

State of Alaska FY2009 Governor's Operating Budget

**Department of Commerce, Community, and Economic
Development
Alaska Energy Authority
Results Delivery Unit Budget Summary**

Alaska Energy Authority Results Delivery Unit

Contribution to Department's Mission

Reduce the cost of energy in Alaska.

Core Services

AEA projects and programs support its mission by 1) providing for the operation and maintenance of existing Authority-owned projects with maximum utility control, 2) assisting in the development of safe, reliable, and efficient energy systems throughout Alaska, which are sustainable and environmentally sound, 3) reducing the cost of electricity for residential customers and community facilities in rural Alaska through the power cost equalization program, and 4) responding quickly and effectively to electrical emergencies.

End Result	Strategies to Achieve End Result
<p>A: The unit cost of energy in Alaska is reduced.</p> <p><u>Target #1:</u> Increase in generation efficiency <u>Measure #1:</u> % change in generation efficiency</p> <p><u>Target #2:</u> 100% eligible electric utilities receive PCE payments <u>Measure #2:</u> % of eligible electric utilities receiving PCE</p> <p><u>Target #3:</u> 0.16 gallons per year of fuel (diesel or natural gas) is saved for every grant dollar <u>Measure #3:</u> Number of gallons saved per grant dollar by energy cost reduction round</p>	<p>A1: Reduce the number of Bulk Fuel (BF) non-code compliant facilities</p> <p><u>Target #1:</u> Upgrade 10 rural bulk fuel facilities annually <u>Measure #1:</u> Number of completed BF upgrade projects per year</p> <p>A2: Upgrade rural powerhouses to increase diesel efficiency</p> <p><u>Target #1:</u> 8 rural power system upgrades (RPSU) completed annually <u>Measure #1:</u> Number of completed RPSU projects per year</p> <p>A3: Manage the Bulk Fuel Revolving Loan Fund to maximize the amount available to eligible communities</p> <p><u>Target #1:</u> 5% or less delinquency rate (over 90 days) <u>Measure #1:</u> \$ amount of loans over 90 days due/\$ amount of loans outstanding</p> <p>A4: Train rural residents to manage and operate rural energy infrastructure and programs</p> <p><u>Target #1:</u> 100 rural residents trained annually to manage and operate rural energy infrastructure and programs <u>Measure #1:</u> Number of rural residents trained annually</p>

FY2009 Resources Allocated to Achieve Results

FY2009 Results Delivery Unit Budget: \$32,831,400

Personnel:

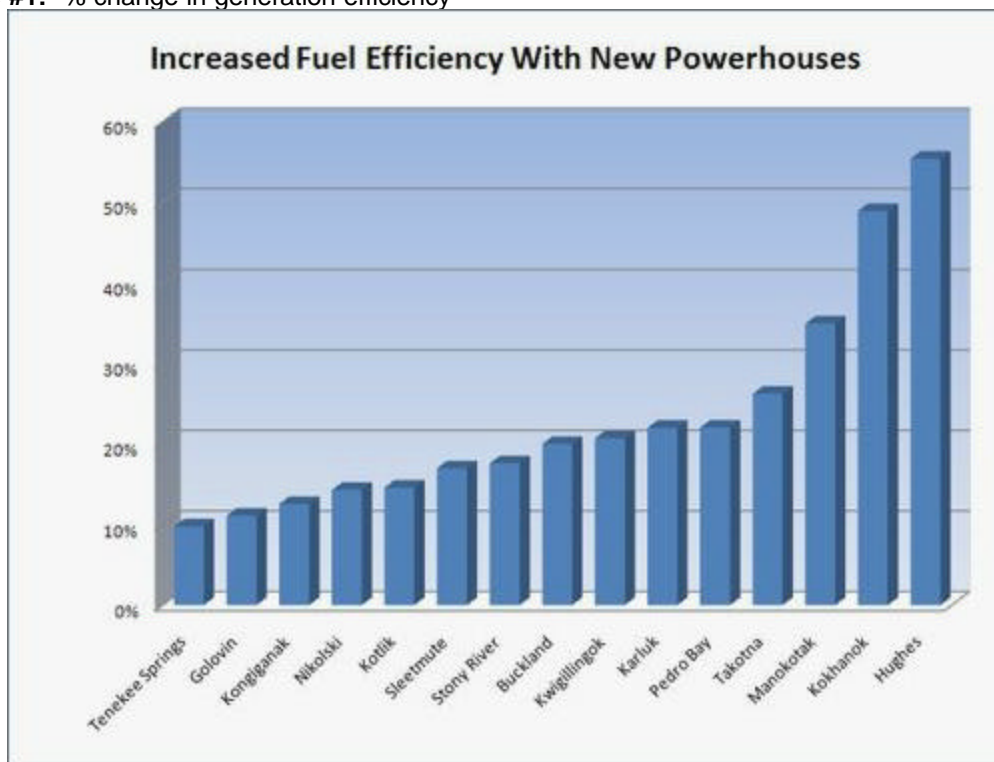
Full time	0
Part time	0
Total	0

Performance Measure Detail

A: Result - The unit cost of energy in Alaska is reduced.

Target #1: Increase in generation efficiency

Measure #1: % change in generation efficiency



Analysis of results and challenges: Generator efficiency before and after the RPSU projects based on PCE data is shown in the chart above. Diesel efficiency measures include 1) replacement of old engine generators with more efficient electronic fuel injection units, and 2) addition of modern system controls that optimize dispatch of the most efficient units for a given electrical load. Average efficiency increase in kilowatt hours produced per gallon of diesel fuel is about 20%. Increase in efficiency for the facilities listed in the chart saved more than 60,000 gallons of fuel.

Target #2: 100% eligible electric utilities receive PCE payments

Measure #2: % of eligible electric utilities receiving PCE

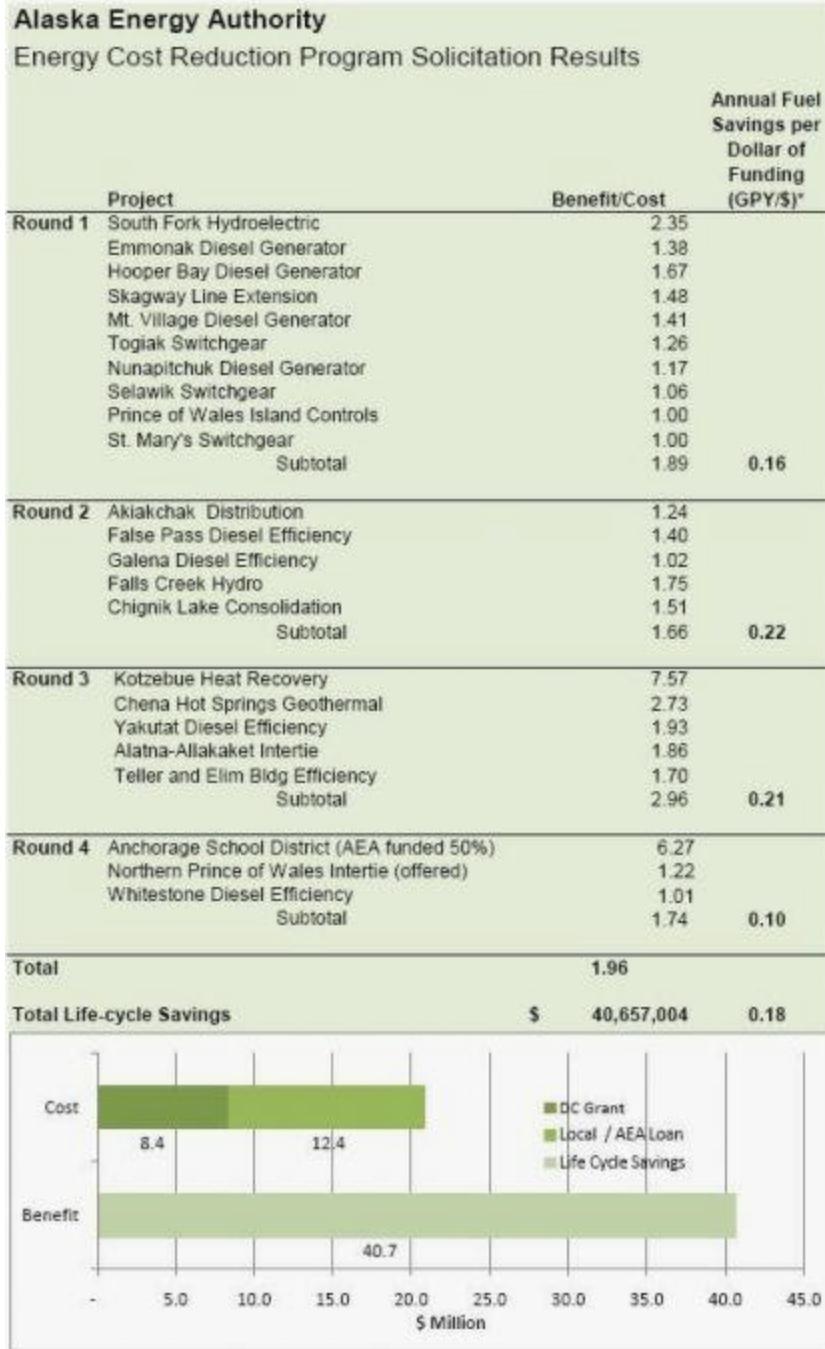
Percentage of Eligible Utilities Receiving PCE

Year	YTD
FY 2003	95.5%
FY 2004	95.5%
FY 2005	98.8%
FY 2006	98.8%
FY 2007	98.9%

Analysis of results and challenges: PCE payments reduce the unit cost of power to residential and community facility customers of eligible utilities. AEA provides technical assistance to utility clerks that need help preparing PCE reports; utilities that are not participating pursuant to the statutes and regulations do not receive some or all payments. 1 out of 88 utilities did not participate in FY 2007.

Target #3: 0.16 gallons per year of fuel (diesel or natural gas) is saved for every grant dollar

Measure #3: Number of gallons saved per grant dollar by energy cost reduction round



Analysis of results and challenges: The Energy Cost Reduction Program provides grant and loan financing for project proposals to reduce the cost of power and heat in Alaskan communities. The program is conducted through a competitive request for proposals; proposals are ranked by life cycle benefit cost analysis. Since fuel costs fluctuate and project life-cycles vary, we measure the success of this program by the estimated annual fuel savings expressed in gallons.

A1: Strategy - Reduce the number of Bulk Fuel (BF) non-code compliant facilities

Target #1: Upgrade 10 rural bulk fuel facilities annually

Measure #1: Number of completed BF upgrade projects per year

Number of completed BF Upgrade projects per year

Year	YTD
2000	3
2001	9
2002	0
2003	12
2004	11
2005	8
2006	7
2007	4

Analysis of results and challenges: A total of 21 projects were completed in years previous to 2000. Upgrading Bulk Fuel facilities reduces the unit cost of energy by replacing leaking tanks and reducing the risk of future tank and equipment failure. Bringing these facilities into compliance with federal and state codes and regulations also makes them safer and more reliable. By eliminating fuel spills from leaking tanks, a community is able to use all fuel purchased. Approximately 35 communities need bulk fuel facility upgrades.

A2: Strategy - Upgrade rural powerhouses to increase diesel efficiency

Target #1: 8 rural power system upgrades (RPSU) completed annually

Measure #1: Number of completed RPSU projects per year

RPSU Projects completed annually

Year	YTD
2001	2
2002	1
2003	2
2004	4
2005	10
2006	10
2007	6

Analysis of results and challenges: Powerhouse upgrade projects replace outdated, inefficient systems with new electronically controlled generator sets. New powerhouses contain generators of several different sizes. This allows the operator to employ the most efficient generator at various power demand levels throughout the day. At peak demand times the largest generator provides the power, while at low-demand times the smallest generator provides the power. Approximately 55 communities require powerhouse upgrades.

A3: Strategy - Manage the Bulk Fuel Revolving Loan Fund to maximize the amount available to eligible communities

Target #1: 5% or less delinquency rate (over 90 days)

Measure #1: \$ amount of loans over 90 days due/\$ amount of loans outstanding



Analysis of results and challenges: Bulk fuel purchases reduce a community's cost of energy. As of 8/31/07, \$291,716 of outstanding loan balance of \$3,065,095 is over 90 days delinquent for a 9.52% delinquency rate. 5 loans out of a total of 39 outstanding loans are delinquent. Bulk fuel loans are short-term loans and as the graph illustrates, the outstanding loan balance fluctuates dramatically throughout the year.

A4: Strategy - Train rural residents to manage and operate rural energy infrastructure and programs

Target #1: 100 rural residents trained annually to manage and operate rural energy infrastructure and programs

Measure #1: Number of rural residents trained annually

Year	YTD
FY 2003	69
FY 2004	106
FY 2005	112
FY 2006	111
FY 2007	131

Analysis of results and challenges: Training local residents to manage and operate rural energy infrastructure reduces the unit cost of energy by providing rural residents the skills to produce and submit PCE reports and operate and maintain energy infrastructure. PCE reports must be submitted to receive PCE payments and proper maintenance of facilities helps ensure that the facilities continue to operate in the most efficient manner. Properly maintaining a facility extends the operational life of the facility.

Key RDU Challenges

See components.

Significant Changes in Results to be Delivered in FY2009

See components.

Major RDU Accomplishments in 2007

See components and AEA capital requests.

Contact Information
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**Alaska Energy Authority
RDU Financial Summary by Component**

All dollars shown in thousands

	FY2007 Actuals				FY2008 Management Plan				FY2009 Governor			
	General Funds	Federal Funds	Other Funds	Total Funds	General Funds	Federal Funds	Other Funds	Total Funds	General Funds	Federal Funds	Other Funds	Total Funds
Formula Expenditures												
AEA Power Cost Equalization	0.0	0.0	25,593.7	25,593.7	0.0	0.0	26,760.0	26,760.0	0.0	0.0	28,160.0	28,160.0
Non-Formula Expenditures												
AEA Owned Facilities	0.0	0.0	179.0	179.0	0.0	0.0	1,067.1	1,067.1	0.0	0.0	1,067.1	1,067.1
AEA Rural Energy Operations	198.6	29.6	3,284.9	3,513.1	198.1	71.9	3,233.6	3,503.6	150.0	30.0	2,766.5	2,946.5
AEA Technical Assistance	100.7	0.0	0.0	100.7	100.7	0.0	0.0	100.7	100.7	0.0	0.0	100.7
Alternative Energy & Efficiency	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.1	41.9	467.1	557.1
Totals	299.3	29.6	29,057.6	29,386.5	298.8	71.9	31,060.7	31,431.4	298.8	71.9	32,460.7	32,831.4

**Alaska Energy Authority
Summary of RDU Budget Changes by Component
From FY2008 Management Plan to FY2009 Governor**

All dollars shown in thousands

	<u>General Funds</u>	<u>Federal Funds</u>	<u>Other Funds</u>	<u>Total Funds</u>
FY2008 Management Plan	298.8	71.9	31,060.7	31,431.4
Adjustments which will continue current level of service:				
-AEA Rural Energy Operations	-48.1	-41.9	-467.1	-557.1
-Alternative Energy & Efficiency	48.1	41.9	467.1	557.1
Proposed budget increases:				
-AEA Power Cost Equalization	0.0	0.0	1,400.0	1,400.0
FY2009 Governor	298.8	71.9	32,460.7	32,831.4