources:		Region:	NW ARCTIC
Total Project Cost:	\$1,075,625		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This purpose of this preconstruction grant is to prepare a feasibility study of the potential hydro resources to serve the villages of Ambler, Kiana, Kobuk and Shungnak. In order to obtain the most efficient use of these grant funds, hydro sites will only be considered which are appropriately sized to meet village needs and lie within a 10 mile radius of the village to be served. The first step will be to review prior studies, update cost estimates and re-run the economic analyses to arrive at a short list of economic sites. The goal of this study will be to arrive at no more than a single site for each of the four villages for further study. The findings will be documented in an interim report to AEA which details the analyses and provides recommendations for further study. Community outreach to villages will follow, and then proceeding into feasibility-level engineering activities. Environmental field studies and permitting will be accomplished. Stream gauging, surveying and mapping, engineering and conceptual design will be conducted. The final deliverable will be a feasibility final report which captures all data collected, studies performed, and conclusions reached.

Project Status:

AVEC is planning for 2010 field work and collecting previous studies at this time. Interim report is anticipated in late spring 2010. Final permitting and draft concept design report is scheduled to be completed by November 2011.

Alaska Village Electric Coop

Mekoryuk Wind Farm Construction

PBO00344; Grant No: 2195384; Project No: 410038

RE Fund Grant:	\$3,155,765	Project Type:	WIND
Match:	875,641	Applicant Type:	Utility
Other Funding Sources:		Region:	LOWER YUKON/KUSKOKWIM
Total Project Cost:	<u>\$4,031,406</u>		
RE FUND EXPENDED	\$1,541,689	As of 2/15/2010	

Project Description:

This project is the construction of a 200kW wind project that serves AVEC's Mekoryuk power system.

Project Status:

The two turbines were both erected in September of 2009. In January 2010 the turbine erection contractor installed 12 thermo-siphons to stabilize the foundation. The outstanding action items for the wind turbine foundation are the installation of the thermister-strings and vibration sensors; both sensors will be tied in to the remote display system.

The integration design has been finalized. Work to fabricate the control module is scheduled to begin this month. The Control module is tentatively scheduled to be transported to Mekoryuk in July 2010 and the turbines will be operational as soon as the module is installed soon after arrival.

Alaska Village Electric Coop

Old Harbor Hydroelectric Final Design

PBO00390; Grant No: 2195431; Project No: 407039

RE Fund Grant:	\$225,000	Project Type:	HYDRO
Match:	25,000	Applicant Type:	Utility
Other Funding Sources:		Region:	KODIAK
Total Project Cost:	\$250,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This grant provides funding to complete the FERC licensing of this 300 kW run-of-river hydroelectric plant for the village of Old Harbor. Located on the East Fork of Mountain Creek this plant would displace most of the diesel power generation for this Kodiak Island based village. The grant will take the project through the following tasks: (1) initial site visit, (2) feasibility report, (3) Preliminary Application Document, (4) scoping meeting and site visits, (5) study plan preparation, (6) 2010 summer field work, (7) draft and final FERC license and other agency permits.

Project Status:

The project is on schedule, having completed a study plan meeting with FERC and other agency staff in late January 2010. Comments are being collected now on the draft study plan for field studies to be completed in summer 2010 which will be subject to final approval by FERC. Estimated FERC license issuance and grant completion is proposed for February 2012.

Alaska Village Electric Coop

Quinhagak Wind Farm Construction

PBO00342; Grant No: 2195383; Project No: 410037

RE Fund Grant:	\$3,882,243	Project Type:	WIND
Match:	956,360	Applicant Type:	Utility
Other Funding Sources:		Region:	LOWER YUKON/KUSKOKWIM
Total Project Cost:	<u>\$4,838,603</u>		
RE FUND EXPENDED	\$850,500	As of 2/15/2010	

Project Description:

This project is the construction of a 300 kW wind power project that serves AVEC's Quinhagak power system.

Project Status:

The civil road and pad work was 85% completed in August 2009; the last 15% will be finish grade and gravel top after the crane has completed its work. The thermo-piles and thermo-siphons were installed in mid October. All three wind turbines have been erected; two of which are complete with rotor and blades. The third unit is scheduled to be completed with rotor and blades by mid February. The integration design has been finalized and materials have been ordered. The control module is tentatively scheduled to be transported to Quinhagak in May of 2010. The turbines should be operational in the summer of 2010 after installation of control equipment.

Alaska Village Electric Coop

Toksook Wind Farm Construction

PBO00343; Grant No: 2195385; Project No: 410039

RE Fund Grant:	\$1,037,750	Project Type:	WIND
Match:	215,306	Applicant Type:	Utility
Other Funding Sources:		Region:	LOWER YUKON/KUSKOKWIM
Total Project Cost:	<u>\$1,253,056</u>		
RE FUND EXPENDED	\$271,823	As of 2/15/2010	

Project Description:

This project is a 100kW expansion of an existing 300kW wind farm that serves AVEC's Toksook Bay power system.

Project Status:

All necessary permitting has been completed. A pad for the wind turbine foundation is in place and the turbine, rotors and tower have been delivered to the village. The tower base is currently in fabrication and will be delivered in June of 2010. The turbine will be erected and commissioned in the summer of 2010.

Alaska Wind Energy

Nikolaevsk Wind Farm Final Design

PBO00385; Grant No: 2195426; Project No: 410043

RE Fund Grant:	\$180,600	Project Type:	WIND
Match:		Applicant Type:	IPP
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$0		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

The project consists of final design and permitting of a 6 MW wind farm near Nikolaevsk.

Project Status:

Alaska Wind Energy has decided not to proceed with the project. Project is being closed out.

Alaska Wind Power, LLC

Coal Mine Road Wind Farm Final Design

PBO00395; Grant No: 2195465; Project No: 410045

RE Fund Grant:	\$105,000	Project Type:	WIND
Match:	26,250	Applicant Type:	IPP
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$131,250		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This pre-construction wind project consists of wind resource assessment, permitting and design for a potential wind farm in the Delta area. Funding from the Renewable Energy Fund is being combined with other grant funding and managed as one grant.

Project Status:

The grant agreement is in final review and is expected to be finalized by March. Progress has been slow in finalizing the grant due to the need for resolving potentially overlapping scopes of work funded by the RE Fund versus other AEA funds. Despite not having a grant in place, the grantee has been moving forward with wind resource assessment, avian studies, a preliminary layout, and an integration study. The project is scheduled for completion in spring of 2011.

Aleutians East Borough

Aleutians East Borough Feasibility Study

PBO00367; Grant No: 2195408; Project No: 407051

RE Fund Grant:	\$25,000	Project Type:	OTHER
Match:	15,000	Applicant Type:	Government
Other Funding Sources:		Region:	ALEUTIANS
Total Project Cost:	\$40,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

The funding is to conduct a reconnaissance report assessing possible renewable energy resources – wind, hydro, current, tidal, and waste heat recovery – for the small isolated communities of Cold Bay, False Pass, and Nelson Lagoon. The report will summarize the assessment and findings. The project will be administered and managed by the AEB and will be conducted by a consultant chosen by the AEB. Project scope includes compiling existing renewable energy resource studies, assessing existing energy loads and fuel usage, identifying renewable energy system costs and savings, assessing needed permits and land, and preparing an economic analysis of options in each community.

Project Status:

Aleutians East Borough has hired a contractor and submitted a first draft report in December 2009. The Borough expected to complete final site visits by February 2010. The project is scheduled for completion by June 2010.

Anchorage, Municipality of

Anchorage Landfill Gas Electricity Construction

PBO00389; Grant No: 2195430; Project No: 402032

RE Fund Grant:	\$2,000,000	Project Type:	BIOFUEL
Match:	3,700,000	Applicant Type:	Government
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$5,700,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

The Municipality of Anchorage has proposed the design and installation of a 3-4 MW power plant utilizing landfill gas, a by-product of anaerobic waste decomposition. The Municipality requested Round 1 funding of \$3.7 million but funding was capped at \$2 million.

Project Status:

Although the Municipality's application proposed to use "landfill gas-to-power" technology, Anchorage Assembly requested that other technology options be considered. Responding to this concern, Anchorage Solid Waste Services Department is releasing an RFP in February 2010 to assess competitive proposals for utilizing the gas, currently being flared. Now that the Municipality's plans are clearer, AEA is working with the Solid Waste Services to finalize the grant agreement. If the Municipality chooses a project consistent with the original proposal AEA will make funds available for design and construction. The Municipality anticipates a design contract by June 2010. Construction is planned for the summer of 2011 with system start-up by September 2011.

Atka, City of

Chuniisax Creek Hydroelectric Construction

PBO00335; Grant No: 2195376; Project No: 407033

RE Fund Grant:	\$996,000	Project Type:	HYDRO
Match:	1,344,000	Applicant Type:	Utility
Other Funding Sources:	574,891	Region:	ALEUTIANS
Total Project Cost:	\$2,914,891		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This construction grant is to complete the final design, permitting and construction of an approximately 45% complete hydroelectric project on Chuniisax Creek. City of Atka has secured another grant from Economic Development Administration (EDA) for this project. It will perform the work using force account construction managed through a construction management (CM) firm and a professional engineer, which are under contract. The remaining elements to be constructed include: dam with intake, penstock, transmission line from existing hydro powerhouse to City, new controls and interface between hydro and diesel powerhouses and final commissioning.

Project Status:

EDA funding required that the original wooden dam design be changed to concrete construction. The final dam design has been reviewed by the State Dam Safety Officer. Further design modifications are underway and will be completed in 1st quarter 2010. Pending EDA approval, construction is anticipated to begin with materials orders in 1st quarter 2010, with project completion estimated by end of 2010.

Bethel, City of

Bethel Wind Power Project Times Four

PBO00391; Grant No: 2195432; Project No: 410034

RE Fund Grant:	\$2,598,320	Project Type:	WIND
Match:	599,666	Applicant Type:	Government
Other Funding Sources:		Region:	LOWER YUKON/KUSKOKWIM
Total Project Cost:	<u>\$3,197,986</u>		
RE FUND EXPENDED	<u>\$0</u>	As of 2/15/2010	

Project Description:

The project consists of the design, purchase and installation of four 100 kW wind turbines for integration with the Bethel Utilities Corporation (BUC) power distribution system. The scope includes final design, equipment procurement, installation of the wind towers and turbines and installation of control equipment for connection to the power grid.

Project Status:

The grant has not been executed as the grantee has not submitted required documentation from the various stakeholders in the community that will be involved in the project. The grant agreement has been slow to develop for two main reasons. First, the City has not yet obtained an interconnection agreement from BUC. The City has separate grant funding to complete the interconnection agreement. Second, AEA is requiring a cost-based power sales rate, which is not consistent with the City's proposed business model that assumed the City would sell power to BUC at avoided cost. Given the cost-based rate requirement, the City is considering other ways to structure the project. AEA anticipates project completion in 2011.

Burro Creek Holdings, LLC

Burro Creek Hydro Feasibility Study

PBO00357; Grant No: 2195400; Project No: 407048

RE Fund Grant:	\$48,000	Project Type:	HYDRO
Match:	12,000	Applicant Type:	IPP
Other Funding Sources:		Region:	SOUTHEAST
Total Project Cost:	\$60,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This grant provides for a reconnaissance level study of the hydropower potential of Burro Creek, a creek located south of Skagway on the west side of Lynn Canal. Grant tasks include: (1) survey of potential site, (2) installation of stream gauge and collection of flow data, (3) engineering analysis and interim report, (4) economic and market analysis of development options, and (5) final report.

Project Status:

The grant award is awaiting signature by grantee. The final report is expected in October 2011.

Cheesh'na Tribal Council

Chistochina Central Wood Heating Constr

PBO00340; Grant No: 2195380; Project No: 402028

RE Fund Grant:	\$500,000	Project Type:	BIOMASS
Match:	12,000	Applicant Type:	Government
Other Funding Sources:		Region:	COPPER RIVER/CHUGACH
Total Project Cost:	<u>\$512,000</u>		
RE FUND EXPENDED	<u>\$0</u>	As of 2/15/2010	

Project Description:

Cheesh'na Tribal Council will complete the final design and construction of biomass boilers to heat a small scale district heat loop for a community hall, new clinic, 2 office buildings, new washeteria, and library. The project will consist of a new 24'x32' building to contain the pellet furnaces. Insulated underground heat lines will connect the furnace building to the several buildings that will be heated.

Project Status:

Project is currently under design and construction is anticipated by fall 2010.

Chena Power, LLC

Biomass-fired Organic Rankine Cycle System

PBO00316; Grant No: 2195358; Project No: 402025

RE Fund Grant:	\$2,000,000	Project Type:	BIOFUEL
Match:	2,612,900	Applicant Type:	Utility
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$4,612,900		
RE FUND EXPENDED	\$600,000	As of 2/15/2010	

Project Description:

This project consists of the design and construction of a 400 kW (net) power system that is fueled by Fairbanks North Star Borough waste paper. The system includes two 250 kW UTC Pure Cycle ORC units; a biomass boiler; fuel processing, storage and handling equipment; cooling pond; controls and grid tie-in.

Project Status:

Chena Power has made initial payments and been reimbursed by AEA for a Wellons fluid bed boiler and the UTC turbine-generators. Chena is also requesting initial payment on an SSI paper shredder. AEA will require completion of design and a business plan before reimbursing final payments on the equipment. Chena has taken partial delivery of the shredder and UTC equipment, and has renovated a three-bay metal building that will serve as the power house. Currently a consultant hired by AEA is assisting Chena with developing a cost-based power sales agreement with Golden Valley Electric Association. Chena Power is scheduled to complete installation and commission the project in the third quarter of 2010.

Chignik Lagoon Power Utility

Chignik Lagoon Hydroelectric Final Design

PBO00345; Grant No: 2195389; Project No: 407036

RE Fund Grant:	\$150,000	Project Type:	HYDRO
Match:		Applicant Type:	Utility
Other Funding Sources:		Region:	BRISTOL
Total Project Cost:	\$150,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This pre-construction grant is to provide for developmental activities up through final design for this 190 kW hydro project on Packers Creek. Specific grant tasks include permitting, stream gauge, site survey and final design.

Project Status:

The utility has retained an engineering firm to complete the grant tasks. Design work and permits under this grant are anticipated to become available for review by summer 2010.

Chignik, City of

Indian Creek Hydro Feasibility Study

PBO00346; Grant No: 2195388; Project No: 407034

RE Fund Grant:	\$207,500	Project Type:	HYDRO
Match:		Applicant Type:	Government
Other Funding Sources:		Region:	BRISTOL
Total Project Cost:	\$207,500		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This project assesses the feasibility of expanding the existing 40 kW hydro plant currently licensed and owned by Trident Seafoods to a City-owned hydro plant of 200kW capacity. Tasks to be completed include: (1) establish MOU with Trident over future rights to an expanded hydro plant, (2) establish MOU with US Fish and Wildlife Service and Alaska Dept. of Fish and Game over ways project impacts can be mitigated, (3) fieldwork consisting of topographic surveys and hydrology data collection, and (4) conceptual design report with cost estimate.

Project Status:

The city has hired a construction management firm to manage the grant. The firm has retained an engineer to perform the grant tasks.

The planned completion date of Tasks 1-4 was estimated to be May 2010, however the progress has been slower than anticipated due to prior consultant time commitments. It is now anticipated the earliest completion of Task 4 will be in 2011.

Chilkoot Indian Association

Haines Central Wood Heating Construction

PBO00333; Grant No: 2195373; Project No: 402034

RE Fund Grant:	\$288,222	Project Type:	BIOMASS
Match:	28,467	Applicant Type:	Government
Other Funding Sources:		Region:	SOUTHEAST
Total Project Cost:	\$316,689		
RE FUND EXPENDED	\$5,677	As of 2/15/2010	

Project Description:

This project will purchase and install cordwood-fired boilers to provide heat to a four-plex housing facility that is currently under construction.

Project Status:

Permitting to proceed with the construction has been received, and the final design is in progress. The project team is evaluating the location for the boiler building to minimize construction costs. Construction is anticipated to be complete by September 2010.

Copper River School District

Kenny Lake Wood Boiler Assessment

PBO00259; Grant No: 2195302; Project No: 402019

RE Fund Grant:	\$120,000	Project Type:	BIOMASS
Match:	10,000	Applicant Type:	Government
Other Funding Sources:		Region:	COPPER RIVER/CHUGACH
Total Project Cost:	<u>\$170,000</u>		
RE FUND EXPENDED	<u>\$0</u>	As of 2/15/2010	

Project Description:

This project will provide the final design and construction for a biomass boiler to heat the K-12 School. The project will consist of a separate small wood furnace building with pellet storage and will tie into the existing oil fired heating boilers that will be kept on stand-by at all times.

Project Status:

This project is currently under planning and design, with the design anticipated being complete by the end of June, and construction to follow once funding has been secured. CRSD has applied for construction funding under Round 3 of the REF Grants process.

Copper Valley Electric Association

Allison Lake Hydro Feasibility Study

PBO00350; Grant No: 2195390; Project No: 407038

RE Fund Grant:	\$2,288,000	Project Type:	HYDRO
Match:	572,000	Applicant Type:	Utility
Other Funding Sources:		Region:	COPPER RIVER/CHUGACH
Total Project Cost:	<u>\$2,860,000</u>		
RE FUND EXPENDED	<u>\$342,637</u>	As of 2/15/2010	

Project Description:

The 4 MW Allison Lake Hydroelectric Project would supplement power to the CVEA system, whose primary source is the 12 MW Solomon Lake Hydro electric project. The funding provided under this grant is in addition to a FY 2009 Legislative grant. Tasks to be completed with these grants include: (1) study plan preparation, (2) conduct environmental field studies for 2009 and 2010 seasons, (2) prepare draft application for FERC license, (3) complete feasibility study, (4) submit license application to FERC and (5) supporting engineering activities.

Project Status:

The 2009 field studies have been completed. Evaluation of the second season study plan is underway at this time, as well as preparation of the feasibility report. The report is due in April 2010 where CVEA Board of Directors will review and either recommend a go or no-go decision on further fund commitments to the project. Project schedule indicates license application to FERC anticipated for submission in December 2010 with consultation over the following year to respond to FERC and agency-related related questions and concerns.

Cordova Electric Cooperative

Cordova Heat Recovery Construction

PBO00365; Grant No: 2195407; Project No: 403028

RE Fund Grant:	\$1,780,000	Project Type:	HEAT RECOVERY
Match:	3,480,000	Applicant Type:	Utility
Other Funding Sources:		Region:	COPPER RIVER/CHUGACH
Total Project Cost:	<u>\$5,260,000</u>		
RE FUND EXPENDED	<u>\$0</u>	As of 2/15/2010	

Project Description:

This project will purchase and install a 250 kW Organic Rankine Cycle (ORC) heat recovery unit to capture water jacket heat on a new high-efficiency, low emissions diesel generator, increasing the electricity production by 4-6%.

Project Status:

The installation of the diesel generator is substantially complete with the exception of communication wiring. For the Organic Rankine Cycle system, the conceptual design and necessary permits are complete. An RFP is being developed for the ORC for circulation in 1st quarter 2010. Installation is scheduled for September/October 2010.

Cordova Electric Cooperative

Humpback Creek Hydroelectric Construction

PBO00347; Grant No: 2195386; Project No: 407037

RE Fund Grant:	\$4,000,000	Project Type:	HYDRO
Match:	430,238	Applicant Type:	Utility
Other Funding Sources:	2,970,000	Region:	COPPER RIVER/CHUGACH
Total Project Cost:	<u>\$7,400,238</u>		
RE FUND EXPENDED	\$1,054,305	As of 2/15/2010	

Project Description:

This construction grant provides for improvements to the existing 1.25 MW run-of-river Humpback Creek Hydroelectric project. The project rebuilds the intake structure which was damaged during a flood in 2006, adds road access to the project site and improves the SCADA communications and controls to more effectively utilize the hydropower potential of the creek. FEMA has also provided some funding.

Project Status:

Road construction began in fall 2008 and was completed in February 2009. Bids for the tunnel, and intake/diversion and conveyance structures were opened in July, 2009 and came in higher than anticipated. The contract was awarded by the utility in September 2009 and the contractor mobilized in October. Tunnel boring and concrete lining and excavation of the left and right abutments for the new intake structure are underway at this time. The tunnel work is ahead of schedule. Critical path item is delivery of the steel penstock and intake structure accessories. February activities include finish hard rock excavation for diversion and intake structure. Overall project target completion date is late fall 2010.

Delta/Greely School District

Delta Junction Wood Chip Heating

PBO00331; Grant No: 2195395; Project No: 402033

RE Fund Grant:	\$2,000,000	Project Type:	BIOMASS
Match:		Applicant Type:	Government
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$2,000,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This project will provide the final design and construction for biomass boilers to heat the Delta School with wood chips.

Project Status:

The project is currently under design with an anticipated conceptual/preliminary design completed 1st quarter of 2010. The original budget submitted for REF Round 1 funding was about \$2.9 million. However, since Delta is connected to the Railbelt grid the project was capped at \$2 million. The recently-hired design consultant revisited the budget to see if the project could be designed and built for \$2 million, but it was determined that the original budget amount is needed. DGSD has applied for the budget shortfall in Round 3. If successful the project will move forward quickly to design in 2010, with construction beginning in 2010 and being completed in 2011.

Fishhook Renewable Energy, LLC

Fishhook Hydroelectric Construction

PBO00394; Grant No: 2195435; Project No: 407020

RE Fund Grant:	\$2,000,000	Project Type:	HYDRO
Match:	2,412,961	Applicant Type:	IPP
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	<u>\$4,412,961</u>		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This grant would partially fund the construction of a 2 MW run-of-river hydroelectric project located on Fishhook Creek in the vicinity of Hatcher Pass. This grant was selected for funding based upon a schedule of completion of milestones to be accomplished by spring 2009 under a separate pre-construction grant. Pre-construction milestones include: (1) completion of all construction permits, (2) provide final design documents, (3) enter into a power sales agreement with the local utility, 4) obtain a Certificate of Public Need and Conveyance from the RCA, and 5) resolution of remaining technical issues.

Project Status:

The grantee has been delayed in accomplishing pre-construction milestones. Project financing for the remaining approximately \$1.8M under the Power Project Loan Fund has not been approved by AEA pending slow progress on the pre-construction grant and response to AEA questions raised by AEA regarding the project. AEA project concerns include: 1) uncertainty in hydrological data, 2) demonstration of owner equity in project, and 3) third party verification of project construction costs.

Golden Valley Electric Association

Eva Creek Wind Farm Feasibility

PBO00384; Grant No: 2195425; Project No: 410044

RE Fund Grant:	\$2,000,000	Project Type:	WIND
Match:	300,000	Applicant Type:	Utility
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$2,300,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

Golden Valley Electric Association originally proposed feasibility, design, and construction of a 24 MW wind farm in the Healy area and requested \$79 million in grant funding. AEA recommended \$2.53 million for feasibility assessment, but the project was capped at \$2 million.

Project Status:

AEA and GVEA are in the process of finalizing the grant scope of work and expect to complete the grant agreement shortly. GVEA has continued to move forward collecting additional wind and geotechnical data in the area for more than a year. The data are needed for specific turbine siting. Detailed final design plans are being developed to address site access and equipment/material staging. Varied land ownership at the site also requires extensive permitting. Feasibility and permitting activity are scheduled to be complete by December 2010.

Golden Valley Electric Association

McKinley Village Solar Thermal Construction

PBO00354; Grant No: 2195394; Project No: 411003

RE Fund Grant:	\$190,000	Project Type:	SOLAR
Match:	3,600	Applicant Type:	Utility
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$193,600		
RE FUND EXPENDED	\$190,000	As of 2/15/2010	

Project Description:

This project consists of design and construction of a solar water heating system (SWHS) including a ground mounted solar collector array with of 36 40-sf collectors, a small building housing a 3,000 gallon hot water storage tank and heat exchange equipment, and 1,530 feet of a buried district heating pipe loop that provides 18 buildings dispersed over about 4 acres with domestic hot water. The project also includes conservation measures and training to minimize hot water usage.

Project Status:

The array was operational in July 2009 and construction was completed in August 2009. Final invoices and reports have been submitted and project is ready for administrative close-out. Project savings numbers will be assessed over the next operating season May – September 2010.

Golden Valley Electric Assoc

North Pole Heat Recovery Construction

PBO00351; Grant No: 2195391; Project No: 403029

RE Fund Grant:	\$840,000	Project Type:	HEAT RECOVERY
Match:	210,000	Applicant Type:	Utility
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$1,050,000		
RE FUND EXPENDED	\$734,254	As of 2/15/2010	

Project Description:

The project consists of installing a waste heat recovery system from the GVEA North Pole powerhouse to several utility buildings. Fifteen glycol unit heaters will supply the heating load currently provided by electric unit heaters. The scope includes procurement of materials and the installation of a glycol heating distribution system, heating equipment and controls.

Project Status:

Currently the majority of the piping and unit heaters are installed and in operation. Variable speed pump controls have been ordered and will be integrated into the heating controls when they arrive. The grant was executed in August 2009. The anticipated project completion date is November 2010.

Gulkana Village Council

Gulkana Central Wood Heating Construction

PBO00341; Grant No: 2195381; Project No: 402030

RE Fund Grant:	\$500,000	Project Type:	BIOMASS
Match:		Applicant Type:	Government
Other Funding Sources:		Region:	COPPER RIVER/CHUGACH
Total Project Cost:	<u>\$500,000</u>		
RE FUND EXPENDED	<u>\$270,776</u>	As of 2/15/2010	

Project Description:

The project consists of final design and construction of biomass boilers to heat a small-scale district heat loop for a community hall, clinic, two office buildings, and four duplexes. The project includes a new 24'x32' building to contain the pellet and cord wood furnaces. The heat lines will also tie into the community water loop distribution system to add heat to help deter freeze-ups in the winter.

Project Status:

This project is currently under construction with start-up scheduled during the 2nd quarter of 2010. The wood furnaces are on site and the interior mechanical and electrical work is set to begin in February. The underground heat lines to the various buildings were installed late last fall.

Gustavus Electric Company

Falls Creek Hydroelectric Construction

PBO00349; Grant No: 2195387; Project No: 407045

RE Fund Grant:	\$750,000	Project Type:	HYDRO
Match:		Applicant Type:	Utility
Other Funding Sources:		Region:	SOUTHEAST
Total Project Cost:	\$750,000		
RE FUND EXPENDED	\$750,000	As of 2/15/2010	

Project Description:

The grant provided funding to assist in the final stages of construction of the Falls Creek 800 kW run-of-river hydroelectric facility.

Project Status:

The project began reliable operation in late July 2009. The hydro has been able to displace practically all of the diesel generation that now serves as a silent but available backup source for the Gustavus Electric Service Area. The grant is complete

Gwitchyaa Zhee Utility Company

Fort Yukon Central Wood Heating Design

PBO00363; Grant No: 2195405; Project No: 402040

RE Fund Grant:	\$210,000	Project Type:	BIOFUEL
Match:	140,656	Applicant Type:	Utility
Other Funding Sources:		Region:	YUKON- KOYUKUK/UPPER TANANA
Total Project Cost:	<u>\$350,656</u>		
RE FUND EXPENDED	<u>\$0</u>	As of 2/15/2010	

Project Description:

The project consists of the design of a central wood heating system using locally available biomass. The scope includes a conceptual design of the heating system, and integration plan with the electric utility heat recovery system and the community wood harvest plan.

Project Status:

The design will proceed to the pre-construction 95% engineered drawing stage, submission of necessary MOU's for wood supplies and heat sales agreements, right of way and permitting documents, environmental analysis and an operational business plan. G-Z contractors will prepare a construction budget and proposed construction schedule. Currently a 35% Design Report has been received and site control and permitting issues are being investigated. The grant was executed in August 2009. The anticipated project completion date is September 30, 2010.

Haida Power, Inc.

Reynolds Creek Hydroelectric Construction

PBO00399; Grant No: 2195440; Project No: 407032

RE Fund Grant:	\$2,000,000	Project Type:	HYDRO
Match:	6,645,000	Applicant Type:	Utility
Other Funding Sources:		Region:	SOUTHEAST
Total Project Cost:	\$8,645,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This construction grant is to fund the initial phase of construction of a 5 MW hydroelectric project on Mellen Lake / Reynolds Creek to provide power to the existing intertied grid on southern Prince of Wales Island in southeast Alaska. Other RE Fund grants have been made on behalf of this project including a \$100,000 preconstruction grant to Haida Corporation. A Round 3 RE Fund application for \$2M has been submitted by Alaska Power Company for a transmission line to connect Reynolds Creek to the grid. A \$9M Power project loan fund request has also been received by Haida Energy, Inc. to fund the balance of the construction costs for this project. The Southeast Conference has also received a \$2M legislative grant for project construction.

Project Status:

Because of the large number of grantees and loan applicants involved with this project, AEA has requested a Joint Venture (or Master Agreement) be completed amongst all participants to define respective roles and responsibilities for this project, as well as the arrangements for construction and operation and ownership of the project. This will guide the issuance of grants and loan to clarify the respective roles and provide for coordination in their administration. AEA has also requested it be provided a scope and budget, timeline and milestones for each of the grants and loan of record. AEA has requested demonstration of site control, a construction cost estimate, a funding plan for the project and demonstration of land rights to build and operate the intertie which would connect Reynolds Creek to the existing Prince of Wales grid.

Haines Borough

Haines Central Wood Heating Feasibility Study

PBO00332; Grant No: 2195372; Project No: 402036

RE Fund Grant:	\$120,500	Project Type:	BIOMASS
Match:	20,000	Applicant Type:	Government
Other Funding Sources:		Region:	SOUTHEAST
Total Project Cost:	\$140,500		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

The project consists of a study for using local wood biomass for supplying boilers in a central district heating system for several existing public buildings. The scope includes a Site Reconnaissance Report, Feasibility Report, and a Conceptual Design for providing heat for the Haines K-12 School, Voc-Ed Building, Municipal Administration Building, and the Public Library.

Project Status:

Currently a draft wood resource report has been received and the draft conceptual design report is being prepared. The grant was executed in May 2009. The anticipated project completion date is July 2010.

Homer Electric Association

Falls Creek Low-Impact Hydro Assess PreConstr

PBO00287; Grant No: 2195331; Project No: 407024

RE Fund Grant:	\$50,000	Project Type:	HYDRO
Match:	25,000	Applicant Type:	Utility
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$125,000		
RE FUND EXPENDED	\$50,000	As of 2/15/2010	

Project Description:

This pre-construction grant has provided funding to assess the feasibility of constructing a 5 MW run-of-the-river hydroelectric plant on Falls Creek. Tasks included in this scope of work included: (1) an initial site assessment, (2) a conceptual design, (3) a study plan, and (4) a reconnaissance report which described the findings.

Project Status:

The Grantee is pursuing further project development under a new scheme in a Round 2 RE grant. The report was issued on April 2, 2009. This grant is complete.

Homer Electric Association

Crescent Lk/Crk Low-Impact Hydro Assess Pre-Construction

PBO00290; Grant No: 2195334; Project No: 407023

RE Fund Grant:	\$50,000	Project Type:	HYDRO
Match:	20,000	Applicant Type:	Utility
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$100,000		
RE FUND EXPENDED	\$23,273	As of 2/15/2010	

Project Description:

This pre-construction grant has provided funding to assess the feasibility of constructing either a 2.3 or 5.8 MW run-of-the-river hydroelectric plant on Crescent Lake / Creek. Tasks included in this scope of work included: (1) an initial site assessment, (2) a conceptual design, (3) a study plan, and (4) a reconnaissance report which described the findings.

Project Status:

The report was issued on April 2, 2009. The Grantee has abandoned further interest in project development due to high cost of project and energy production. Some grant funds remain unexpended and available for re-programming. This grant is complete.

Homer Electric Association

Grant Lk/Crk Low-Impact Hydro Assess Pre-Const

PBO00289; Grant No: 2195333; Project No: 407025

RE Fund Grant:	\$50,000	Project Type:	HYDRO
Match:	25,000	Applicant Type:	Utility
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$125,000		
RE FUND EXPENDED	\$50,000	As of 2/15/2010	

Project Description:

This pre-construction grant has provided funding to assess the feasibility of constructing a 5 MW run-of-the-river hydroelectric plant on Grant Lake / Creek. Tasks included in this scope of work included: (1) an initial site assessment, (2) a conceptual design, (3) a study plan, and (4) a reconnaissance report which described the findings.

Project Status:

The report was issued on April 2, 2009. The Grantee is pursuing further project development under a new scheme in a Round 2 RE grant. This grant is complete.

Homer Electric Association

Ptarmigan Lk/Crk Low-Impact Hydro Assess Pre-Const

PBO00291; Grant No: 2195335; Project No: 407026

RE Fund Grant:	\$50,000	Project Type:	HYDRO
Match:	25,000	Applicant Type:	Utility
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$125,000		
RE FUND EXPENDED	\$4,684	As of 2/15/2010	

Project Description:

This pre-construction grant has provided funding to assess the feasibility of constructing a 3 MW run-of-the-river hydroelectric plant on Ptarmigan Lake / Creek. Tasks included in this scope of work included: (1) an initial site assessment, (2) a conceptual design, (3) a study plan, and (4) a reconnaissance report which described the findings.

Project Status:

The report was issued on April 2, 2009. The Grantee has abandoned further interest in project development due to high cost of project and energy production. . Some grant funds remain unexpended and available for re-programming. This grant is complete.

Hooper Bay, City of
Hooper Bay Wind Farm Feasibility

PBO00398; Grant No: 2195439; Project No: 410040

RE Fund Grant:	\$80,000	Project Type:	WIND
Match:		Applicant Type:	Government
Other Funding Sources:		Region:	LOWER YUKON/KUSKOKWIM
Total Project Cost:	<u>\$80,000</u>		
RE FUND EXPENDED	<u>\$0</u>	As of 2/15/2010	

Project Description:

The project consists of a feasibility study for the installation of two wind turbines near the water treatment plant to supply a portion of the facility electrical load. The scope includes a site specific wind resource analysis, feasibility study and conceptual design for integration of the wind system into the water plant facility.

Project Status:

Currently the feasibility study is underway. The grant was executed in December 2009. The anticipated project completion date is April 2010.

Independence Power, LLC

Fourth of July Creek Hydroelectric Reconnaissance

PBO00379; Grant No: 2195420; Project No: 407044

RE Fund Grant:	\$20,000	Project Type:	HYDRO
Match:	20,000	Applicant Type:	IPP
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$40,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This grant is for reconnaissance level assessment of a hydro resource located on Fourth of July Creek. This creek is located east of Seward, Alaska near the Lemon Creek Penitentiary. The work scope includes a hydrology study, stakeholder meeting and permitting analysis. All findings are to be documented in a Reconnaissance Study and Initial Feasibility Assessment.

Project Status:

AEA received the Final Report in November 2009 and is reviewing it. The report predicts the hydro nameplate capacity of the site is 5.4 MW and recommends advancement of the project into the feasibility stage.

Interior Regional Housing Authority

Galena Wood Heating Construction

PBO00402; Grant No: 2195443; Project No: 402037

RE Fund Grant:	\$382,779	Project Type:	BIOMASS
Match:	382,779	Applicant Type:	Government
Other Funding Sources:		Region:	YUKON- KOYUKUK/UPPER TANANA
Total Project Cost:	<u>\$765,558</u>		
RE FUND EXPENDED	<u>\$0</u>	As of 2/15/2010	

Project Description:

This project consisted of design and construction of a wood-fired system to heat the assisted living center in Galena.

Project Status:

IRHA has decided not to proceed with the project, and project funding is being reallocated.

Juneau, City & Borough of

Juneau Ground Source Heat Pump Constr

PBO00352; Grant No: 2195393; Project No: 406009

RE Fund Grant:	\$1,450,000	Project Type:	GEOTHERM
Match:	500,000	Applicant Type:	Government
Other Funding Sources:		Region:	SOUTHEAST
Total Project Cost:	\$1,950,000		
RE FUND EXPENDED	\$139,911	As of 2/15/2010	

Project Description:

The City and Borough of Juneau is designing and constructing a hybrid ground source heat pump (GSHP) to serve 81% of the new Aquatic Center's heating needs.

Project Status:

During the summer of 2009 a well field consisting of 164 350-foot wells was completed. The piping was installed in the boreholes and most of the backfill was put in place, but was not finished prior to the onset of winter. The remaining backfill will be finished in late spring, and the heat pumps will be installed after the mechanical room is ready. As the Aquatic Center is still under construction, the GSHP will not be fully functional until late 2010. Project completion is scheduled for winter 2010.

Juneau, City and Borough of
Juneau Airport Ground Source Heat Pump

PBO00317; Grant No: 2195359; Project No: 406008

RE Fund Grant:	\$513,000	Project Type:	GEOTHERM
Match:	513,000	Applicant Type:	Government
Other Funding Sources:		Region:	SOUTHEAST
Total Project Cost:	\$1,026,000		
RE FUND EXPENDED	\$513,000	As of 2/15/2010	

Project Description:

The Juneau Airport Ground Source Heat Pump (GSHP) project consists of the construction of the geothermal loop field in conjunction with the overall airport renovation project.

Project Status:

The field consists of 108 360-foot deep borings that were drilled in a little more than one month's time. The borings were run with piping to carry the heat transfer fluid and connected with horizontal piping to manifolds. With the completion of the borings and connections, the airport will continue the project by connecting the field to the heat pumps in the airport buildings with non-RE Fund dollars. As the airport is still undergoing renovations, the GSHP will not be functioning until the airport's mechanical work and building envelope are completed. Project completion is scheduled for Summer 2010.

Kenai Winds, LLC

Nikiski Wind Farm Construction

PBO00392; Grant No: 2195433; Project No: 410046

RE Fund Grant:	\$80,000	Project Type:	WIND
Match:	18,920,000	Applicant Type:	IPP
Other Funding Sources:	_____	Region:	RAILBELT
Total Project Cost:	\$21,000,000		

RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This project consists of final design and construction project of a 9 MW wind farm at a refinery in Nikiski.

Project Status:

Kenai Winds is currently applying for permits and developing a final design. Construction is scheduled for summer/fall 2010. Kenai Winds has submitted Round 3 grant application to expand the capacity to a total of 16 MW. Current focus is on completing the 95-percent design for AEA review and working with AEA's rate consultant to establish a cost-based rate. Grantee is hand delivering the signed grant agreement on Feb. 23.

Ketchikan Public Utilities

Whitman Lake Hydro Final Design

PBO00400; Grant No: 2195441; Project No: 407046

RE Fund Grant:	\$1,300,000	Project Type:	HYDRO
Match:	320,000	Applicant Type:	Utility
Other Funding Sources:		Region:	SOUTHEAST
Total Project Cost:	\$1,620,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This pre-construction grant is to prepare final design documents for the Whitman Lake Hydroelectric Project. The project was issued a license to construct by FERC on March 17, 2009. The intent of this grant is to fund all remaining activities needed to be accomplished up to but not including construction bidding for this project. These steps include preparation of final design drawings and specifications, review and approval of same by FERC and preparation of final construction cost estimate and project construction schedule.

Project Status:

The utility's consultant is working through these milestones at present and is on schedule to complete all tasks by April 2011.

Kodiak Electric Association

Pillar Mountain Wind Project - Construction

PBO00329; Grant No: 2195371; Project No: 410025

RE Fund Grant:	\$4,000,000	Project Type:	WIND
Match:	1,000,000	Applicant Type:	Utility
Other Funding Sources:		Region:	KODIAK
Total Project Cost:	\$5,000,000		
RE FUND EXPENDED	\$4,000,000	As of 2/15/2010	

Project Description:

This project consists of the installation and interconnection of three GE 1.5MW wind turbines on Pillar Mountain near the City of Kodiak.

Project Status:

The project is complete and the turbines have been operational since July 3, 2009. The turbines have been operating very well and have had an excellent 95% availability since commissioning. According to Kodiak Electric Association the turbines have produced nearly 7.8 million kWhs of electricity and saved nearly 550,000 gallons of diesel fuel.

Kotzebue Electric Association

Kotzebue Wind Farm Expansion Construction

PBO00386; Grant No: 2195427; Project No: 410041

RE Fund Grant:	\$4,000,000	Project Type:	WIND
Match:	427,495	Applicant Type:	Utility
Other Funding Sources:		Region:	NW ARCTIC
Total Project Cost:	<u>\$4,427,495</u>		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

Kotzebue Electric originally proposed expanding its wind farm by 3.25 MW with \$12.1 million in RE Fund grant funds but was capped at \$4 million. KEA has proposed a revised scope and requested an additional \$4,000,000 under Round 3. The revised project will consist of two new 900kW EWT900 wind turbines and a 500kW/3.7MWh Zinc Bromide Flow Battery.

Project Status:

AEA and the Kotzebue Electric Association are currently developing the milestones and budget for the revised project scope and expect to finalize the grant agreement in the next month. KEA has been moving the project forward with geotechnical investigations and foundation design using their own funding. The project is pursuing an aggressive schedule with a target completion date, pending additional funding, of December 2010.

Kwaan Electric Transmission

Kake-Petersburg Intertie Final Design

PBO00374; Grant No: 2195414; Project No: 409019

RE Fund Grant:	\$2,990,000	Project Type:	TRANSMISSION
Match:	2,500,000	Applicant Type:	Utility
Other Funding Sources:		Region:	SOUTHEAST
Total Project Cost:	\$5,490,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

The grant funds will be used towards environmental assessments and final design for the Kake – Petersburg Hydroelectric Transmission Intertie. The applicant, along with the Alaska Department of Transportation (ADOT), proposes to build a road and 69-kV transmission line to connect the community of Kake with Petersburg. The road/intertie will allow the delivery of surplus hydropower available from the Tyee project to Kake and eliminate its total reliance upon diesel generation. The principal tasks involved in this project include: (1) preliminary feasibility report, (2) route selection, (3) environmental permitting and (4) final design. It is anticipated this scope of work will take approximately three years to complete.

Project Status:

ADOT has completed the preliminary feasibility report. The northern route has been selected as the preferred option. The large cost of this project is under advisement at this time. Questions remain as to potential funding sources for construction of this capital project and what, if any renewable energy alternatives may be available located closer to Kake. Additionally, discussions are underway among the Southeast Alaska Power Authority and KWETICO as to who will build, own and operate the intertie. As these questions are answered the project will move forward.

Kwig Power Company

Kwigillingok High Penetration Wind-Diesel Smart Grid

PBO00369; Grant No: 2195410; Project No: 410036

RE Fund Grant:	\$1,600,000	Project Type:	WIND
Match:	1,600,000	Applicant Type:	Utility
Other Funding Sources:		Region:	LOWER YUKON/KUSKOKWIM
Total Project Cost:	<u>\$3,200,000</u>		
RE FUND EXPENDED	<u>\$0</u>	As of 2/15/2010	

Project Description:

This project consists of the construction of a 450 kW high-penetration wind system in Kongiganak with multiple secondary thermal loads in residences and the school. Project design is similar to systems being installed in Kwigillingok and Tuntutuliak. Half of the funding is being provided by a legislative grant.

Project Status:

Towers, turbines and foundation materials are staged and ready for construction in spring 2010 once the final design is accepted following review by AEA and NREL. The grant agreement is currently being reviewed internally by AEA.

Lake and Peninsula Borough

Chignik Lake Area Wind-Hydro Final Design

PBO00368; Grant No: 2195409; Project No: 410033

RE Fund Grant:	\$375,000	Project Type:	WIND
Match:	96,000	Applicant Type:	Government
Other Funding Sources:		Region:	BRISTOL
Total Project Cost:	\$471,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This project is a feasibility study for both hydroelectric and wind energy in the vicinity of Chignik Lake. If the feasibility studies show the potential for projects larger than Chignik Lake can use, the project will be expanded to look at the feasibility of tying Chignik Lake with Chignik and Chignik Lagoon and could be expanded to provide design funding for one of the feasible projects.

Project Status:

The grantee has hired a consultant, installed meteorological tower and completed a site visit for selecting streams for the hydro assessment. The next steps include collection of resource data, production of energy generation estimates, identification of permitting issues and the development of a conceptual design. The project is scheduled for completion by the end of 2010.

Lake and Peninsula Borough

Lake Pen Borough Wind Feasibility Study

PBO00337; Grant No: 2195374; Project No: 410032

RE Fund Grant:	\$184,000	Project Type:	WIND
Match:	40,000	Applicant Type:	Government
Other Funding Sources:		Region:	BRISTOL
Total Project Cost:	\$224,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This project is regional wind resource assessment and feasibility project for 6 different utilities in the Lake and Peninsula Borough. The purpose of this grant is to determine which of the communities are best suited for a wind project and then complete Engineering, Procure, and Construct (EPC) bid documents for these communities.

Project Status:

The project is in the early stages and the Borough has just closed their RFP to select a contractor. The contractor's first activities will entail compiling existing data and determining where further data collection is needed. This project is scheduled for completion in December 2010.

Lake and Peninsula Borough

Lake Peninsula Borough Wood Heating Final Design

PBO00364; Grant No: 2195406; Project No: 402026

RE Fund Grant:	\$77,000	Project Type:	BIOMASS
Match:	18,000	Applicant Type:	Government
Other Funding Sources:		Region:	BRISTOL
Total Project Cost:	\$95,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

The project consists of final design and permitting to install high efficiency low emissions wood boilers in five communities in the Land and Peninsula Borough to provide heat to the local schools and adjacent teacher housing. The communities to be considered are Pedro Bay, Newhalen/Iliamna, Nondalton, Kokhanok, and Port Alsworth. The scope includes a energy plan screening for the Borough, assessments of high efficiency wood boilers, an estimate of wood operations and maintenance costs, a full Reconnaissance Study and Preliminary Design, Site Control, Permitting and Right of Way assessment. The final report will include a 95% Design Report Operational Business Plan, and an estimated construction budget and construction schedule.

Project Status

Currently the wood resource evaluation is underway. The grant was executed in July 2009. The anticipated project completion date is December 2010.

McGrath Light & Power Company

McGrath Central Wood Heating Proj Dev Ph III

PBO00361; Grant No: 2195403; Project No: 402039

RE Fund Grant:	\$322,000	Project Type:	BIOMASS
Match:	183,000	Applicant Type:	Utility
Other Funding Sources:		Region:	YUKON- KOYUKUK/UPPER TANANA
Total Project Cost:	<u>\$505,000</u>		
RE FUND EXPENDED	<u>\$0</u>	As of 2/15/2010	

Project Description:

The project consists of the final design and permitting of a district heating system utilizing local woody biomass to heat several public facilities including offices and school buildings in the City of McGrath. The scope includes submission of a 65% Design Report and a System Integration Plan with the McGrath Electric Utility Heat Recovery Construction Project (Round 1 Application #61). The final product includes the 95% Design Drawings, Site Control Documentation, Environmental Analysis Report, Operational Business Plan, and an estimated Construction Budget and Schedule.

Project Status:

Currently work is underway on the conceptual design of the heating system and integration plan with the proposed new diesel powerhouse in Ft. Yukon. The grant was executed in July 2009. The anticipated project completion date is May 2010.

McGrath Light & Power Company

McGrath Heat Recovery Construction

PBO00375; Grant No: 2195416; Project No: 403030

RE Fund Grant:	\$712,415	Project Type:	HEAT RECOVERY
Match:	241,810	Applicant Type:	Utility
Other Funding Sources:		Region:	YUKON- KOYUKUK/UPPER TANANA
Total Project Cost:	<u>\$954,225</u>		
RE FUND EXPENDED	\$283,491	As of 2/15/2010	

Project Description:

The McGrath Heat Recovery Project includes final design, permitting, and construction of power plant efficiency improvements and a recovered heat system. Power plant improvements include fuel efficiency upgrades, high efficiency fan and pump motors, and installation of marine jacketed exhaust manifolds for increased heat recovery capture. The recovered heat system will provide available recovered heat from the McGrath Light and Power (ML&P) power plant to four adjacent commercial buildings, and the Iditarod Area School District (IASD) school complex. The project is designed for future expansion to the new McGrath Clinic, as well as integration with the future McGrath Central Wood Heating biomass project.

Project Status:

NEPA project level environmental permitting is complete. Installation of arctic piping to commercial and IASD end-user facilities is complete. Power plant heat recovery room upgrades are 80% complete. Installation of heat recovery equipment at end-user facilities is 55% complete. Power plant efficiency improvements are 5% complete

Metlakatla Indian Community

Metlakatla-Ketchikan Intertie Design and Permittin

PBO00388; Grant No: 2195429; Project No: 409020

RE Fund Grant:	\$820,000	Project Type:	TRANSMISSION
Match:	160,833	Applicant Type:	Government
Other Funding Sources:		Region:	SOUTHEAST
Total Project Cost:	\$980,833		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This grant is to provide for the permitting and final design of a transmission line that would interconnect the community power systems of Metlakatla to Ketchikan (and the associated Wrangell-Petersburg grid). The proposed transmission line would follow the new road on Annette Island north to Walden Point, and then require a submarine cable to connect to the Ketchikan Public Utility system. In addition, grant funds will also be used to complete design upgrades to the various control systems of the MIC electric system, including the governor and SCADA systems. Three tasks have been identified for this grant including: (1) preliminary field design and right-of-way identification and (2) field staking and final design and (3) construction drawings, staking sheets and bid documents.

Project Status:

MIC has hired a consultant to perform all grant related tasks. The tasks are underway at this time and are expected to be completed by Spring 2010. No problems have been reported with the progress of this grant.

Native Village of Eyak

Cordova Wood Processing Plant-Purchase and setup

PBO00358; Grant No: 2195399; Project No: 402027

RE Fund Grant:	\$147,720	Project Type:	BIOMASS
Match:		Applicant Type:	Government
Other Funding Sources:		Region:	COPPER RIVER/CHUGACH
Total Project Cost:	<u>\$147,720</u>		
RE FUND EXPENDED	<u>\$142,630</u>	As of 2/15/2010	

Project Description:

This project consists of the purchase and use of mobile firewood processor that will enable logs in Cordova to be used for local space heating.

Project Status:

The Native Village of Eyak has purchased and transported the fuelwood processing plant and transported it to Cordova. The equipment (a mobile Cord King Compact Model 69 with splitter and 60" saw blade on wheels) arrived in Cordova in January 2010. Currently the Village is setting up the unit for initial training at a smaller log deck in Cordova. With recent heavy snow fall, the equipment was not able to reach a larger log deck that will be eventually used. Once some of the snow melts, and the road is plowed, then access to this site will allow the equipment to begin its work.

Nikolski IRA Council

Nikolski Wind Integration Construction

PBO00334; Grant No: 2195375; Project No: 410028

RE Fund Grant:	\$409,430	Project Type:	WIND
Match:	41,500	Applicant Type:	Government
Other Funding Sources:		Region:	ALEUTIANS
Total Project Cost:	\$450,930		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This project will integrate an existing Vestas V15 65 kW wind turbine with an existing diesel powerhouse. The integration consists of the installation of remote electrical boilers to utilize excess wind energy for heating and adding to the existing switchgear. TDX Power has already installed the thermal boilers in the school and local lodge.

Project Status:

The grant agreement has been prepared and is with the grantee for signature. Once the grant is signed AEA will review the design and then the grantee will order the necessary equipment to complete the job. Construction is scheduled for completion summer of 2010.

Nome Joint Utility Systems

Nome Banner Peak Wind Farm Transmission Constructi

PBO00403; Grant No: 2195444; Project No: 409017

RE Fund Grant:	\$801,000	Project Type:	TRANSMISSION
Match:	89,000	Applicant Type:	Utility
Other Funding Sources:		Region:	BERING
Total Project Cost:	\$890,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This is a grant to construct a two-mile intertie connecting a 1.17-megawatt wind farm constructed by Banner Wind LLC with the Nome Joint Utility Systems electrical grid.

Project Status:

Construction has completed and the wind farm is producing power for the utility. NJUS will request reimbursement for the full grant amount in March.

Nome, City of

Nome/Newton Peak Wind Farm Construction

PBO00397; Grant No: 2195438; Project No: 410030

RE Fund Grant:	\$4,000,000	Project Type:	WIND
Match:	400,000	Applicant Type:	Utility
Other Funding Sources:		Region:	BERING
Total Project Cost:	\$4,400,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

NJUS originally requested \$13.95 million from Round 1 for feasibility, design and construction of a 3 MW wind farm as a \$13.5 million but project funding was capped at \$4 million.

Project Status:

AEA and NJUS are working to revise the project scope, budget and milestones and expect to finalize the grant within a month. Due to the change in scope, AEA will require feasibility analysis prior to proceeding to final design or construction funding.

Northwest Arctic Borough

Buckland, Deering, Noorvik Wind Farm Construction

PBO00336; Grant No: 2195377; Project No: 410042

RE Fund Grant:	\$10,758,928	Project Type:	WIND
Match:	162,500	Applicant Type:	Government
Other Funding Sources:		Region:	NW ARCTIC
Total Project Cost:	\$10,921,428		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This project consists of feasibility through construction of wind energy projects in three separate communities (Buckland, Deering, and Noorvik) in the Northwest Arctic Borough.

Project Status:

The grant agreement has been difficult to put together due to the complexity of awarding funds to the Borough for potential construction projects in three separate communities with three separate utilities. Memoranda of agreement between the three utilities and the borough have been drawn up and signed. The grant agreement has completed AEA review and is with the Grantee for signature. Wind resource assessment is ongoing in all three communities. The next step is to complete feasibility studies based on the updated wind resource data. The results of these studies will determine which communities proceed to the permitting and final design stage. Project(s) are scheduled for commissioning in late 2011.

Northwest Inupiat Housing Authority

Kobuk River Valley Woody Biomass Feasibility

PBO00330; Grant No: 2195397; Project No: 402031

RE Fund Grant:	\$249,500	Project Type:	BIOMASS
Match:	248,980	Applicant Type:	Government
Other Funding Sources:		Region:	NW ARCTIC
Total Project Cost:	\$498,480		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

The project consists of a feasibility study to determine the sustainable level of biomass harvest in the Upper Kobuk River Valley near the villages of Ambler, Shungnak, and Kobuk.

Project Status:

The scope includes a woody biomass resource assessment, harvest system alternatives, wood yard conceptual design, feasibility of boiler types, preliminary business models and the production of a 35% Conceptual Design Report with a final Environment Analysis, estimated construction budget and schedule. Currently a reconnaissance of the wood resources is underway. The grant was executed in September 2009. The anticipated project completion date is December 2011.

Nushagak Electric and Telephone Cooperative

Lake Elva Hydropower Feasibility, Permitting & Final Design

PBO00378; Grant No: 2195419; Project No: 407035

RE Fund Grant:	\$4,006,500	Project Type:	HYDRO
Match:		Applicant Type:	Utility
Other Funding Sources:		Region:	BRISTOL
Total Project Cost:	\$4,006,500		
RE FUND EXPENDED	\$108,095	As of 2/15/2010	

Project Description:

This grant evaluates the 1.5 MW Lake Elva Hydropower project as a potential source of power for this Dillingham-based utility. Located 36 miles northwest of Dillingham within the boundaries of the Wood-Tikchik State Park, Lake Elva is a high mountain natural lake. Site access is either by snow machine in the winter or by helicopter in the summer. The grant is divided into three phases. Phase 1 allows for a feasibility study of the Lake Elva hydro and for stream gauging. Phase 2 will provide third party (AEA) funding for preparation of a regional integrated resource plan to review all available regional energy sources. Phase 3 would include permitting and final design subject to successful completion of Phases 1 and 2. Assuming work began on that phase in 2011, completion is projected to be in 2015.

Project Status:

Phase 1 feasibility study has been completed. Some minor work has been accomplished for Phase 2, but further detailed study and additional funding are required before this task is considered complete. It is anticipated this work will occur this summer with completion at the end of December 2010.

Petersburg, City of

Ruth Lake Hydro Reconnaissance

PBO00373; Grant No: 2195415; Project No: 407047

RE Fund Grant:	\$160,000	Project Type:	HYDRO
Match:	44,556	Applicant Type:	Utility
Other Funding Sources:		Region:	SOUTHEAST
Total Project Cost:	\$202,528		
RE FUND EXPENDED	\$157,972	As of 2/15/2010	

Project Description:

This grant provided funds to pre-feasibility reconnaissance of the Ruth Lake hydro site and assisted with the City's filing of the Preliminary Permit application to FERC. The site is a high mountain lake located in Thomas Bay which could have a 20 MW nameplate capacity. The City filed the Preliminary Permit application with FERC on February 3, 2009. In the fall of 2009, FERC ruled (by drawing) that of the three competing municipal preference applications received for Ruth Lake, the City of Angoon was selected as the recipient of the Preliminary Permit for Ruth Lake. This permit is good for 3 years from date of issuance. Consequently, any further work on development of this site by the City of Petersburg has been deferred pending future appeals or expiration of the Preliminary Permit.

Project Status:

The grant scope of work has been completed and the grant is closed.

Puvurnaq Power Company

Kongiganak High Penetration Wind-Diesel Smart Grid

PBO00370; Grant No: 2195411; Project No: 410035

RE Fund Grant:	\$1,700,000	Project Type:	WIND
Match:	1,192,850	Applicant Type:	Utility
Other Funding Sources:		Region:	LOWER YUKON/KUSKOKWIM
Total Project Cost:	<u>\$2,892,850</u>		
RE FUND EXPENDED	<u>\$0</u>	As of 2/15/2010	

Project Description:

This project consists of the construction of a 450 kW high-penetration wind system in Kwigillingok with multiple secondary thermal loads in residences and the school. Project design is similar to a system being installed in Kongiganak. Half of the funding is being provided by a legislative grant.

Project Status:

Towers and turbines are erected and ready for wiring, new controllers, and connection to the grid. Turbines are expected to be generating power for the grid in late spring or early summer 2010. The project management team is completing the final, integrated design for review by AEA and NREL.

Sitka, City and Borough of
Takatz Lake Hydroelectric Feasibility

PBO00376; Grant No: 2195418; Project No: 407049

RE Fund Grant:	\$514,684	Project Type:	HYDRO
Match:		Applicant Type:	Government
Other Funding Sources:		Region:	SOUTHEAST
Total Project Cost:	\$514,684		
RE FUND EXPENDED	\$60,422	As of 2/15/2010	

Project Description:

The project assesses feasibility of connecting Sitka to a potential 25 MW hydroelectric power plant on Takatz Lake, a high mountain lake located on the Chatham side of Baranof Island. The three main goals of this grant are resource assessment, conceptual design and a feasibility study. Sitka obtained the FERC-issued Preliminary Permit for Takatz Lake in September 2008 and has received FERC approval to allow the Alternative Licensing Process to be used for Takatz Lake. Though approved for \$2 million in grant funding in Round 1, Sitka received approximately \$515,000 because it was at the bottom of the ranked grant funding list. Because of the limited funding, the project scope has been reduced to match the funds available.

Project Status:

Sitka is in the process of selecting a consultant to provide for grant funded engineering services. Sitka has installed a stream gauge and will be conducting environmental and geotechnical investigations and obtaining aerial photography for the site and proposed transmission line route in 2010. The final feasibility report will be produced in 2011 which will document the proposed conceptual design, cost estimates and engineering and environmental issues associated with the project. The report will recommend whether or not to pursue FERC licensing.

South Fork Hydro, LLC

South Fork Hydroelectric Construction

PBO00393; Grant No: 2195434; Project No: 407041

RE Fund Grant:	\$1,000,000	Project Type:	HYDRO
Match:	2,087,000	Applicant Type:	IPP
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$3,087,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This grant provides funds for the construction of a 1.2 MW run-of-river hydroelectric project located on the South Fork of Eagle River. South Fork Hydro LLC proposes to construct an intake structure, penstock, powerhouse and generation equipment, tailrace, transmission line and access road for this project.

Project Status:

Currently, a utility rate specialist is working with South Fork Hydro LLC to calculate a cost-based power sales rate from the project. The LLC will then need to enter into a Power Purchase Agreement with the local utility and obtain a Certificate of Public Convenience and Necessity from the Regulatory Commission of Alaska. After completing final design documents and obtaining all necessary permits, the project will proceed into construction. Commissioning, final inspection, and punchlist completion will follow. South Fork Hydro estimates the project construction will be completed within 13 months after start of actual work on the project.

St. George, City of

St. George Wind Farm Construction

PBO00355; Grant No: 2195398; Project No: 410029

RE Fund Grant:	\$1,500,000	Project Type:	WIND
Match:	500,000	Applicant Type:	Government
Other Funding Sources:	1,000,000	Region:	ALEUTIANS
Total Project Cost:	\$3,000,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

The proposed project is a high penetration wind-diesel project that will be owned by the City of St. George. The project will consist of a 225 kW wind turbine and thermal dump loads.

Project Status:

AEA is waiting for the city to demonstrate that they have all necessary matching funds before the grant is put in place. The city currently has a loan application into AEA's Power Project Loan Fund for \$500,000 match. However AEA awaits City responses to AEA information requests before additional evaluation of the loan application. The City has been making some progress without grant funding in place. The City has completed initial geotechnical assessments and all permits and land lease agreements. Assuming the City secures match funding, the project will likely be completed in the 2011 construction season.

TDX Power, Inc.

Manley Hot Springs Geothermal Plant

PBO00380; Grant No: 2195421; Project No: 406006

RE Fund Grant:	\$215,000	Project Type:	GEOTHERM
Match:	705,000	Applicant Type:	Utility
Other Funding Sources:		Region:	YUKON- KOYUKUK/UPPER TANANA
Total Project Cost:	<u>\$1,645,000</u>		
RE FUND EXPENDED	<u>\$0</u>	As of 2/15/2010	

Project Description:

Resource assessment, feasibility, and design and construction

Project Status:

With the goal of installing a pre-packaged 200 kW geothermal-powered generator, TDX completed the resource assessment phase of the project in the summer of 2009. The assessment included acquiring aeromagnetic data and performing a RaMPS (Resistivity Monopole Profiling and Sounding) survey. The data from these two surveys were compiled in a report, released in January 2010, that pinpointed two potential drill sites. By April, based on the results of survey, estimated drilling costs, and available funding TDX will determined the scope and schedule of the drilling program. Drilling may take place in the summer of 2010. . Currently, the construction of the geothermal power plant is planned for 2011, but is dependent on the drilling plan. The project is scheduled for completion in winter 2011.

Unalakleet Valley Electric Cooperative

Unalakleet Wind Farm Construction

PBO00359; Grant No: 2195401; Project No: 410031

RE Fund Grant:	\$4,000,000	Project Type:	WIND
Match:	164,340	Applicant Type:	Utility
Other Funding Sources:	1,350,000	Region:	BERING
Total Project Cost:	<u>\$4,164,340</u>		
RE FUND EXPENDED	<u>\$3,788,533</u>	As of 2/15/2010	

Project Description:

This project consists of the construction of 600 kW of wind generating capacity to serve the Unalakleet Valley Electric Coop system. Originally UVEC proposed a 1.2 MW system costing \$9 million, but Round 1 capped project funding at \$4 million. UVEC has proceeded with the smaller project with over \$1 million in additional funding from Norton Sound Economic Development Council and Unalakleet Native Corporation.

Project Status:

The turbines were erected, commissioned, and operating by fall of 2009. The turbines currently need to be operated manually since they have not yet been fully integrated into the power system with a dump load boiler and automated controls. These final aspects of the project will be completed as AEA and UVEC finish rebuilding the diesel powerhouse during the 2010 construction season through an associated Rural Power System Upgrade project. The project is expected to be fully operational by the end of 2010.

University of Alaska-Anchorage

Statewide Hydrokinetic Feasibility Study

PBO00401; Grant No: 2195442; Project No: 407054

RE Fund Grant:	\$565,439	Project Type:	OCEAN/RV
Match:		Applicant Type:	Government
Other Funding Sources:		Region:	STATEWIDE
Total Project Cost:	\$565,439		
RE FUND EXPENDED	\$171,119	As of 2/15/2010	

Project Description:

This project is a resource assessment of hydrokinetic energy potential near 17+ communities in rural Alaska.

Project Status:

UAA School of Engineering collected resource data in the field during summer 2009. Five communities were surveyed on the Kuskokwim and twelve on the Yukon River. During the fall and winter, the data has been analyzed to determine the velocity and volumetric flow at different water levels throughout the year, so that yearlong models of potential power production can be made for each of the communities. The communities to be assessed during the 2010 field season are in the process of being chosen in conjunction with input from AEA, but will likely include a wider geographic distribution than the 2009 field season. The project is scheduled for completion in spring 2011.

University of Alaska-Fairbanks

Nenana Hydrokinetic Construction

PBO00396; Grant No: 2195437; Project No: 407053

RE Fund Grant:	\$450,000	Project Type:	OCEAN/RV
Match:		Applicant Type:	Government
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$450,000		
RE FUND EXPENDED	\$163,380	As of 2/15/2010	

Project Description:

In a two-phase project, the University of Alaska Fairbanks' Alaska Center for Energy and Power (ACEP) are researching the installation of hydrokinetic turbines in Alaska's rivers.

Project Status:

Staged on the Tanana River at Nenana, ACEP, working with partners and subcontractors, has accomplished the first field season of resource assessment including: bathymetry, river current and discharge, sediment transport, and side-scan sonar. During the late fall and winter, ACEP and Ocean Renewable Power Co. (the holder of the FERC preliminary permit at the location) are studying the ice and debris conditions. Due to regulatory and engineering hurdles, construction and installation of an ORPC turbine will likely take place in 2011, instead of May 2009 as originally planned. The project is scheduled for completion winter 2011

Whittier, City of

Whittier Creek Hydroelectric Reconnaissance

PBO00353; Grant No: 2195396; Project No: 407043

RE Fund Grant:	\$85,000	Project Type:	HYDRO
Match:	15,000	Applicant Type:	Government
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$200,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This grant provides for a reconnaissance level study of the hydropower potential of Whittier Creek . Grant tasks include; (1) an Interim Report, (2) two years of stream gauging and hydrology analysis of Whittier Creek, and(3) a preliminary design concept and analysis. The complete analysis and all field data will be documented in a reconnaissance report which will be completed by May 2012. The U.S. Army Corps of Engineers is matching the state grant funds and city funds with federal funds and will also be managing the grant activities for the City of Whittier. The stream gauging installation and data collection will be conducted by the USGS.

Project Status:

The grant award has been delayed due to the Whittier City Manager position becoming vacant in the fall of 2009, but is anticipated to be awarded later this month.

Wrangell, City and Borough of

Wrangell Hydro Based Electric Boilers Construction

PBO00382; Grant No: 2195423; Project No: 407055

RE Fund Grant:	\$2,000,000	Project Type:	OTHER
Match:	82,000	Applicant Type:	Government
Other Funding Sources:		Region:	SOUTHEAST
Total Project Cost:	\$2,082,000		
RE FUND EXPENDED	\$127,983	As of 2/15/2010	

Project Description:

The project consists of the design, permitting, and construction of the conversion from diesel-fired boilers to electric unit heaters, thereby utilizing excess hydro capacity. The scope includes final design construction documents, procurement of the heating and control equipment, and the mechanical and electrical installation of the system.

Project Status:

Currently installation of the electric unit heaters and electric supply and control equipment is underway with several heaters in operation. The grant was executed in August 2009. The anticipated project completion date is August 2010.

Yakutat Power

Yakutat Biomass Feasibility

PBO00383; Grant No: 2195424; Project No: 402035

RE Fund Grant:	\$249,600	Project Type:	BIOMASS
Match:	17,652	Applicant Type:	Utility
Other Funding Sources:		Region:	SOUTHEAST
Total Project Cost:	\$267,252		
RE FUND EXPENDED	\$8,431	As of 2/15/2010	

Project Description:

The project consists of an investigation of the local woody biomass resource, permitting issues and a conceptual design of a biomass to electricity system. The electricity produced would be integrated into the existing powerhouse to displace a portion of the diesel generator production. The scope includes a local biomass resource evaluation and a conceptual design and integration plan with the existing diesel powerhouse.

Project Status:

Currently a brief feasibility study of the technology is under AEA review and prospective engineering firms are being evaluated. The grant was executed in August 2009. The anticipated project completion date is September 2010.

Yukon River Inter-Tribal

Ruby Hydrokinetic

PBO00360; Grant No: 2195402; Project No: 407050

RE Fund Grant:	\$446,950	Project Type:	OCEAN/RV
Match:	15,000	Applicant Type:	IPP
Other Funding Sources:		Region:	YUKON- KOYUKUK/UPPER TANANA
Total Project Cost:	<u>\$461,950</u>		
RE FUND EXPENDED	<u>\$87,422</u>	As of 2/15/2010	

Project Description:

This project will expand the demonstration of a hydrokinetic energy conversion device near Ruby on the Yukon River from 5 kW to 25 kW of installed capacity.

Project Status:

The Yukon River Intertribal Watershed Council (YRITWC) continued work on the 5-kW Encurrent turbine pilot project in the summer of 2009. Functional testing and electricity production was cut short last summer as abrasion of the transmission cable wore through the protective sheath and cut-off power from the turbine. After analyzing the results and revising the construction plans this winter, YRITWC plans on deploying the 25-kW Encurrent turbine next summer. Permanent permitting remains an on-going effort. Completion is scheduled for June 2011.

Kenai Hydro, LLC

Grant Lake/Falls Creek

PBO00387; Grant No: 2195428; Project No: 407042

RE Fund Grant:	\$816,000	Project Type:	HYDRO
Match:	204,000	Applicant Type:	IPP
Other Funding Sources:		Region:	RAILBELT
Total Project Cost:	\$1,020,000		
RE FUND EXPENDED	\$0	As of 2/15/2010	

Project Description:

This pre-construction grant provides funding to develop field data and studies for support of a FERC license for new 4.5 MW hydro scheme which draws water from Grant Lake and Falls Creek. Significant milestone activities conducted in 2009 include: (1) environmental field studies, (2) engineering support for FERC submissions of the Notice of Intent and the Pre-Application Document, (3) outreach meetings for general public and agency personnel, and (4) preliminary engineering for support of FERC project licensing.

Project Status:

Tasks 1-4 have been under way since May 2009 and are anticipated to continue in 2010. The project's LLC membership has recently changed with the announcement of the withdrawal by Kenai Winds, LLC a J.V. between CIRI and EnXco. Homer Electric continues to pursue the project as the sole remaining LLC member.

Cross Reference Table by Region

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75	90	St. George Wind Farm Construction	City of St. George - St. George Municipal Electric Utility
19	11	Aleutians East Borough Renewable Energy Reconnaissance	Aleutians East Borough
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67	52	Nome/Newton Peak Wind Farm Construction	City of Nome d/b/a Nome Joint Utility System (NJUS)
77	50	Unalakleet Wind Farm Construction	Unalakleet Valley Electric Cooperative, Inc. (UVEC)
66	47	Nome Banner Peak Wind Farm Transmission Construction	City of Nome d/b/a Nome Joint Utilities System
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59	64	Lake Pen Borough Wind Feasibility Study	Lake and Peninsula Borough
58	62	Chignik Lake Area Wind-Hydro Final Design	Lake and Peninsula Borough
60	63	Lake Pen Borough Wood Heating Final Design	Lake and Peninsula Borough
27	40	Indian Creek Hydro Feasibility Study	City Of Chignik
70	6	Lake Elva Hydropower Construction	Nushagak Electric & Telephone Cooperative, Inc
26	14	Chignik Lagoon Hydroelectric Final Design	Chignik Lagoon Power Utility (CLPU)
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32	21	Humpback Creek Hydroelectric Construction	Cordova Electric Cooperative
31	22	Cordova Heat Recovery Construction	Cordova Electric Cooperative
64	26	Cordova Wood Processing Plant Construction	Native Village of Eyak
30	27	Allison Lake Hydro Feasibility Study	Copper Valley Electric Association, Inc (CVEA)
24	15	Chistochina Central Wood Heating Construction	Cheesh'na Tribal Council
29	46	Kenny Lake Wood Heating Construction	Copper River School District
38	2	Gulkana Central Wood Heating Construction	Gulkana Village Council
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54	103	Pillar Mountain Wind Farm Construction	Kodiak Electric Association, Inc.
14	73	Old Harbor Hydroelectric Final Design	Alaska Village Electric Cooperative
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15	70	Quinhagak Wind Farm Construction	Alaska Village Electric Cooperative

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69	59	Kobuk River Valley Woody Biomass Feasibility Study	Northwest Inupiat Housing Authority
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35	109	Eva Creek Wind Farm Construction	Golden Valley Electric Association
25	53	North Pole Biomass Electricity/Heat Construction	Chena Power Utility, LLC
34	87	Fishhook Hydroelectric Construction	Fishhook Renewable Energy, LLC
52	34	Grant Lake/Falls Creek Hydro Feasibility Study	Kenai Hydro, LLC
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18	66	Coal Mine Road Wind Farm Final Design	Alaska Wind Power, LLC
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79	97	Nenana Hydrokinetic Construction	University of Alaska Fairbanks, Office of Sponsored Programs
33	112	Delta Junction Wood Chip Heating Feasibility Study	Delta/Greely School District
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71	38	Ruth Lake Hydro Reconnaissance	City of Petersburg d/b/a Petersburg Municipal & Light
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49	54	Galena Wood Heating Construction	Interior Regional Housing Authority (IRHA)
83	84	Ruby Hydrokinetic Construction	Yukon River Inter-Tribal Watershed Council
9	49	Tok Wood Heating Construction	Alaska Gateway School District
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