1-27-09 Overview: Alaska Energy Authority Statewide Energy Plan

<target><bill></bill><subject>1-27-09 Overview Alaska Energy Authority Statewide Energy Plan</subject><comm>HENE26</comm></target>

Alaska Legislature
House Special Committee on Energy

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MEETING AGENDA

Tuesday, January 27th 2009

3:00 – 5:00 p.m.

1) Alaska Energy Authority's Statewide Energy Report

Presented by Steve Haagenson, Executive Director, AEA

###

AIDEA Alaska Industrial Development and Export Authority

ALASKA ENERGY AUTHORITY

January 21, 2009

Honorable Gary Stevens
Senate President
State Capitol, Room 103
Juneau, Alaska 99801-1182

Honorable Mike Chenault
Speaker of the House
State Capitol, Room 505
Juneau, Alaska 99801-1182

RE: Renewable Energy Fund- Time Extension for Round II Application Review

Dear Sirs:

The Alaska Energy Authority (AEA) was directed as follows in Ch. 31, SLA 2008 (HB152):

> "(3) not later than 10 days after the first day of each regular legislative session, submit to the Legislature a report summarizing and reviewing each grant application submitted under this section and a recommended priority for awarding grants".

Due to the time required to provide a complete and thorough evaluation of the 114 applications received in Round I, we request a time extension from January 30, 2009 to March 3, 2009. This will allow time to complete the review of the 120 applications received in Round II.

We are committed to providing a high quality review of each grant application. We have a comprehensive review program in place and have completed the Round I (FY09) reviews. The time extension will allow AEA staff and the Renewable Energy Fund Advisory Committee to complete the evaluation of Round II (FY10) applications and deliver a quality work product to the Legislature that will provide a recommended priority for the award of these FY10 projects.

Sincerely,

ALASKA ENERGY AUTHORITY

Steven Haagenson
Executive Director

cc: Senator Kevin Meyers- LB&A Chair
Commissioner Pat Galvin, AEA Chair
Commissioner Notti, DCCED

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Alternative Energy Resources

Hydro

Installed KW: 1800
kW-hr/year: 4700000

Site: NYAC Tuluksak River/Slate Cr.
Study plan effort: reconnaissance
Plant Factor: %
Penetration: 0.14

		per kW-hr	Heat Cost $/MMBtu:
Capital cost	$10,541,654		
Annual Capital	$409,707	$0.09	$25.54
Annual OM	$240,406	$0.05	$14.99
Fuel cost:	$0	$0.00	
Total Annual Cost	$650,113	$0.14	$40.53
Non-Fuel Costs		$0.08	
Alternative COE:		**$0.22**	
% Community energy		12%	
New Community COE		$0.55	

(includes non-fuel and diesel costs)

Savings
$1,832,324

Alternative Energy Resources

Wind Diesel Hybrid

Installed KW: 9600
kW-hr/year: 4105800

Met Tower? no
Homer Data? no
Wind Class: 5
Avg wind speed: 6.70 m/s

		per kW-hr	Heat Cost $/MMBtu:
Capital cost	$39,415,684		
Annual Capital	$2,649,353	$0.65	$189.06
Annual OM	$192,629	$0.05	$13.75
Fuel cost:	$0	$0.00	
Total Annual Cost	$2,841,982	$0.69	$202.81
Non-Fuel Costs		$0.08	
Alternative COE:		**$0.78**	
% Community energy		10%	
New Community COE		$0.61	

(includes non-fuel and diesel costs)

Savings
($673,531)

Biomass For Heat

Heat Deliverd:	425000 BTU/hr	Garn heater installed cost	$500,000
Cords/day:	1.8	Annual ID	$33,608
Hours per year	6000	Capital per MMBt	$13.18
Wood (cordwood or willows)	$225 $/cord	Fuel cost per MMBtu	$20.09
		Total per MMBT	$33.27
		Annual Heat	1.2%

Other Resources

Bethel

Tidal:	
Wave:	
Coal Bed Methane:	
Natural Gas:	
Coal:	
Propane:	

Renewable Fund Project List:

For detailed information, consult the AEA web site. akenergyauthority.org

A project titled: Bethel Wind Farm Construction (BNC land) has been submitted by: Alaska Wind Power, LLC for a Wind Diesel Hybrid project. The total project budget is: $8,710,000 with $6,960,000 requested in grant funding and $1,750,000 as matching funds.

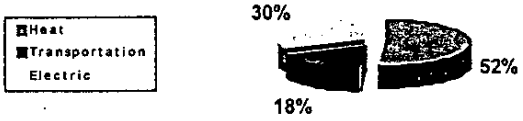
A project titled: Bethel Wind Power x 4 has been submitted by: City of Bethel for a Wind Diesel Hybrid project. The total project budget is: $3,197,986 with $2,598,320 requested in grant funding and $199,889 as matching funds.

A project titled: Bethel Wind Power x4_City of Bethel has been submitted by: City of Bethel for a Wind Diesel Hybrid project. The total project budget is: $3,197,986 with $2,598,320 requested in grant funding and $599,666 as matching funds.

A project titled: Orutsaramiut Native Council has been submitted by: Orutsaramiut Native Council Incorporated for a Gas project. The total project budget is: $70,200 with $701,700 requested in grant funding and $771,900 as matching funds.

Kwethluk

Energy Used



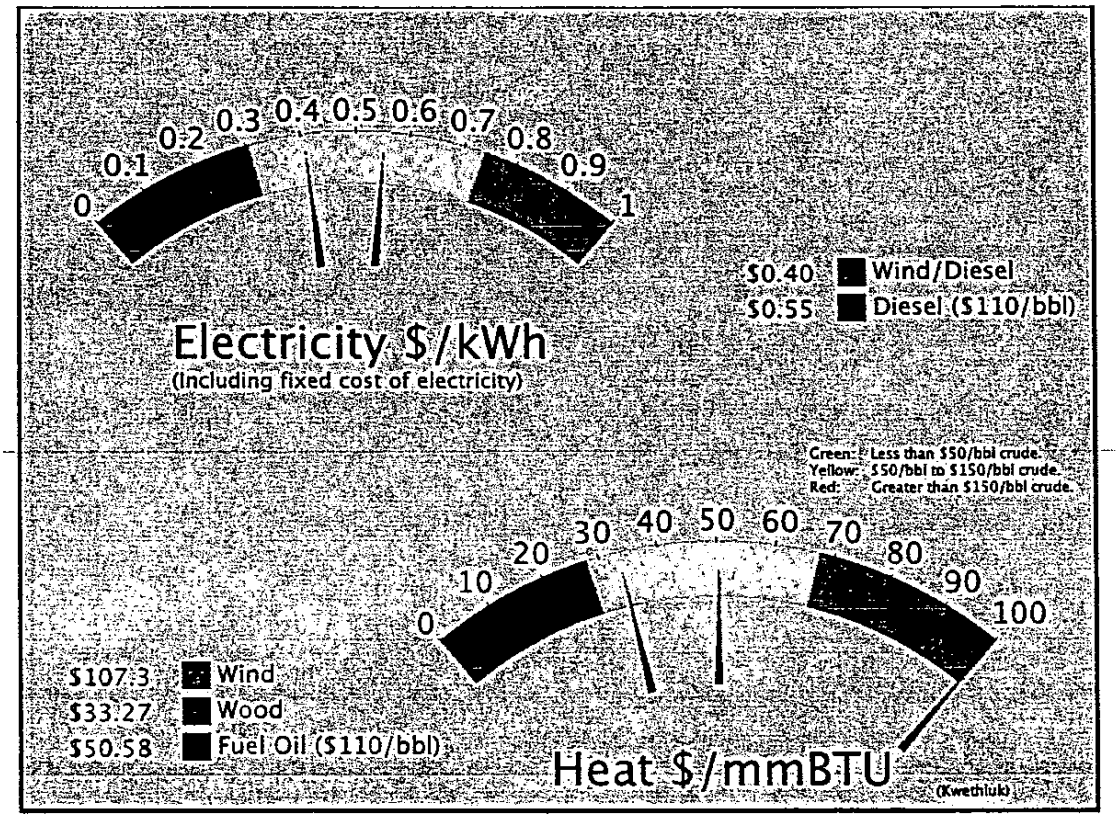
Total: **$2,989** Per capita

Heat **$1,530** Per capita

Transportation **$547** Per capita

Electricity: **$911** Per capita

POPULATION: 721



Kwethluk

Regional Corporation
Calista Corporation

House 38
Senate : **S**

POPULATION 721 LATITUDE: 60d 49m N LONGITUDE: 161d 26m **Unorganized**

LOCATION This is a Yup'ik community located 12 air miles east of Bethel on the Kwethluk River at its junction with the Kuskokwim. The village is the second largest along the Lower Kuskokwim River, following Bethel.

ECONOMY The largest employers are the school district, village corporation, store and health clinic. 61 residents hold commercial fishing permits. Subsistence activities play a central role in the lifestyle; salmon, moose and caribou are the staples of the diet. Seal meat and seal oil are obtained in trade with coastal relatives and neighbors. Most families travel to fish camps each summer.

HISTORY Archaeological evidence from a nearby site indicates that the area has been occupied since prehistoric times. The name Kwethluk is derived from "Kwikli," meaning "river." In the late 1800s, families from four villages on the Kwethluk River joined others living at the site. In 1889, an Eskimo lay worker for the Moravian Church was stationed at the village. A measles epidemic struck the village in the late 1890s. The Moravian Church built a chapel in 1896, followed by a Russian Orthodox Church in 1912. Discovery of gold in nearby creeks in 1909 attracted prospectors to the area, but the finds proved disappointing and most were gone by 1911. One placer deposit, discovered on the upper Kwethluk River, delivered a small yield and was worked until World War II. A Moravian orphanage was established three miles upriver. A BIA school with teacher's quarters was built in 1924. In 1939, the villagers owned 31,000 reindeers, used for food and skins. A tuberculosis epidemic at this time tragically reduced the population. A post office was established in 1947, and a Native-owned store opened in 1948. An airstrip was cleared in 1956. Snowmachines replaced dog teams in the 1960s as the principal form of winter transportation. The City was incorporated in 1975.

Current Energy Status PCE

Electric (Estimates based on PCE)

Current efficiency	13.49	kW-hr/gal	Fuel COE	$0.46	/kw-hr	Estimated Local Fuel cost @ $110/bbl	$4.59 /kw-hr
Consumption in 200	116,368	gal	Est OM	$0.02	/kw-hr	Estimated Diesel OM	$23,138
Average Load	132	kW	NF COE:	$0.07	/kw-hr	Other Non-Fuel Costs:	$83,133
Estimated peak loa	264.13	kW	Total	$0.55		Current Fuel Costs	$534,083
Average Sales	1,156,885	kW-hours				**Total Electric**	**$640,354**

Space Heating (Estimated)

2000 Census Data		2008 Estimated Heating Fuel used:	197,388	gal	
Fuel Oil:	86%	Estimated heating fuel cost/gallon	$5.59		
Wood:	9%	$/MMBtu delivered to user	$50.70		**Total Heating Oil**
Electricity:	5.2%	Community heat needs in MMBtu	23,687		**$1,103,321**

Transportation (Estimated)

Estimated Diesel:	70,612	gal	Estimated cost	$5.59	**Total Transportation** **$394,690**

Energy Total **$2,138,365**

Possible Upgrades to Current Power Plant

Power Plant - Performance Improvement to higher efficiency

Upgrade needed:		Capital cost	$1,300,000		
Powerhouse Module		Annual Capital cost	$108,897	$0.09	/kw-hr
Status	**Construction**	Estimated Diesel OM	$23,138	$0.02	
Acheivable efficiency	14 kW-	New fuel cost	$514,795	$0.44	**Savings**
New Fuel use	112,166	Avg Non-Fuel Costs:	$106,271	$0.07	**($89,609)**
		New cost of electricity		$0.51 per kW-hr	

Diesel Engine Heat Recovery

Heat Recovery System Installed? **N**

Is it working now? **N**

BLDGs connected and working:

None

			Value
Water Jacket	17,455	gal	$97,568
Stack Heat	0	gal	$0

Capital cost	$369,781		
Annual ID	$30,975		
Annual OM	$7,396		
Total Annual costs	$38,371		**Savings**
Heat cost	$19.89	$/MMBtu	**$59,197**

Alternative Energy Resources

Wind Diesel Hybrid

Installed KW	**400**		
kW-hr/year	**907550**		
Met Tower?	**no**		
Homer Data?	**yes**		
Wind Class	**5**		
Avg wind speed	**7.50**	m/s	

			Heat Cost $/MMBtu :
Capital cost	**$3,071,563**	per kW-hr	
Annual Capital	**$206,457**	$0.23	$66.65
Annual OM	**$42,579**	$0.05	$13.75
Fuel cost:	**$0**	$0.00	
Total Annual Cost	**$249,036**	$0.27	**$80.40**
Non-Fuel Costs		$0.09	
Alternative COE:		**$0.37**	
% Community energy	78%		**Savings**
New Community COE	**$0.39**		**$188,058**

(includes non-fuel and diesel costs)

Biomass For Heat

Heat Deliverd:	**425000**	BTU/hr
Cords/day:	**1.8**	
Hours per year	**6000**	
Wood (cordwood or willows)	**$225**	$/cord

Garn heater installed cost	**$500,000**
Annual ID	**$33,608**
Capital per MMBt	**$13.18**
Fuel cost per MMBtu	**$20.09**
Total per MMBT	**$33.27**
Annual Heat	10.8%

Other Resources

Kwethluk

Tidal:	
Wave:	
Coal Bed Methane:	
Natural Gas:	
Coal:	
Propane:	

Renewable Fund Project List:

For detailed information, consult the AEA web site. akenergyauthority.org

Chikuminuk Hydro	Electric	16,000 kW	24,095,897 kWh
Kisaralik Hydro	Electric	30,000 kW	50,000,000 kWh
Newhalen Hydro	Electric	22,000 kW	50,000,000 kWh
Nyak Hydro	Electric	1,800 kW	4,700,000 kWh
Bethel Wind	Electric	9,600 kW	4,105,800 kWh
Amautluak Wind	Electric	9,000 kW	20,377,440 kWh
Generation			153,279,137 kWh
Load			127,799,965 kWh
Bethel			
	Electric	9,122 kW	39,955,247 kWh
	Heat	217,913 mmBTU	63,847,934 kWh
Kwethluk			
	Electric	264 kW	1,156,885 kWh
	Heat	23,687 mmBTU	6,940,229 kWh
Eek			
	Electric	162 kW	712,095 kWh
	Heat	13,117 mmBTU	3,843,246 kWh
Quinhagak			
	Electric	385 kW	1,688,006 kWh
	Heat	21,912 mmBTU	6,420,158 kWh
Amatluak			
	Electric	123 kW	537,659 kWh
	Heat	9,210 mmBTU	2,698,506 kWh

Bethel

Energy Used

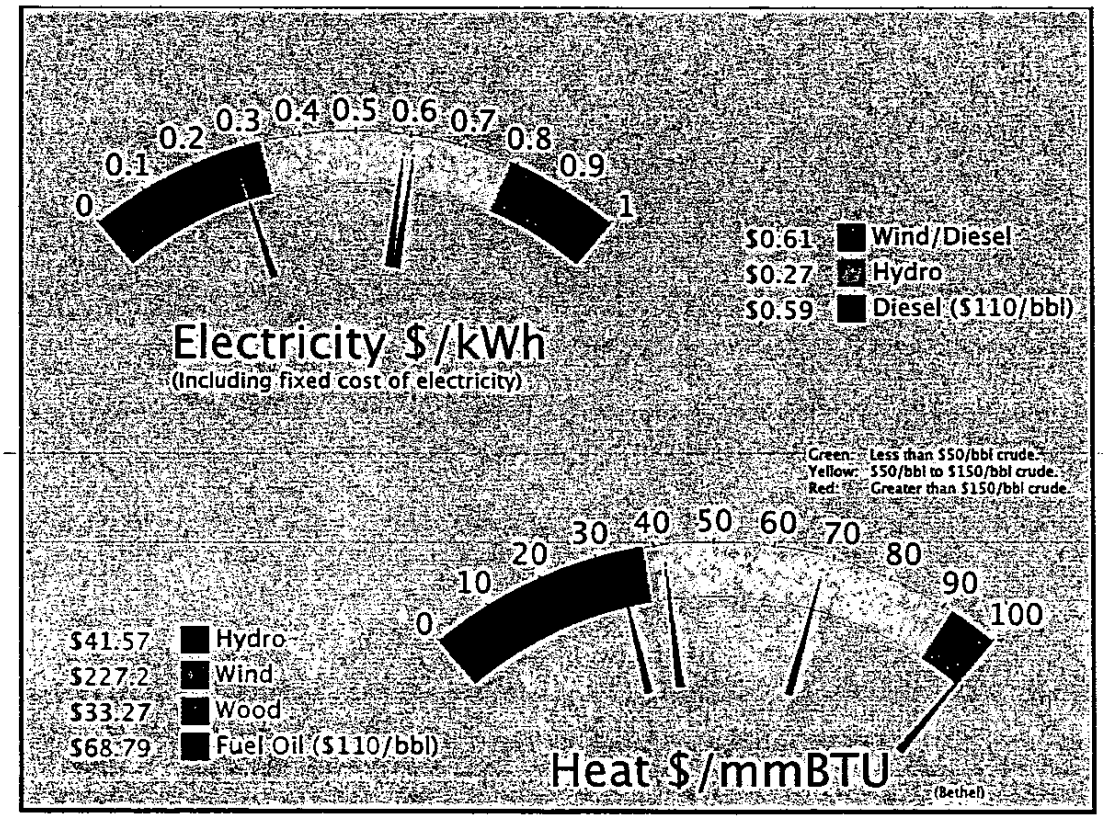
Total: **$7,332** Per capita

Heat **$2,442** Per capita

Transportation **$874** Per capita

Electricity: **$4,017** Per capita

POPULATION: 5653



Bethel

Regional Corporation
Calista Corporation

House 38
Senate : S

POPULATION 5653 LATITUDE: 60d 47m N LONGITUDE: 161d 45m **Unorganized**

LOCATION Bethel is located at the mouth of the Kuskokwim River, 40 miles inland from the Bering Sea. It lies in the Yukon Delta National Wildlife Refuge, 400 air miles west of Anchorage.

ECONOMY Bethel serves as the regional center for 56 villages in the Yukon-Kuskokwim Delta. Food, fuel, transportation, medical care, and other services for the region are provided by Bethel. 50% of the jobs in Bethel are in government positions. Commercial fishing is an important source of income; 200 residents hold commercial fishing permits, primarily for salmon and herring roe net fisheries. Subsistence activities contribute substantially to villager's diets, particularly salmon, freshwater fish, game birds and berries. Poor fish returns since 1997 have significantly affected the community.

HISTORY Bethel was first established by Yup'ik Eskimos who called the village Mumtrekhlogamute meaning Smokehouse People named for the nearby fish smokehouse. There were 41 people in Bethel during the 1880 U.S. Census. At that time, it was an Alaska Commercial Company Trading Post. The Moravian Church established a mission in the area in 1884. The community was moved to its present location due to erosion at the prior site. A post office was opened in 1905. Before long, Bethel was serving as a trading, transportation and distribution center for the region, which attracted Natives from surrounding villages. The City was incorporated in 1957. Over time, federal and state agencies established regional offices in Bethel.

Current Energy Status PCE

Electric (Estimates based on PCE)

Current efficiency	13.68	kW-hr/gal	Fuel COE	$0.51	/kw-hr	Estimated Local Fuel cost @ $110/bbl	$6.60 /kw-hr
Consumption in 200	3,075,281	gal	Est OM	$0.02	/kw-hr	Estimated Diesel OM	$799,105
Average Load	4,561	kW	NF COE:	$0.06	/kw-hr	Other Non-Fuel Costs:	$2,530,895
Estimated peak loa	9122.2	kW	Total	$0.59		Current Fuel Costs	$20,301,775
Average Sales	39,955,247	kW-hours				**Total Electric**	**$23,631,775**

Space Heating (Estimated)

2000 Census Data		2008 Estimated Heating Fuel used:	1,815,943	gal	
Fuel Oil:	87%	Estimated heating fuel cost/gallon	$7.60		
Wood:	1%	$/MMBtu delivered to user	$68.95		**Total Heating Oil**
Electricity:	5.5%	Community heat needs in MMBtu	217,913		**13,804,071**

Transportation (Estimated)

Estimated Diesel:	649,616	gal	Estimated cost	$7.60	**Total Transportation** **$4,938,121**

Energy Total **$42,373,967**

Possible Upgrades to Current Power Plant

Power Plant - Performance Improvement to higher efficiency

Upgrade needed:		Capital cost	$0			
#N/A		Annual Capital cost	$0	$0.00	/kw-hr	
Status	NA	Estimated Diesel OM	$799,105	$0.02		
Acheivable efficiency	14.8 kW-	New fuel cost	$18,831,562	$0.47		**Savings**
New Fuel use	2,852,575	Avg Non-Fuel Costs:	$3,330,000	$0.06		**$1,470,213**
		New cost of electricity		$0.53	per kW-hr	

Diesel Engine Heat Recovery

Heat Recovery System Installed?

Is it working now?

BLDGs connected and working:

			Value
Water Jacket	461,292	gal	$3,506,558
Stack Heat	307,528	gal	$2,337,706

Capital cost	$12,771,083		
Annual ID	1,069,790		
Annual OM	$255,422		
Total Annual costs	$1,325,212		**Savings**
Heat cost	$15.60	$/MMBtu	**$4,519,052**

Alternative Energy Resources

Hydro

Installed KW: 16000
kW-hr/year: 24095897
Site: **Chikuminuk Lake**
Study plan effort: **reconnaissance**
Plant Factor: **50** %
Penetration: **0.46**

		per kW-hr	Heat Cost $/MMBtu:
Capital cost	**$79,756,000**		
Annual Capital	**$3,099,756**	$0.13	$37.69
Annual OM	**$579,120**	$0.02	$7.04
Fuel cost:	**$0**	$0.00	
Total Annual Cost	**$3,678,876**	$0.15	**$44.73**
Non-Fuel Costs		$0.08	
Alternative COE:		**$0.24**	
% Community energy		60%	
New Community COE		**$0.32**	

(includes non-fuel and diesel costs)

Savings
$11,039,683

Alternative Energy Resources

Hydro

Installed KW: 30000
kW-hr/year: 50000000
Site: **Kisaralik River**
Study plan effort: **reconnaissance**
Plant Factor: **50** %
Penetration: **0.58**

		per kW-hr	Heat Cost $/MMBtu:
Capital cost	**$163,798,760**		
Annual Capital	**$7,281,651**	$0.15	$42.67
Annual OM	**$423,000**	$0.01	$2.48
Fuel cost:	**$0**	$0.00	
Total Annual Cost	**$7,704,651**	$0.15	**$45.15**
Non-Fuel Costs		$0.08	
Alternative COE:		**$0.24**	
% Community energy		125%	
New Community COE		**$0.28**	

(includes non-fuel and diesel costs)

Savings
$15,927,124

Alternative Energy Resources

Hydro

Installed KW: 22000
kW-hr/year: 50000000
Site: **Newhalen River**
Study plan effort: **reconnaissance**
Plant Factor: %
Penetration: **0.55**

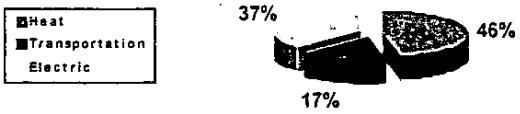
		per kW-hr	Heat Cost $/MMBtu:
Capital cost	**$378,645,160**		
Annual Capital	**$23,561,665**	$0.47	$138.07
Annual OM	**$423,000**	$0.01	$2.48
Fuel cost:	**$0**	$0.00	
Total Annual Cost	**$23,984,665**	$0.48	**$140.55**
Non-Fuel Costs		$0.08	
Alternative COE:		**$0.56**	
% Community energy		125%	
New Community COE		**$0.68**	

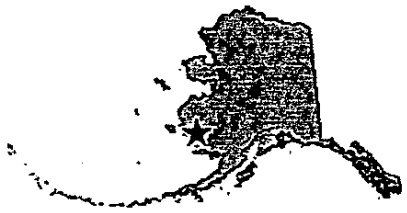
(includes non-fuel and diesel costs)

Savings
($352,890)

Eek

Energy Used





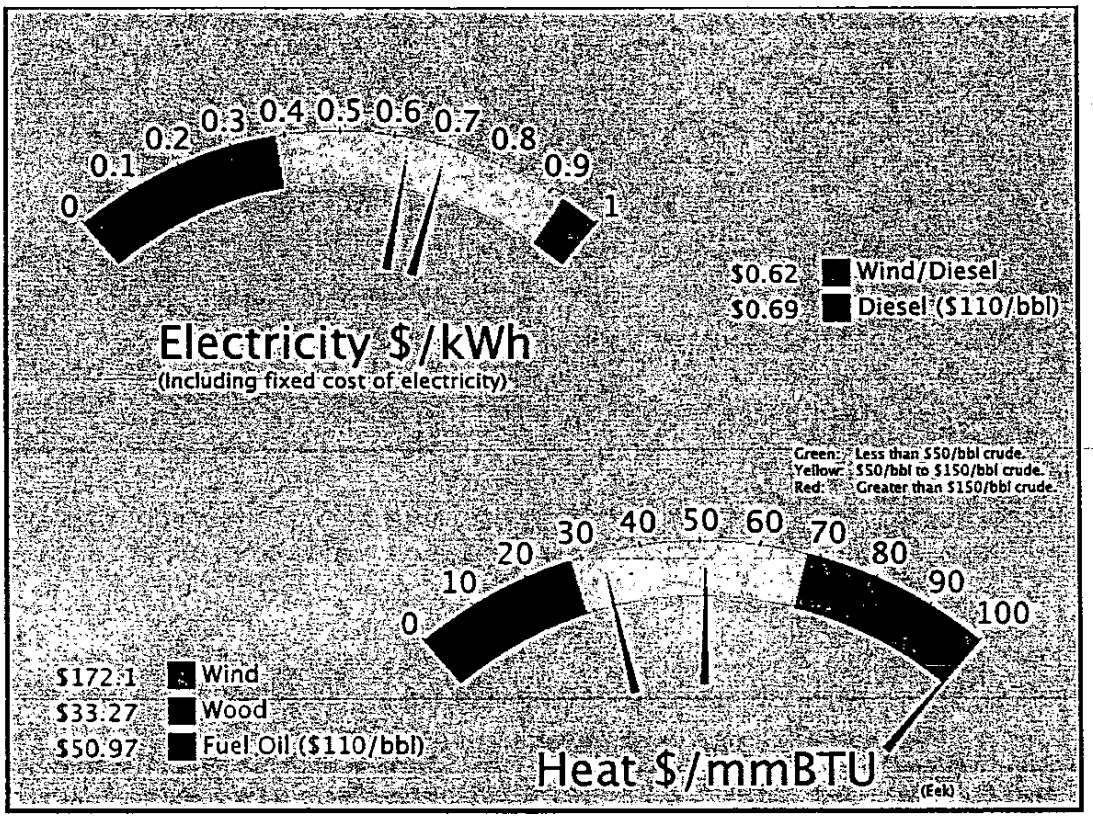
Total: **$4,643** Per capita

Heat **$2,160** Per capita

Transportation **$773** Per capita

Electricity: **$1,710** Per capita

POPULATION: 285



Eek

Regional Corporation
Calista Corporation
House 38
Senate : S

POPULATION 285 LATITUDE: 60d 13m N LONGITUDE: 162d 01m **Unorganized**

LOCATION Eek lies on the south bank of the Eek River, 12 miles east of the mouth of the Kuskokwim River. It is 35 air miles south of Bethel in the Yukon-Kuskokwim Delta, and 420 miles west of Anchorage.

ECONOMY Eek's economy is primarily subsistence- and commercial fishing-based. A few full-time positions are available at the school, City, and village office. All families participate in subsistence fishing; 44 residents hold commercial fishing permits. Poor fish returns and prices in recent years have significantly affected the economy.

HISTORY The village was originally located on the Apokok River, and moved to its present location in the 1930s. Constant flooding and erosion forced a relocation. A BIA school and a Moravian Church were constructed at the new site. A post office was established in 1949. The City was incorporated in 1970.

Current Energy Status PCE

Electric (Estimates based on PCE)

Estimated Local Fuel cost @ $110/bbl $4.63 /kw-hr

Current efficiency	13.44	kW-hr/gal	Fuel COE	$0.42	/kw-hr	Estimated Diesel OM	$14,242
Consumption in 200	64,071	gal	Est OM	$0.02	/kw-hr	Other Non-Fuel Costs:	$185,145
Average Load	81	kW	NF COE:	$0.26	/kw-hr	Current Fuel Costs	$296,796
Estimated peak loa	162.58	kW	Total	$0.70		**Total Electric**	
Average Sales	712,095	kW-hours					**$496,183**

Space Heating (Estimated)

2000 Census Data		2008 Estimated Heating Fuel used:	109,309	gal	
Fuel Oil:	100%	Estimated heating fuel cost/gallon	$5.63		
Wood:	0%	$/MMBtu delivered to user	$51.08		**Total Heating Oil**
Electricity:	0.0%	Community heat needs in MMBtu	13,117		**$615,664**

Transportation (Estimated)

Estimated Diesel: 39,103 gal Estimated cost $5.63

Total Transportation **$220,241**

Energy Total **$1,332,087**

Possible Upgrades to Current Power Plant

Power Plant - Performance Improvement to higher efficiency

Upgrade needed:

Powerhouse Module

Status **Pending**

Acheivable efficiency 14 kW-

New Fuel use 61,493

Capital cost	$1,300,000		
Annual Capital cost	$108,897	$0.15	/kw-hr
Estimated Diesel OM	$14,242	$0.02	
New fuel cost	$284,855	$0.40	**Savings**
Avg Non-Fuel Costs:	$199,387	$0.26	**($96,956)**
New cost of electricity		$0.76	per kW-hr

Diesel Engine Heat Recovery

Heat Recovery System Installed? Y

Is it working now? Y

BLDGs connected and working:

Powerhouse, Mechanics Hut

			Value
Water Jacket	9,611	gal	$54,130
Stack Heat	0	gal	$0

Capital cost	$227,610		
Annual ID	$19,066		
Annual OM	$4,552		
Total Annual costs	$23,618		**Savings**
Heat cost	$22.24	$/MMBtu	**$30,512**

Alternative Energy Resources

Wind Diesel Hybrid

Installed KW	**200**
kW-hr/year	**453775**
Met Tower?	**no**
Homer Data?	**yes**
Wind Class	**5**
Avg wind speed	**7.50** m/s

			Heat Cost $/MMBtu :
Capital cost	**$1,760,485**	per kW-hr	
Annual Capital	**$118,332**	$0.26	$76.41
Annual OM	**$21,289**	$0.05	$13.75
Fuel cost:	**$0**	$0.00	
Total Annual Cost	**$139,622**	$0.31	**$90.15**
	Non-Fuel Costs	$0.28	
	Alternative COE:	**$0.59**	
	% Community energy	64%	**Savings**
	New Community COE	**$0.61**	**$58,579**
	(includes non-fuel and diesel costs)		

Biomass For Heat

Heat Deliverd:	**425000**	BTU/hr
Cords/day:	**1.8**	
Hours per year	**6000**	
Wood (cordwood or willows)	**$225**	$/cord

Garn heater installed cost	**$500,000**
Annual ID	**$33,608**
Capital per MMBt	**$13.18**
Fuel cost per MMBtu	**$20.09**
Total per MMBT	**$33.27**
Annual Heat	19.4%

Other Resources

Eek

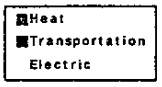
Tidal:	
Wave:	
Coal Bed Methane:	
Natural Gas:	
Coal:	
Propane:	

Renewable Fund Project List:

For detailed information, consult the AEA web site. akenergyauthority.org

Quinhagak

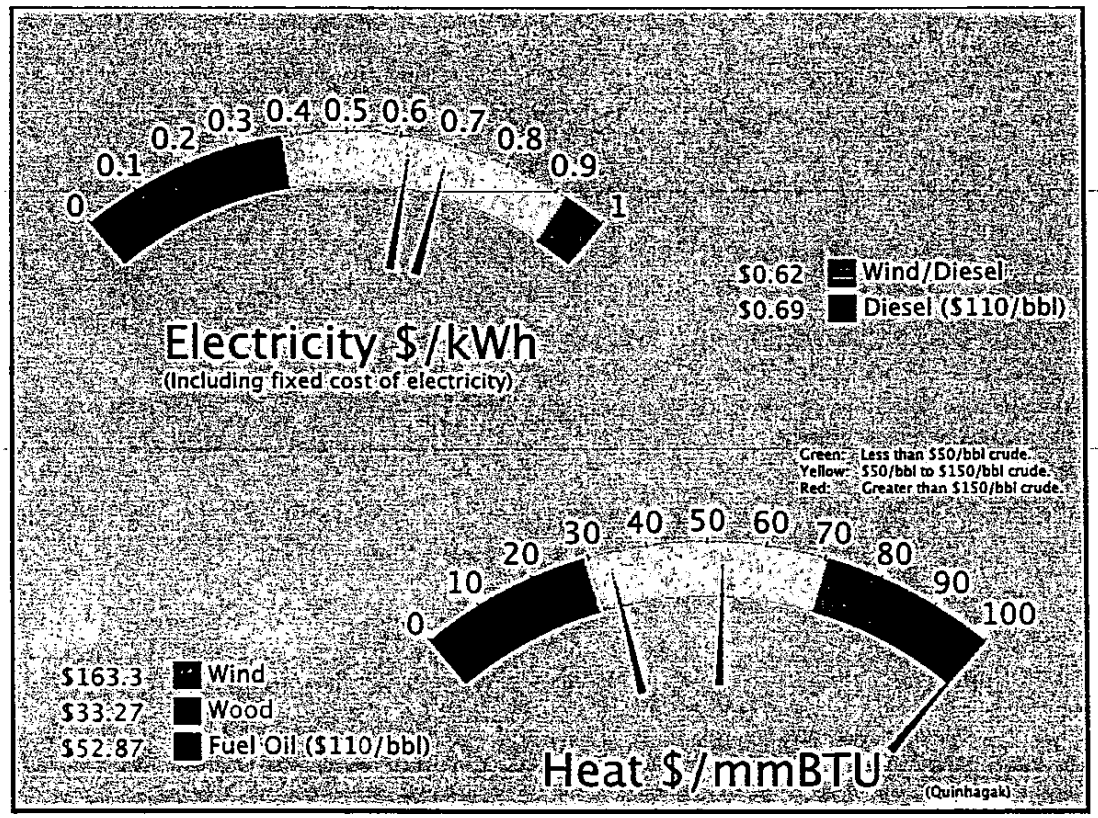
Energy Used



Total: **$4,163** Per capita

Heat	**$1,659**	Per capita
Transportation	**$594**	Per capita
Electricity:	**$1,910**	Per capita

POPULATION: 643



Quinhagak

Regional Corporation
Calista Corporation
House 38
Senate : S

POPULATION 643 LATITUDE: 59d 45m N LONGITUDE: 161d 54m **Unorganized**

LOCATION Quinhagak is on the Kanektok River on the east shore of Kuskokwim Bay, less than a mile from the Bering Sea coast. It lies 71 miles southwest of Bethel.

ECONOMY Most of the employment is with the school, government services or commercial fishing. Trapping, basket weaving, skin sewing and ivory carving also provide income. Subsistence remains an important part of the livelihood; seal and salmon are staples of the diet. 83 residents hold commercial fishing permits for salmon net and herring roe fisheries. Coastal Villages Seafood LLC processes halibut and salmon in Quinhagak.

HISTORY The Yup'ik name is Kuinerraq, meaning "new river channel." Quinhagak is a long-established village whose origin has been dated to 1,000 A.D. It was the first village on the lower Kuskokwim to have sustained contact with whites. Gavril Sarichev reported the village on a map in 1826. After the purchase of Alaska in 1867, the Alaska Commercial Co. sent annual supply ships to Quinhagak with goods for Kuskokwim River trading posts. Supplies were lightered to shore from the ship, and stored in a building on Warehouse Creek. A Moravian Mission was built in 1893. There were many non-Natives in the village at that time; most waiting for boats to go upriver. In 1904 a mission store opened, followed by a post office in 1905 and a school in 1909. Between 1906 and 1909, over 2,000 reindeer were brought in to the Quinhagak area. They were managed for a time by the Native-owned Kuskokwim Reindeer Company, but the herd had scattered by the 1950s. In 1915 the Kuskokwim River was charted, so goods were barged directly upriver to Bethel. In 1928, the first electric plant opened; the first mail plane arrived in 1934. The City was incorporated in 1975.

Current Energy Status PCE

Electric (Estimates based on PCE)

Current efficiency	13.61	kW-hr/gal	Fuel COE	$0.41	/kw-hr	Estimated Local Fuel cost @ $110/bbl	$4.84 /kw-hr
Consumption in 200	143,191	gal	Est OM	$0.02	/kw-hr	Estimated Diesel OM	$33,760
Average Load	193	kW	NF COE:	$0.26	/kw-hr	Other Non-Fuel Costs:	$438,882
Estimated peak loa	385.39	kW	Total	$0.69		Current Fuel Costs	$693,474
Average Sales	1,688,006	kW-hours				**Total Electric**	**$1,166,116**

Space Heating (Estimated)

2000 Census Data		2008 Estimated Heating Fuel used:	182,597	gal	
Fuel Oil:	90%	Estimated heating fuel cost/gallon	$5.84		
Wood:	9%	$/MMBtu delivered to user	$53.00		**Total Heating Oil**
Electricity:	0.0%	Community heat needs in MMBtu	21,912		**$1,066,913**

Transportation (Estimated)

Estimated Diesel: **65,320** gal Estimated cost **$5.84**

Total Transportation **$381,666**

Energy Total **$2,614,695**

Possible Upgrades to Current Power Plant

Power Plant - Performance Improvement to higher efficiency

Upgrade needed:

Powerhouse Module

Status **Pending**

Acheivable efficiency **14** kW-

New Fuel use **139,205**

Capital cost	$1,300,000		
Annual Capital cost	$108,897	$0.06	/kw-hr
Estimated Diesel OM	$33,760	$0.02	
New fuel cost	$674,170	$0.40	**Savings**
Avg Non-Fuel Costs:	$472,642	$0.26	**($89,592)**
New cost of electricity		$0.69 per kW-hr	

Diesel Engine Heat Recovery

Heat Recovery System Installed? Y

Is it working now? Y

BLDGs connected and working:

Powerhouse Only

			Value
Water Jacket	21,479	gal	$125,500
Stack Heat	0	gal	$0

Capital cost	$539,545		
Annual ID	$45,196		
Annual OM	$10,791		
Total Annual costs	$55,987		**Savings**
Heat cost	$23.59	$/MMBtu	**$69,513**

Alternative Energy Resources

Wind Diesel Hybrid

Installed KW	**400**
kW-hr/year	**895168**
Met Tower?	**no**
Homer Data?	**yes**
Wind Class	**4**
Avg wind speed	**7.00** m/s

		per kW-hr	Heat Cost $/MMBtu :
Capital cost	**$3,071,563**		
Annual Capital	**$206,457**	$0.23	$67.58
Annual OM	**$41,998**	$0.05	$13.75
Fuel cost:	**$0**	$0.00	
Total Annual Cost	**$248,455**	$0.28	**$81.32**
Non-Fuel Costs		$0.28	
Alternative COE:		**$0.56**	
% Community energy	53%		**Savings**
New Community COE	**$0.61**		**$137,162**

(includes non-fuel and diesel costs)

Biomass For Heat

Heat Deliverd:	**425000** BTU/hr	Garn heater installed cost	**$500,000**
Cords/day:	**1.8**	Annual ID	**$33,608**
Hours per year	**6000**	Capital per MMBt	**$13.18**
Wood (cordwood or willows)	**$225** $/cord	Fuel cost per MMBtu	**$20.09**
		Total per MMBT	**$33.27**
		Annual Heat	11.6%

Other Resources

Quinhagak

Tidal:	
Wave:	
Coal Bed Methane:	
Natural Gas:	
Coal:	
Propane:	

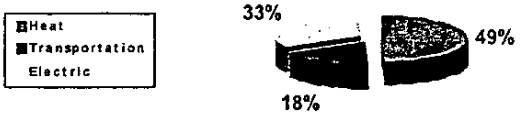
Renewable Fund Project List:

For detailed information, consult the AEA web site. akenergyauthority.org

A project titled: Quinhagak Wind Farm Construction has been submitted by: Alaska Village Electric Cooperative for a Wind Diesel Hybrid project. The total project budget is: $4,313,603 with $3,882,243 requested in grant funding and $431,360 as matching funds.

Atmautluak

Energy Used



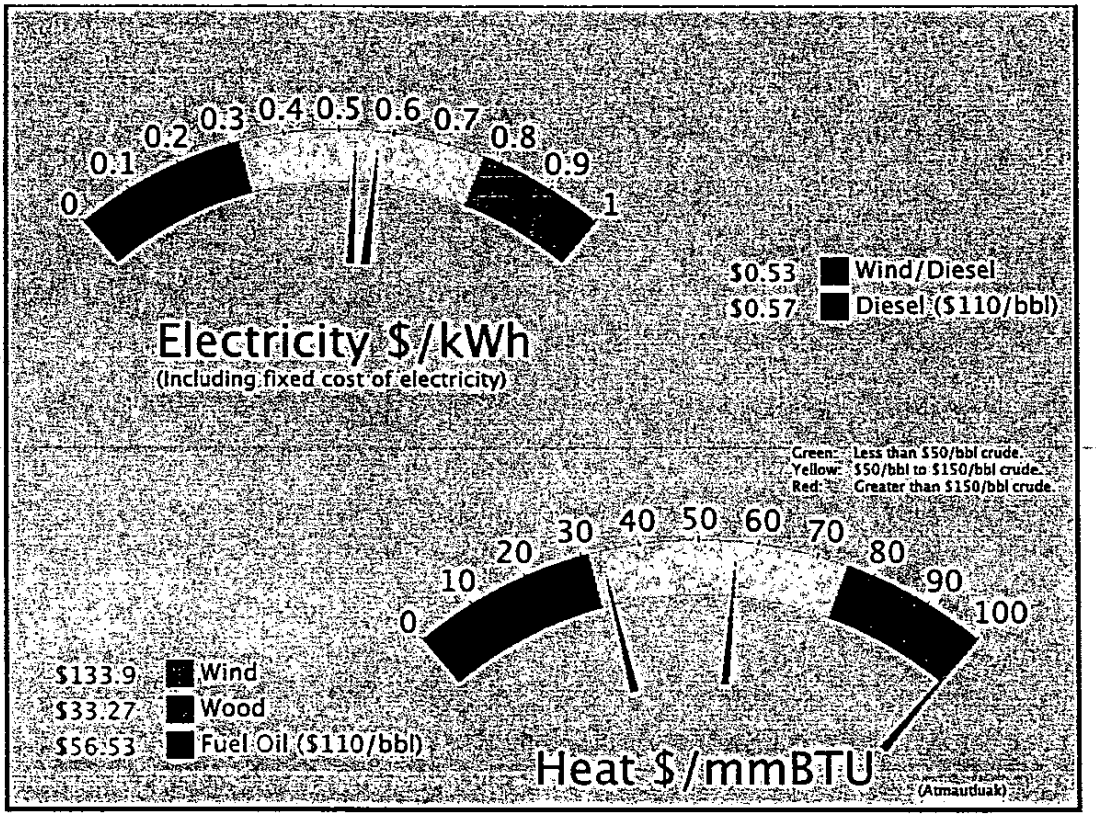
Total: **$3,190** Per capita

Heat **$1,572** Per capita

Transportation **$562** Per capita

Electricity: **$1,055** Per capita

POPULATION: 305



Atmautluak

Regional Corporation
Calista Corporation

House 38
Senate : S

POPULATION 305 LATITUDE: 60d 51m N LONGITUDE: 162d 16m **Unorganized**

LOCATION Atmautluak lies on the west bank of the Pitmiktakik River in the Yukon-Kuskokwim delta, 20 miles northwest of Bethel.

ECONOMY The school, retail businesses and the village government provide cash income to supplement the subsistence lifestyle. Thirty-one residents hold commercial fishing permits. Poor fish returns since 1997 have significantly affected the community.

HISTORY Yup'ik Eskimos have inhabited this region for thousands of years due to the area's rich resources, however Atmautluak itself was not settled until the 1960s. People moved to this site on higher ground to avoid flooding and for the rich resources of the area. A City was incorporated in 1976, but it was dissolved on Feb. 7, 1996 in favor of the traditional village council government.

Current Energy Status PCE

Electric (Estimates based on PCE)

Estimated Local Fuel cost @ $110/bbl $5.25 /kw-hr

Current efficiency	3.80	kW-hr/gal	Fuel COE	$0.41	/kw-hr	Estimated Diesel OM	$10,753
Consumption in 200	41,567	gal	Est OM	$0.02	/kw-hr	Other Non-Fuel Costs:	$79,988
Average Load	61	kW	NF COE:	$0.15	/kw-hr	Current Fuel Costs	$218,081
Estimated peak loa	122.75	kW	Total	$0.57		**Total Electric**	
Average Sales	537,659	kW-hours					**$308,823**

Space Heating (Estimated)

2000 Census Data		2008 Estimated Heating Fuel used:	76,746	gal	
Fuel Oil:	95%	Estimated heating fuel cost/gallon	$6.25		
Wood:	0%	$/MMBtu delivered to user	$56.66		**Total Heating Oil**
Electricity:	5.2%	Community heat needs in MMBtu	9,210		**$479,395**

Transportation (Estimated)

Estimated Diesel:	27,454	gal	Estimated cost	$6.25	**Total Transportation** **$171,494**

Energy Total **$959,711**

Possible Upgrades to Current Power Plant

Power Plant - Performance Improvement to higher efficiency

Upgrade needed:

Status

Acheivable efficiency 14 kW-

New Fuel use 11,278

Capital cost	$0		
Annual Capital cost	$0	$0.00	/kw-hr
Estimated Diesel OM	$10,753	$0.02	
New fuel cost	$59,171	$0.11	**Savings**
Avg Non-Fuel Costs:	$90,741	$0.15	**$158,911**
New cost of electricity		$0.54 per kW-hr	

Diesel Engine Heat Recovery

Heat Recovery System Installed?

Is it working now?

BLDGs connected and working:

			Value
Water Jacket	6,235	gal	$38,947
Stack Heat	0	gal	$0

Capital cost	$171,855		
Annual ID	$14,396		
Annual OM	$3,437		
Total Annual costs	$17,833		**Savings**
Heat cost	$25.88	$/MMBtu	**$21,114**

Alternative Energy Resources

Wind Diesel Hybrid

Installed KW 300

kW-hr/year 679248

Met Tower? **no**

Homer Data? **yes**

Wind Class 6

Avg wind speed **8.10** m/s

			Heat Cost $/MMBtu :
Capital cost	**$2,438,000**	per kW-hr	
Annual Capital	**$163,872**	$0.24	$70.69
Annual OM	**$31,868**	$0.05	$13.75
Fuel cost:	**$0**	$0.00	
Total Annual Cost	**$195,740**	$0.29	**$84.43**
	Non-Fuel Costs	$0.17	
	Alternative COE:	**$0.46**	
	% Community energy	126%	**Savings**
	New Community COE	**$0.53**	**$113,083**
	(includes non-fuel and diesel costs)		

Biomass For Heat

Heat Deliverd: **425000** BTU/hr

Cords/day: **1.8**

Hours per year **6000**

Wood (cordwood or willows) **$225** $/cord

Garn heater installed cost	**$500,000**
Annual ID	**$33,608**
Capital per MMBt	**$13.18**
Fuel cost per MMBtu	**$20.09**
Total per MMBT	**$33.27**
Annual Heat	27.7%

Other Resources

Atmautluak

Tidal:
Wave:
Coal Bed Methane:
Natural Gas:
Coal:
Propane:

Renewable Fund Project List:

For detailed information, consult the AEA web site. akenergyauthority.org

Alaska Renewable Energy Fund
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ALASKA ENERGY AUTHORITY

	Project					Cost and Request			
Energy Region	ID	Project Name	Applicant	Applicant Type	Project Type	Project Cost	Grant Request	Match Offered	Recommended Funding
Aleutians	58	Chuniisax Creek Hydroelectric Construction	City of Atka	Utility	Hydro	2,440,000	996,000	1,344,000	996,000
	89	Nikolski Wind Integration Construction	Umnak Power / Nikolski IRA Council	Government	Wind	451,030	409,430	41,600	409,430
	90	St. George Wind Farm Construction	City of St. George - St. George Municipal Electric	Government	Wind	3,000,000	1,500,000	1,500,000	1,500,000
	11	Aleutians East Borough Renewable Energy	Aleutians East Borough	Government	Other	40,000	25,000	15,000	25,000
	95	Makushin Geothermal Feasibility Study	Kiiguusi Suuluta Land Company, LLC	IPP	Geothermal	250,000,000	3,225,500		-
		TOTAL				**255,931,030**	**6,155,930**	**2,900,600**	**2,930,430**
Bering Straits	52	Nome/Newton Peak Wind Farm Construction	City of Nome d/b/a Nome Joint Utility System	Utility	Wind	15,534,309	13,951,326	1,582,983	4,000,000
	50	Unalakleet Wind Farm Construction	Unalakleet Valley Electric Cooperative, Inc. (UVEC)	Utility	Wind	8,996,832	8,774,080	222,752	4,000,000
	47	Nome Banner Peak Wind Farm Transmission Construction	City of Nome d/b/a Nome Joint Utilities System	Utility	Transmission	890,000	801,000	89,000	801,000
	106	Nome/ Banner Peak Wind Farm Construction	Banner Wind, LLC	IPP	Wind	5,157,000	4,126,000	1,031,000	
		TOTAL				**30,578,141**	**27,652,406**	**2,925,735**	**8,801,000**
Bristol Bay	64	Lake Pen Borough Wind Feasibility Study	Lake and Peninsula Borough	Government	Wind	8,000,000	184,000	40,000	184,000
	62	Chignik Lake Area Wind-Hydro Final Design	Lake and Peninsula Borough	Government	Wind	8,150,000	375,000	96,000	375,000
	63	Lake Pen Borough Wood Heating Final Design	Lake and Peninsula Borough	Government	Biomass	1,265,000	77,000	18,000	77,000
	40	Indian Creek Hydro Feasibility Study	City Of Chignik	Government	Hydro	207,500	207,500	-	207,500
	6	Lake Elva Hydropower Construction	Nushagak Electric & Telephone Cooperative,	Utility	Hydro	22,000,000	10,000,000	12,000,000	4,006,500
	14	Chignik Lagoon Hydroelectric Final Design	Chignik Lagoon Power Utility (CLPU)	Utility	Hydro	1,900,000	150,000		150,000
	18	Pike's Ridge Geothermal Final Design	Naknek Electric Association	Utility	Geothermal	10,020,000	5,000,000	5,000,000	-
	7	Naknek/King Salmon Fish Waste Feasibility Study	Naknek Electric Association	Utility	Biofuels	100,000	80,000	20,000	-
	55	Snake Mountain Wind Farm Construction **(Withdrawn)**	Bristol Bay Area Health Corporation	Government	Wind	13,100,000	10,100,000	2,800,000	-
		TOTAL				**64,742,500**	**26,173,500**	**19,974,000**	**5,000,000**

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ALASKA ENERGY AUTHORITY

	Project					Cost and Request			
Energy Region	ID	Project Name	Applicant	Applicant Type	Project Type	Project Cost	Grant Request	Match Offered	Recommended Funding
Copper River/ Chugach	21	Humpback Creek Hydroelectric Construction	Cordova Electric Cooperative	Utility	Hydro	11,600,000	5,500,000	6,100,000	4,000,000
	22	Cordova Heat Recovery Construction	Cordova Electric Cooperative	Utility	Heat Recovery	5,260,000	1,780,000	3,480,000	1,780,000
	26	Cordova Wood Processing Plant Construction	Native Village of Eyak	Government	Biomass	628,825	364,225	264,600	147,720
	27	Allison Lake Hydro Feasibility Study	Copper Valley Electric Association, Inc (CVEA)	Utility	Hydro	45,058,000	2,288,000	572,000	2,288,000
	15	Chistochina Central Wood Heating Construction	Cheesh'na Tribal Council	Government	Biomass	839,000	827,000	12,000	500,000
	46	Kenny Lake Wood Heating Construction	Copper River School District	Government	Biomass	1,200,000	1,200,000		120,000
	2	Gulkana Central Wood Heating Construction	Gulkana Village Council	Government	Biomass	898,000	898,000	-	500,000
		TOTAL				**65,483,825**	**12,857,225**	**10,428,600**	**9,335,720**
Kodiak	103	Pillar Mountain Wind Farm Construction	Kodiak Electric Associaiton, Inc.	Utility	Wind	23,319,539	9,650,000	2,000,000	4,000,000
	73	Old Harbor Hydroelectric Final Design	Alaska Village Electric Cooperative	Utility	Hydro	4,100,000	225,000	25,000	225,000
		TOTAL				**27,419,539**	**9,875,000**	**2,025,000**	**4,225,000**
Lower Yukon/ Kuskokwim	122	Bethel Wind Power Project Times 4	City of Bethel	Government	Wind	3,197,986	2,598,320	599,666	2,598,320
	110	Kongiganak Wind Farm Construction	Puvurnaq Power Company	Utility	Wind	3,200,000	1,700,000	1,500,000	1,700,000
	107	Kwigillingok Wind Farm Construction	Native Village of Kwigillingok	Utility	Wind	3,200,000	1,600,000	1,600,000	1,600,000
	67	Bethel Wind Farm Construction (BNC land)	Village Wind Power, LLC	IPP	Wind	8,710,000	6,960,000	1,750,000	-
	70	Quinhagak Wind Farm Construction	Alaska Village Electric Cooperative	Utility	Wind	4,313,603	3,882,243	431,360	3,882,243
	72	Mekoryuk Wind Farm Construction	Alaska Village Electric Cooperative	Utility	Wind	3,506,406	3,155,765	350,641	3,155,765
	91	Napaimute Solar PV Construction	Native Village of Napaimute	Government	Solar	123,494	109,471	14,023	-
	71	Toksook Bay Wind Farm Expansion Construction	Alaska Village Electric Cooperative	Utility	Wind	1,153,056	1,037,750	115,306	1,037,750
	35	Hooper Bay Wind Farm Construction	City of Hooper Bay	Government	Wind	2,220,141	2,220,141	-	80,000
	113	Napaskiak Wind Farm Feasibility Study	Napaskiak Utility (electric) - City of Napaskiak	Utility	Wind				-
	96	Crooked Creek Renewable Energy Reconnaissance Study	Crooked Creek Traditional Council	Government	Other	178,000	137,543	58,000	-
		TOTAL				**29,802,686**	**23,401,233**	**6,418,996**	**14,054,078**

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ALASKA ENERGY AUTHORITY

	Project					Cost and Request			
Energy Region	ID	Project Name	Applicant	Applicant Type	Project Type	Project Cost	Grant Request	Match Offered	Recommended Funding
Northwest Arctic	59	Kobuk River Valley Woody Biomass Feasibility Study	Northwest Inupiat Housing Authority	Government	Biomass	7,500,000	249,500	248,980	249,500
	75	Ambler Solar PV Construction	Alaska Village Electric Cooperative	Utility	Solar	605,000	550,000	55,000	550,000
	76	Noatak Solar PV Construction	Alaska Village Electric Cooperative	Utility	Solar	605,000	550,000	55,000	
	77	Shungnak Solar PV Construction	Alaska Village Electric Cooperative	Utility	Solar	605,000	550,000	55,000	
	85	Kotzebue Wind Farm Expansion Construction	Kotzebue Electric Association	Utility	Wind	14,807,535	12,075,535	2,800,000	4,000,000
	56	Buckland/Deering/Noorvik Wind Farm Construction	Northwest Arctic Borough	Government	Wind	10,921,428	10,758,928	162,500	10,758,928
	74	Upper Kobuk Region Hydroelectric Feasibility	Alaska Village Electric Cooperative	Utility	Hydro	1,500,000	1,025,000	50,625	1,025,000
	83	Kotzebue Wind Farm Red-Ox Flow Battery Storage	Kotzebue Electric Association	Utility	Wind	3,930,399	3,144,399	786,000	-
	121	Ambler Solar and Wind Power Construction	City of Ambler	Government	Other	150,000	150,000		-
		TOTAL				**40,624,362**	**29,053,362**	**4,213,105**	**16,583,428**
Railbelt	68	Anchorage Landfill Gas Electricity Construction	Municipality of Anchorage, Solid Waste Services Dept	Government	Biofuels	7,400,000	3,700,000	3,700,000	2,000,000
	57	South Fork Hydroelectric Construction	South Fork Hydro, LLC	IPP	Hydro	3,087,000	1,000,000	2,087,000	1,000,000
	94	Nikolaevsk Wind Farm Final Design	Alaska Wind Energy, LLC, d/b/a Wind Energy Alaska	IPP	Wind	21,923,000	4,334,600	17,588,400	180,600
	109	Eva Creek Wind Farm Construction	Golden Valley Electric Association	Utility	Wind	93,341,555	79,340,322	14,001,233	2,000,000
	53	North Pole Biomass Electricity/Heat Construction	Chena Power Utility, LLC	Utility	Biofuels	4,007,900	2,000,000	2,007,900	2,000,000
	93	Anchorage Landfill Gas Electricity Final Design	Alaska Wind Energy, LLC, d/b/a Wind Energy Alaska	IPP	Biofuels	8,257,850	2,100,000	6,157,850	
	87	Fishhook Hydroelectric Construction	Fishhook Renewable Energy, LLC	IPP	Hydro	4,555,922	2,142,961	2,412,961	2,000,000
	34	Grant Lake/Falls Creek Hydro Feasibility Study	Kenai Hydro, LLC	IPP	Hydro	26,924,120	816,000	204,000	816,000
	105	North Pole Heat Recovery Construction	Golden Valley Electric Association	Utility	Heat Recovery	1,050,000	840,000	210,000	840,000
	66	Coal Mine Road Wind Farm Final Design	Alaska Wind Power, LLC	IPP	Wind	96,000,000	105,000	26,250	105,000
	102	Delta Junction Wind Farm Construction	Alaska Environmental Power LLC	IPP	Wind	8,363,886	6,269,750	2,094,136	2,000,000
	98	Nikiski Wind Farm Construction	Kenai Winds, LLC	IPP	Wind	46,800,000	11,700,000	35,100,000	80,000
	78	Girdwood Gas CHP/Hydro/Wind Solar Construction	Alaska Green Energy, LLC	IPP	Other	12,231,750	5,231,750	7,000,000	47,625
	48	Whittier Creek Hydroelectric Reconnaissance	City of Whittier	Government	Hydro	3,000,000	85,000	115,000	85,000

Alaska Renewable Energy Fund
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ALASKA ENERGY AUTHORITY

	Project					Cost and Request			
Energy Region	ID	Project Name	Applicant	Applicant Type	Project Type	Project Cost	Grant Request	Match Offered	Recommended Funding
	86	Fourth of July Creek Hydroelectric Reconnaissance	Independence Power, LLC	IPP	Hydro	15,675,000	7,837,500	7,837,500	20,000
	97	Nenana Hydrokinetic Construction	University of Alaska Fairbanks, Office of	Government	Ocean/River	1,937,072	1,854,026	83,046	450,000
	112	Delta Junction Wood Chip Heating Feasibility Study	Delta/Greely School District	Government	Biomass	2,868,000	2,868,000	-	2,704,684
	108	McKinley Village Solar Thermal Construction	Golden Valley Electric Association	Utility	Solar	190,000	190,000	3,600	
	8	Anchorage Geothermal District Heating Feasibility Study	Iceland America Energy, Inc.	IPP	Geothermal	1,070,000,000	4,047,230	4,295,580	
	3	Anchorage Waste Gasification Feasibility Study	Alaska Recycling Energy, LLC	IPP	Biofuels	200,000,000	1,100,000	100,000	
	39	Delta Junction Barley/Wood Pellet Central Heating	State of AK, Dept. of Natural Resources,	Government	Biomass	831,203	831,203	-	
	5	Fairbanks Waste Gasification Feasibility Study	Alaska Recycling Energy, LLC	IPP	Biofuels	100,000,000	775,000	-	
	4	Palmer Waste Gasification Feasibility Study	Alaska Recycling Energy, LLC	IPP	Biofuels	60,000,000	650,000	-	
	16	Mt. Redoubt/Mt. Spur Geothermal Construction	Cook Inlet Power	IPP	Geothermal	98,150,000	950,000	97,200,000	
	17	Jack River Hydroelectric Feasibility Study	Native Village of Cantwell	Government	Hydro	200,000	194,540	5,460	
	43	Palmer Gas CHP Construction	Alpine Energy, LLC	IPP	Gas	15,000,000	7,500,000	7,500,000	
	44	Whittier Gas CHP Construction	Alpine Energy, LLC	IPP	Gas	15,000,000	7,500,000	7,500,000	
	45	Anchorage Wood Processing and Heating Construction	EarthRun Energy	IPP	Biomass	300,000	300,000		
	51	Mt. Alice Harbor Renewable Energy Construction	Mt. Alice Development, Inc.	Government	Other	140,229,650	14,673,250		
	79	Palmer Coal Bed Methane CHP Construction	Alaska Green Energy, LLC	IPP	Other	20,824,011	19,401,411	1,422,600	
	92	Delia Creek Hydro Construction	HPML, LLC	IPP	Hydro	600,000	50,000	-	
	–	Kenai Hydro Recon Assessment	Homer Electric Associtation	Utility	Hydro				200,000
		TOTAL				**2,078,747,919**	**190,387,543**	**218,652,516**	**16,528,909**

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ALASKA ENERGY AUTHORITY

	Project					Cost and Request			
Energy Region	ID	Project Name	Applicant	Applicant Type	Project Type	Project Cost	Grant Request	Match Offered	Recommended Funding
Southeast	23	Coffman Cove-Naukati Intertie Construction	Alaska Power & Tetephone Company	Utility	Transmission	6,155,019	3,752,181	2,402,838	3,752,181
	29	Kake-Petersburg Intertie Final Design	Kwaan Electric Transmission Intertie	Utility	Transmission	40,000,000	2,990,000	2,500,000	2,990,000
	10	Falls Creek Hydroelectric Construction	Gustavus Electric Company	Utility	Hydro	10,153,000	750,000	-	750,000
	104	Reynolds Creek Hydroelectric Construction	Haida Power, Inc.	Utility	Hydro	17,145,000	10,500,000	6,645,000	2,000,000
	111	Juneau Ground Source Heat Pump Construction (Aquatic	City & Borough of Juneau	Government	Geothermal	1,950,000	1,450,000	500,000	1,450,000
	37	Whitman Lake Hydro Construction	Ketchikan Public Utilities-Electic Division	Utility	Hydro	17,750,000	1,300,000	320,000	1,300,000
	33	Haines Central Wood Heating System Construction (Low	Chilkoot Indian Association	Government	Biomass	441,229	288,222	28,446	288,222
	60	Yakutat Biomass Gasification Construction	Yakutat Power	Utility	Biofuels	3,633,600	3,393,600	240,000	249,600
	38	Ruth Lake Hydro Reconnaissance	City of Petersburg d/b/a Petersburg Municipal &	Utility	Hydro	109,975,000	160,000	45,000	160,000
	42	Burro Creek Hydro Feasibility Study	Burro Creek Holdings, LLC	IPP	Hydro	60,000	48,000	12,000	48,000
	28	Hoonah - Hawk Inlet Intertie Construction	Kwaan Electric Transmission Intertie	Utility	Transmission	37,459,970	36,709,970	750,000	-
	20	Metlakatla-Ketchikan Intertie Construction	Metlakatla Indian Community	Government	Transmission	7,652,000	7,152,000	500,000	820,000
	41	Haines Central Wood Heating Feasibility Study (Community	Haines Borough	Government	Biomass	2,090,500	120,500	20,000	120,500
	65	Indian River Hydroelectric Construction	City of Tenakee Springs	Utility	Hydro	2,500,000	2,400,000	100,000	-
	9	Wrangell Hydro Based Electric Boilers Construction	City and Borough of Wrangell	Government	Other	3,260,000	3,260,000	123,000	2,000,000
	19	Gustavus/Angoon/Wrangell/Nikiski Tidal Feasibility Study	Alaska Tidal Energy Company	IPP	Ocean/River		1,940,000	515,000	-
	1	Takatz Lake Hydroelectric Feasibility	City & Borough of Sitka	Government	Hydro	225,000,000	2,000,000		
	101	Ketchikan Biomass Gasification Construction	Diesel Brewing Company, LLC dba Diesel Brewing of	IPP	Biofuels	25,625,000	20,500,000	5,125,000	-
	12	Juneau Waste Gasification Reconnaissance Study	Alaska Recycling Energy, LLC	IPP	Biofuels		95,000		-
	13	Ketchikan Waste Gasification Reconnaissance Study	Alaska Recycling Energy, LLC	IPP	Biofuels		105,620		-
	25	Haines Ground Source Heat Pump Construction	Haines Assisted Living, Inc	IPP	Geothermal	2,379,007	1,432,906	946,101	-
	--	Juneau Ground Source Heat Pump Construction (Airport)	City & Borough of Juneau	Government	Geothermal	1,076,000	1,026,000	513,000	513,000
		TOTAL				**514,305,325**	**101,373,999**	**21,285,385**	**16,441,503**

Alaska Renewable Energy Fund
Proposed Grant Allocation Round 1
January 14, 2009

ALASKA ENERGY AUTHORITY

	Project					Cost and Request			
Energy Region	ID	Project Name	Applicant	Applicant Type	Project Type	Project Cost	Grant Request	Match Offered	Recommended Funding
Yukon-Koyukuk/ Upper Tanana	61	McGrath Heat Recovery Construction	McGrath Light & Power, Co.	Utility	Heat Recovery	991,815	824,815	167,000	712,415
	54	Galena Wood Heating Construction	Interior Regional Housing Authority (IRHA)	Government	Biomass	382,779	382,779	4,659,760	382,779
	84	Ruby Hydrokinetic Construction	Yukon River Inter-Tribal Watershed Council	IPP	Hydro	461,950	446,950	10,555	446,950
	49	Tok Wood Heating Construction	Alaska Gateway School District	Government	Biomass	3,805,349	3,245,349	560,000	3,245,349
	24	Yerrick Creek Hydroelectric Construction	Alaska Power & Telephone Company	Utility	Hydro	14,500,000	11,600,000	2,900,000	-
	30	McGrath Central Wood Heating Construction	McGrath Power and Light	Utility	Biomass	4,005,000	3,052,000	953,000	322,000
	31	Fort Yukon Central Wood Heating Construction	Gwitchyaa Zhee Utility Company	Utility	Biomass	4,285,161	2,945,991	1,200,000	210,000
	--	Manley Hot Springs Geothermal Construction	TDX Power	Utility	Geothermal	1,880,000	1,880,000	1,665,000	215,000
		TOTAL				**30,312,054**	**24,377,884**	**12,115,315**	**5,534,493**
Statewide	88	Statewide Hydrokinetic Feasibility Study	Thomas Ravens, Ph.D. and Myree McDonald,	Government	Ocean/River	565,439	565,439	-	565,439
	36	Statewide Heat Recovery Demonstration Project	Precision Power, LLC	IPP	Heat Recovery	7,000,000	300,000	60,000	-
	82	Juneau Based Statewide Hydro/Ammonia Electricity	Alaska Electric Light & Power	Utility	Other	800,000	800,000	-	
	32	Statewide Biomass Reconnaissance Study	University of Alaska, Fairbanks	Government	Biofuels	286,149	286,149	-	-
	81	Statewide Heat Recovery/Electric Demonstration Construction	Ormat Nevada Inc.	IPP	Heat Recovery	28,000,000	495,000	-	-
		TOTAL				**36,651,588**	**2,446,588**	**60,000**	**565,439**
TOTAL						**3,174,598,969**	**453,754,671**	**300,999,252**	**100,000,000**

ALASKA ENERGY AUTHORITY

Alaska Renewable Energy Fund

Summary of Methodology for Proposal Evaluation and Grant Recommendation

January 20, 2009

Overview of Review Process

Renewable Energy Fund applications were evaluated in three stages. For more detail please refer to Evaluation Guidelines in the appendices and to documents posted on the Renewable Energy Fund webpage http://www.akenergyauthority.org/RE_Fund.html.

In the first stage each application was evaluated for completeness, eligibility, and responsiveness to the request for applications (RFA). This evaluation was conducted by Alaska Energy Authority (AEA) staff.

The second stage evaluated the technical and economic feasibility of the proposed projects. This stage was conducted by AEA staff with the assistance of DNR staff, outside economists, and other consultants.

The third stage was a final scoring based on the specific guidelines in the RFA that was conducted by AEA staff. The scoring was done based on a number of matrices and pre-established weighting for each of the criteria.

1. Cost of Energy (30%):
2. Matching Funds (25%)
3. Economic and Technical Feasibility (20%): score from stage 2
4. Project Readiness (5%)
5. Economic and Other Alaska Benefit (10%)
6. Sustainability (5%)
7. Local Support (5%)

Upon completion of the evaluation all applications were ranked by region with the final funding recommendation being made based on the number and rank of applications with each region, the cost of energy, and a balance of statewide funding.

Projects may have been recommended for partial funding if they were viable but:

- Documentation submitted with the application was not sufficient to justify full funding for more than one phase of a project.
- Project construction was scheduled for 2010 or later, the project was expensive or higher risk, or there were competing projects for which planning is desirable
- The applicant requested AEA to manage the project and the AEA program manager could confidently estimate a lower cost.
- The proposal included operating costs or other costs not recommended for funding.

In addition AEA adopted a maximum funding cap to provide for the ability to award more projects.

Where AEA offers less than the requested amount, AEA will work with grantees to assure that the revised scope of the final grant award is consistent with the grantee's proposal and meets the public purposes of the program.

Roles of AEA Staff and the Renewable Energy Fund Advisory Committee

AEA staff requested and received input from the Renewable Energy Fund Advisory Committee regarding the process and final funding recommendations. Following is a summary of Committee involvement.

AEA staff prepared a draft RFA package including the RFA, application form, worksheet form, and a sample grant agreement in summer 2008. The Advisory Committee met on 8/22 and 8/25 to discuss the RFA package. AEA staff revised the draft and issued the finalized RFA on 9/3 taking into account the Committee's comments.

Midway through the AEA staff review of the Round 1 applications AEA met with the Committee on 11/21 to brief them on the process and how AEA was handling specific issues. Issues addressed included ensuring that grant funding to independent power producers would benefit the public appropriately, protocols for offering partial or multi-phase funding, handling competing and interacting projects, eligibility of biofuel projects, and eligibility of statewide resource assessment projects.

On 12/18 during the last stages of AEA Round 1 review, AEA briefed the Committee on how AEA was addressing issues discussed in the November meeting, the draft evaluation guidelines, and schedule.

Following AEA evaluation of all Round 1 applications, AEA staff and the Committee met on 1/12 to establish how to address the HB152 requirement for a statewide balance of matching funds. Based on this discussion AEA has finalized its recommendations.

APPENDIX A

Evaluation Guidelines and Instructions for Evaluation of RFA for Renewable Energy Fund Grant Projects

General:

- Applications that do not comply with AS 42.45.45 and all of the material and substantial terms, conditions, and requirements of the RFA may be rejected.
- If an application is rejected the applicant will be notified in writing that its application has been rejected and the basis for rejection.
- The Authority may waive minor requirements of the RFA that do not result in a material change in the requirements of the RFA and do not give an applicant an unfair advantage in the review process.
- Upon submission of the final recommendations to the Legislature the Authority will make all applications available for review on the Authority's web site.
- All communications with applicants during the evaluation process will go through the Grant Manager.
- The Executive Director is the Executive Director of AEA, Program Managers are staff at AEA who have oversight for AEA programs (e.g. biomass, hydroelectric, wind energy, geothermal, etc.). Program Managers are the subject matter technical experts, and the Grant Manager is the person responsible for overseeing the grant process for the Authority.
- All applications will be reviewed using the same process and criteria established in the RFA.
- Decisions made in each stage of the review process will be documented in writing and made a part of the grant file.
- If reviewers think they may have a potential conflict of interest, (financial or personal interest, such as friend or family members) they should inform their supervisor immediately of the potential nature of the conflict.
- Reviewers should make notes of any questions they may have about an application. Reviewers should not contact applicants directly.
- If reviewers have questions about an application or process contact they should contact the Grant Manager. If reviewers have technical questions they should contact the Program Managers.
- If an application is rejected or not recommended the applicants will be sent a letter from the Grant manager explaining why their application has been rejected or not recommended. Reviewers will be required to provide to the Grant Manager the reasons for why the application is being rejected
- Notes should be made directly into the database on line. All written notes should be kept with the application file.

- All notes are considered public records and subject to Alaska public records act disclosure requirements.
- Any appeals from rejected applicants in Stage 1 or Stage 2 reviews will be directed to the Grant Manager. The Grant Manager will review the appeal with the Executive Director, Senior Program Manager, and Legal staff as required to determine an appropriate course of action.

Stage 1 Review Process:

All applications received by the deadline will initially be reviewed by the Authority staff to assess if the application is complete, meets the minimum submission requirements, and has adequate information to proceed to Stage 2 – Technical Evaluation.

Reviewers –

Grant Manager and two Senior Program Managers

Criteria

- All criteria are scored pass/fail. Failure to meet any of these criteria results in rejection of the Application.

1. The application is submitted by an Eligible Applicant (sec 1.4).
2. The project meets the definition of an Eligible Project (sec 1.5).
3. A resolution or other formal authorization of the applicant's governing body is included with the application to demonstrate the applicant's commitment to the project (sec 1.4).
4. The application provides a detailed description of the phase(s) of project proposed—i.e. reconnaissance, feasibility analysis/conceptual design, final design/permitting, and/or construction (sec 2.2).
5. The application is complete in that the information provided is sufficiently responsive to the RFP to allow AEA to consider the application in the next stage of evaluation.
6. The applicant provides evidence of having the minimum technical, financial, and management capability to complete the work as proposed in the grant or a reasonable plan to obtain it.

Process

- The Grant Manager will evaluate criteria 1-3 above.
- The Senior Program Managers or Program Managers will evaluate criteria 4-6 above.
- If it appears that the application could be complete with a clarification or minor additional data the Program Managers may make a recommendation to the Grant Manager for additional information. The Grant manager will request clarifying

information from the applicant. The applicant will have a specified amount of time to provide the requested information. Failure of the applicant to respond timely or provide information that completes their application will result in the application being rejected.

- Applications that are determined by the Grant Manager and Program Managers and determined to be incomplete or fail to meet the minimum requirements will be reviewed by the Executive Director with the assistance of Legal or procurement staff prior to being rejected at Stage 1.
- Applications that fail to pass will be provided written notice as to why their application failed stage 1.
- Any requests for reconsideration from rejected applicants in Stage 1 will be directed to the Grant Manager. The Grant Manager will review the request with the Executive Director, Senior Program Manager, and Legal staff as required to determine an appropriate course of action.

Stage 2 Review Process:

All applications that pass Stage 1 will be reviewed for feasibility in accordance with the criteria below.

Reviewers –

- Program Managers – the AEA technical subject matter experts.
- Staff from Department of Natural Resources – technical experts providing specific review and comment on projects that may have issues related to permitting and natural resource development.
- Economists - Contracted economist who will review cost benefit and other cost and pricing information provided for each application submitted for the purpose of providing the authority and independent assessment of the economics of the proposed project.
- ISER – University of Alaska Institute of Social and Economic Research – is providing Quality Assurance review of Economic Analysis work.
- Senior Program Manager – Overseer of the work of the Program Managers

Criteria

- Each of the numbered criteria below will be scored with a numerical score 1-10 and weighted per the percentages below.

Criteria	Weight
1. Project Management, Development, and Operation a. The proposed schedule is clear, realistic, and described in	20%

adequate detail. b. Project development, operation, maintenance, fuel, and other cost and savings estimates are realistic. c. The project team's method of communicating, monitoring, and reporting development progress is described in adequate detail. d. Logistical, business, and financial arrangements for operating and selling energy from the completed project are reasonable and described in adequate detail.	
2. Qualifications and Experience a. The applicant, partners, and contractors have sufficient knowledge and experience to successfully complete, and operate the project b. The project team has staffing, time, and other resources to successfully complete and operate the project. c. The project team is able to understand and address technical, economic, and environmental barriers to successful project completion and operation. d. Use of local labor and training of local labor workforce.	20%
3. Technical Feasibility a. The renewable energy resource is available on a sustainable basis and project permits and other authorizations can reasonably be obtained. b. A site is available and suitable for the proposed energy system. c. Project technical and environmental risks are reasonable. d. The proposed energy system can reliably produce and deliver energy as planned. e. If a demonstration project is being proposed: • specific benefits of proposed technology are likely (such as application in other areas of the State); • need for this project is shown; (and • risks of the proposed system are reasonable and warrant demonstration.	20%
4. Economic Feasibility a. The project is shown to be economically feasible b. The project has an adequate financing plan for completion of the grant-funded phase and has considered options for funding subsequent phases of the project.	20%
5. Benefits Other benefits to the Alaska public are demonstrated.	20%

Process

- Program Managers will carefully review the proposals for their assigned technology group and provide an initial feasibility score on all criteria and a funding recommendation.
- An economist hired by AEA will review the performance and economic information and provide an independent analysis of cost and benefits of each project. The

reviewers will consider the independent analysis when scoring the economic feasibility and benefits criteria.

- Reviewers will use the formula and criteria in the Scoring Matrix Guide (see below) for designated criteria in Stage 2.
- If the Program Manager believes they need additional information they will coordinate their request for follow-up information with the Grant Manager. The purpose of follow-up is for clarification and to help the Project Manager gain sufficient understanding of the project proposed.
- Any requests for additional information will be made by the Grant Manager to the applicant by e-mail, Bcc to Program Manager, with a response time of 7 days or less.
- Failure of the applicant to respond timely or provide an adequate clarification as requested will result in the application being rejected in Stage 2.
- The Senior Program Managers will meet with the Program Managers to review the applications and discuss final stage 2 scoring. Scoring per the stage 2 criteria may be adjusted based on final discussions between the Program Manager, Senior Program Managers, Economists, and Executive Director.
- A final weighted "feasibility" score will be given for each application reviewed.
- Applications that fail to adequately address the criteria in the technical review may not be recommended for funding or further review.
- Applications that fail to pass will be provided written notice as to why their application failed stage 2.
- The Authority will develop a preliminary list of feasible applications based on the Stage 2 review with AEA recommendations on technical and economic feasibility and a recommended funding level to be considered in the Stage 3 review.

Stage 3 Review Process:

The third stage of evaluation will result in the final score, ranking by region, and recommendation of projects for grant funding.

The Feasibility score from Stage 2 will be automatically weighted and scored in Stage three.

The average of the Economic and Public Benefit score of stage 2 will be used for initial scoring of Economic and Other Public Benefit Score. This score will be reviewed by the Program Managers.

The Grant Manager, with staff assistance, will score the cost of energy, type and amount of matching funds, and local support, using the formulas and methods outlined in the Scoring Matrix Guide (Appendix B).

Two Senior Program Managers will review the scoring of the Program Managers and Grant Manager and provide a score for readiness and previous success, and sustainability.

AEA will develop a regional ranking of applications and a draft ranking of all projects for the Advisory committee to review.

The Advisory Committee will review the final Stage 3 scores regional ranking recommendations of the Authority. The Committee may make recommendations to assist in achieving a statewide balance but will not be rescoring based on the criteria.

Reviewers –

- Grant Manager (Local Support and Match Criteria)
- Program Managers (i.e. specialists in hydro, wind, biomass, geothermal, ocean/river, biofuels)
- Two Senior Program Managers
- Executive Director of AEA.
- Advisory Committee (Review of Regional Ranking and Funding Recommendations)

Criteria

- Criteria noted below will be scored and weighted as noted.

Criteria	Weight
Cost of energy per resident in the affected project area relative to other areas (From Worksheet)	30
The type and amount of matching funds and other resources an applicant will commit to the project. (See formula)	25
Project feasibility (Score from Stage 2 weighted)	20
Project readiness. How quickly the proposed work can begin and be accomplished and/or success in previous phases of project development.	5
Economic & Other Alaska Public Benefit (such as ability to use technology in other parts of Alaska).	10
Sustainability – Operations and Maintenance	5
Local Support (See formula)	5

Process

- Each application will be given a single weighted score.
- Where more than one evaluator is scoring a specific criterion the scores of all evaluators for that criterion will be averaged.
- Any requests for additional information will be made by the Grant Manager by e-mail, Bcc to Program Manager, with a response time of 7 days or less.

- The evaluation team may conduct interviews of applicants to determine a more complete understanding of the technical or financial aspects of their application. (Refer to RFA Section 4 Stage 3 Review.) However given the time constraints this is not likely for this round of applications.

Recommendation Guidelines

- The final recommendations will be one of the following:
  - Recommend – Full funding per application
  - Recommend – Partial funding with a recommended funding amount
  - Do not recommend for grant funding – (basis for not recommending to be explained)
- Final AEA recommendations may also suggest specific terms or conditions be imposed on the grantee to assure the project is successful and the public receives proper benefit for the funds to be expended
- Multi-phase funding guidelines
  - Fund all phases: Project can be constructed in 2009, and is well-defined, relatively inexpensive, and low-risk.
  - Fund fewer than all phases: Project construction in 2010+, not well-defined, expensive, higher risk, or there are competing projects for which planning is desirable.
- Competing or interactive projects guidelines
  - If AEA is aware of the potential for substantial interaction among proposed and/or other known projects, then recommend planning with appropriate level of analysis and public input before committing substantial funding to one or more alternatives.
  - Railbelt: If installed capacity > 10 MW or system transmission constraints are likely, then construction funding not recommended until after Railbelt integrated resource plan (IRP) consideration.
- Partial Funding Guidelines
  - Partial funding levels will correspond to amount proposed in phases that are recommended.
  - Exception 1: If proposal asks AEA to manage the project, and AEA thinks project can be built for less, then lower figure can be recommended.
  - Exception 2: Proposal requests funding for operating expense (labor, fuel) not recommended for funding.
  - Exception 3 – AEA proposes to limit funding to a maximum dollar limit for specific areas, groups, or types of projects in order to increase the total number of projects that may be awarded and address the statewide balance of funds.

- Guidelines for recommendations for biofuel projects for Private vs Governmental entities
    - Government projects eligible for construction/equipment funding
    - Non-government : limited to funding recommended preconstruction activities
- Consideration of Resources Assessment Projects
    - Resource assessment associated with one or more site-specific projects is eligible for phase 2 funding. General regional or statewide assessment, not tied to particular proposed projects, is not eligible, and more appropriately done through the DNR/AEA Alaska Energy Inventory Data project.
- Recommendation Guidelines will be documented and a part of the grant file.

Ranking of Applications and Funding Recommendations

- Upon completion of scoring and specific project recommendations by AEA all applications will be grouped within geographical regions,
    - See Map Delineating regions http://www.akenergyauthority.org/RE_Fund_map.html
- Each group of applications will be ranked within their geographical region based on the final stage three score.
- Each application under consideration for funding will have stage three score and regional rank.
- A draft recommendation of projects for funding (based on available funds) will be presented to the Advisory Committee for Review along with the complete list of all projects.
- To be able to provide support for a maximum number of projects the maximum recommended funding per grant will be limited to:
    1. $2,000,000 for Railbelt and Southeast where the Cost of Energy score is19 or less
    2. $4,000,000 for all other regions and Southeast communities with Cost of Energy score 20 or greater
- The final list of recommended projects for funding will provide a reasonable statewide balance of funds taking into consideration the overall score, the cost of energy, the rank of projects within a region.

Recommendations to the Legislature

The final recommendation to the legislature will include:

- A list of recommended grants to applications based on 09 funding
- A list of recommended grants to applications based on 10 funding.
- A list of applications recommended if additional funds may be available.
- A list of applications not recommended for funding.
- A list of applications rejected as ineligible.

The Final recommendation to the legislature will also contain specific information for each project as requested by the legislature and a summary of each project.

Applicants may be required to provide additional information to the Legislature upon request (RFA Section 1.21).

APPENDIX B

Scoring Matrix Guide

General Scoring Criteria

- Pass/Fail scoring means either the criteria are met or they are not.
- A weighted score for each of the criteria will calculated and each complete application will be given a total score at the end of the Stage 2 and Stage 3 review process unless the application is determined not to meet the requirements of the RFA.
- Reviewers should use the following weighted scoring of criteria as a guide in addition to the specific formula scoring matrices for some criteria defined in Appendix A of these procedures.

Score	Guidelines (Intent to provide a range	
10	A+	The application demonstrates a thorough understanding of the criteria requirements and completely addresses them thoughtful manner. The application addresses the criteria in a manner clearly superior to other applications received. There is no need for additional follow-up with the applicant to understand how they meet the requirements of the criteria
7	B	The application provides information that is generally complete and well-supported. Evaluators may still have a few questions regarding how the applicant meets the criteria but it is clear the applicant understands what is required.
5	C	The application addresses the criteria in an adequate way. Meets minimum requirements under each of the criteria. Some issues may still need to be clarified prior to awarding a grant.
3	D	The application information is incomplete or fails to fully address what is needed for the project or information has errors. The Authority may need more info to be able to complete the evaluation or need to resolve issues before recommending or awarding a grant.
0	F	The application fails to demonstrate understanding of the criteria requirements or project proposed. Required information is poor or absent in the proposal.

Stage 2, Criterion 4 Economic Benefit Review Guideline

Compare AEA and Applicant B/C and determine which of the B/C ranges below are appropriate. If there is wide discrepancy between the two B/C ratios use judgment to assign a score. Reduce the score to the extent that you judge that the project does not show that it has an adequate financing plan for completion of the grant-funded phase or has not considered options for funding subsequent phases of the project. Scores must be >= 0.	**Benefit / Cost (B/C) Ratio Value**	**Score**
	Less than 0.80	**0**
	=>0.80 – =<0.90	**3**
	>0.90 – =<1.00	**4**
	>1.00 – =<1.10	**5**
	>1.10 – =<1.50	**6**
	>1.50 – =<1.60	**7**
	>1.60 – =<1.80	**8**
	>1.80 - < 2.00	**9**
	=>2.0	**10**

Stage 3 Criteria – Match

Total of 25 points will be calculated as follows

Type of Match	**5 Pts**	+	**Percentage of Match to total Grant Request**	**15 Pts**	+	**Total Amount of Match (1)**	**5 Pts**
Support of any kind referenced but not given a specific value IE housing offered to outside workers, administration of project without compensation	***1***		*.01% - <5% of Grant =*	***4***		*> $1 - < $15K*	***1***
Previous investment towards project completion	***2***		*=>5% - =<10% of Grant =*	***6***		*$15K - <$100K*	***2***
Another grant [State] as Match	***3***		*>10% - =<15% of Grant =*	***8***		*$100K <$1 mil*	***3***
Other (Grant Fed) Or private	***4***		*>15% - =<30% of Grant*	***11***		*$1 mil - <$6 mil*	***4***
Loan or Local Cash or any documented In-kind Match	***5***		*>30% - =<49% of Grant =*	***13***		*> $6 mil*	***5***
			> 49% of Grant	***15***			

(1) If there are multiple types of Match that with highest value is scored.

Stage 3 Criteria Local Support

Total of 5 Points Available

Documented unresolved issues concerning the application no points will be given if these exist regardless of demonstrated support	0 points
Resolution from city or village council	2 points
Support demonstrated by local entity other than applicant	3 points
Support demonstrated by two local entities other than the applicant	4 points
Support demonstrated by three or more local entities other than the applicant	5 points

Stage 3 Criteria Cost of Energy

Based on Cost of Power by Community Location

Posting Description	RCA Total Res Rate	Utility Last Reported Residential Rate	Use for RE Fund	Raw RE Fund Score (1-10)	**Adj RE Fund Score (1-10)**
Anchorage	0.0893		0.0893	1.12	**1.12**
Juneau	0.1103		0.1103	1.38	**1.38**
Anchorage	0.1171		0.1171	1.46	**1.46**
Matanuska Valley	0.1271		0.1271	1.59	**1.59**
Homer-North Kachemak Bay	0.1387		0.1387	1.73	**1.73**
Homer-South Kachemak Bay	0.1423		0.1423	1.78	**1.78**
Fairbanks	0.1729		0.1729	2.16	**2.16**
North Slope	0.1781		0.1781	2.23	**2.23**
Dillingham/Aleknagik PCE		0.2278	0.2278	2.85	**2.85**
Haines/Covenant Life PCE	0.2304	0.2302	0.2302	2.88	**2.88**
Skagway PCE	0.2304	0.2302	0.2302	2.88	**2.88**
King Cove PCE		0.2400	0.2400	3.00	**3.00**
Craig PCE	0.2599	0.2581	0.2581	3.23	**3.23**
Hollis PCE	0.2599	0.2581	0.2581	3.23	**3.23**
Hydaburg PCE	0.2599	0.2581	0.2581	3.23	**3.23**
Klawock/Kassan PCE	0.2599	0.2581	0.2581	3.23	**3.23**
Thorne Bay/Kasaan PCE	0.2599	0.2581	0.2581	3.23	**3.23**
Nome PCE		0.3169	0.3169	3.96	**3.96**
Cordova PCE		0.3183	0.3183	3.98	**3.98**
Kipnuk PCE	0.5094	0.3200	0.3200	4.00	**4.00**
Akutan PCE		0.3230	0.3230	4.04	**4.04**

Unalakleet PCE	0.3900	0.3368	0.3368	4.21	**4.21**
Ouzinkie PCE		0.3400	0.3400	4.25	**4.25**
Naknek/S.Naknek/Kng Slmn PCE		0.3562	0.3562	4.45	**4.45**
Kotzebue PCE		0.3605	0.3605	4.51	**4.51**
Toksook Bay PCE		0.3889	0.3889	4.86	**4.86**
Tununak PCE		0.3889	0.3889	4.86	**4.86**
Galena PCE		0.3980	0.3980	4.98	**4.98**
Larsen Bay PCE		0.4000	0.4000	5.00	**5.00**
Buckland PCE		0.4036	0.4036	5.05	**5.05**
Kasigluk PCE		0.4165	0.4165	5.21	**5.21**
Nunapitchuk PCE		0.4165	0.4165	5.21	**5.21**
Elfin Cove PCE		0.4200	0.4200	5.25	**5.25**
Chenega Bay PCE		0.4350	0.4350	5.44	**5.44**
Kwethluk PCE		0.4400	0.4400	5.50	**5.50**
Koyukuk PCE		0.4500	0.4500	5.63	**5.63**
Manokotak PCE		0.4500	0.4500	5.63	**5.63**
Shishmaref PCE		0.4519	0.4519	5.65	**5.65**
Fort Yukon PCE	1.0406	0.4529	0.4529	5.66	**5.66**
Minto PCE		0.4553	0.4553	5.69	**5.69**
Old Harbor PCE		0.4606	0.4606	5.76	**5.76**
Lower Kalskag PCE		0.4621	0.4621	5.78	**5.78**
Upper Kalsag PCE		0.4621	0.4621	5.78	**5.78**
Togiak PCE		0.4644	0.4644	5.81	**5.81**
Mt. Village PCE		0.4666	0.4666	5.83	**5.83**
St. Michael PCE		0.4672	0.4672	5.84	**5.84**
Shaktoolik PCE		0.4709	0.4709	5.89	**5.89**
Emmonak PCE		0.4739	0.4739	5.92	**5.92**
Hooper Bay PCE		0.4761	0.4761	5.95	**5.95**
Elim PCE		0.4766	0.4766	5.96	**5.96**
Koyuk PCE		0.4815	0.4815	6.02	**6.02**
Marshall PCE		0.4818	0.4818	6.02	**6.02**
Pitkas Point PCE		0.4820	0.4820	6.03	**6.03**
St. Mary's/Andreafsky PCE		0.4820	0.4820	6.03	**6.03**
Mekoryuk PCE		0.4821	0.4821	6.03	**6.03**
Russian Mission PCE		0.4830	0.4830	6.04	**6.04**
Brevig Mission PCE		0.4878	0.4878	6.10	**6.10**
Chevak PCE		0.4888	0.4888	6.11	**6.11**
Dot Lake/Dot Lake Village PCE	0.4708	0.4925	0.4925	6.16	**6.16**
Tetlin PCE	0.4708	0.4925	0.4925	6.16	**6.16**

Tok/Tanacross PCE	0.4708	0.4925	0.4925	6.16	**6.16**
Wales PCE		0.4925	0.4925	6.16	**6.16**
Alakanuk PCE		0.4963	0.4963	6.20	**6.20**
Eek PCE		0.4987	0.4987	6.23	**6.23**
Quinhagak PCE		0.4989	0.4989	6.24	**6.24**
Stebbins PCE		0.4995	0.4995	6.24	**6.24**
Ekwok PCE		0.5000	0.5000	6.25	**6.25**
Kwigillingok PCE		0.5000	0.5000	6.25	**6.25**
Levelock PCE		0.5000	0.5000	6.25	**6.25**
Koliganek PCE		0.5000	0.5000	6.25	**6.25**
Nikolai PCE		0.5000	0.5000	6.25	**6.25**
Platinum PCE		0.5000	0.5000	6.25	**6.25**
Pilot Station PCE		0.5004	0.5004	6.26	**6.26**
Savoonga PCE		0.5010	0.5010	6.26	**6.26**
Nightmute PCE		0.5041	0.5041	6.30	**6.30**
Kaltag PCE		0.5067	0.5067	6.33	**6.33**
Central PCE	0.7399	0.5089	0.5089	6.36	**6.36**
Goodnews Bay PCE		0.5106	0.5106	6.38	**6.38**
Selawik PCE		0.5114	0.5114	6.39	**6.39**
New Stuyahok PCE		0.5145	0.5145	6.43	**6.43**
Chignik Lagoon PCE		0.5159	0.5159	6.45	**6.45**
Gambell PCE		0.5177	0.5177	6.47	**6.47**
Nelson Lagoon PCE		0.5200	0.5200	6.50	**6.50**
Tuntutuliak PCE		0.5200	0.5200	6.50	**6.50**
Holy Cross PCE		0.5236	0.5236	6.55	**6.55**
Huslia PCE		0.5260	0.5260	6.58	**6.58**
Grayling PCE		0.5283	0.5283	6.60	**6.60**
Nunam Iqua PCE		0.5300	0.5300	6.63	**6.63**
Yakutat PCE		0.5318	0.5318	6.65	**6.65**
Noorvik PCE		0.5333	0.5333	6.67	**6.67**
Kivalina PCE		0.5368	0.5368	6.71	**6.71**
Scammon Bay PCE		0.5392	0.5392	6.74	**6.74**
Golovin PCE		0.5400	0.5400	6.75	**6.75**
Tenakee Springs PCE		0.5400	0.5400	6.75	**6.75**
Kiana PCE		0.5413	0.5413	6.77	**6.77**
Nulato PCE		0.5424	0.5424	6.78	**6.78**
Unalaska PCE		0.5433	0.5433	6.79	**6.79**
Beaver PCE		0.5500	0.5500	6.88	**6.88**
Chefornak PCE		0.5500	0.5500	6.88	**6.88**
Kongiganak PCE		0.5500	0.5500	6.88	**6.88**
Twin Hills PCE		0.5500	0.5500	6.88	**6.88**

Atka PCE		0.5520	0.5520	6.90	**6.90**
Anvik PCE		0.5603	0.5603	7.00	**7.00**
Teller PCE		0.5614	0.5614	7.02	**7.02**
Tanana PCE	0.5962	0.5693	0.5693	7.12	**7.12**
Kotlik PCE		0.5712	0.5712	7.14	**7.14**
Takotna PCE		0.5810	0.5810	7.26	**7.26**
Shageluk PCE		0.5813	0.5813	7.27	**7.27**
Chitina PCE		0.5850	0.5850	7.31	**7.31**
Bethel/Oscarville PCE	0.5251	0.5972	0.5972	7.47	**7.47**
Naukati PCE	0.5407	0.5995	0.5995	7.49	**7.49**
Akiak PCE		0.6000	0.6000	7.50	**7.50**
Akiachak PCE		0.6000	0.6000	7.50	**7.50**
Karluk PCE		0.6000	0.6000	7.50	**7.50**
Diomede PCE		0.6000	0.6000	7.50	**7.50**
Napaskiak PCE		0.6000	0.6000	7.50	**7.50**
Pedro Bay PCE		0.6000	0.6000	7.50	**7.50**
Tuluksak PCE		0.6000	0.6000	7.50	**7.50**
Nikolski PCE		0.6000	0.6000	7.50	**7.50**
White Mountain PCE		0.6000	0.6000	7.50	**7.50**
Manley Hot Springs PCE	0.9017	0.6010	0.6010	7.51	**7.51**
Iliamna/Newhalen/Nondalton PCE		0.6024	0.6024	7.53	**7.53**
Igiugig PCE		0.6030	0.6030	7.54	**7.54**
Coffman Cove PCE	0.5471	0.6045	0.6045	7.56	**7.56**
McGrath PCE	0.5216	0.6078	0.6078	7.60	**7.60**
Sand Point PCE	0.6008	0.6091	0.6091	7.61	**7.61**
Hughes PCE		0.6100	0.6100	7.63	**7.63**
Angoon PCE	0.8354	0.6126	0.6126	7.66	**7.66**
Chilkat Valley PCE	0.8354	0.6126	0.6126	7.66	**7.66**
Hoonah PCE	0.8354	0.6126	0.6126	7.66	**7.66**
Kake PCE	0.8354	0.6126	0.6126	7.66	**7.66**
Klukwan PCE	0.8354	0.6126	0.6126	7.66	**7.66**
Deering PCE		0.6215	0.6215	7.77	**7.77**
Chignik PCE	0.5816	0.6270	0.6270	7.84	**7.84**
Atmautluak PCE		0.6400	0.6400	8.00	**8.00**
St. Paul PCE		0.6400	0.6400	8.00	**8.00**
Eagle/Eagle Village PCE	0.5891	0.6453	0.6453	8.07	**8.07**
Whale Pass PCE	0.5572	0.6578	0.6578	8.22	**8.22**
Napakiak PCE	0.6601	0.6601	0.6601	8.25	**8.25**
Circle PCE		0.6700	0.6700	8.38	**8.38**
Chistochina PCE	0.6552	0.6856	0.6856	8.57	**8.57**

Kokhanok Bay PCE		0.6900	0.6900	8.63	**8.63**
Northway/Northway Village PCE	0.6261	0.6915	0.6915	8.64	**8.64**
Bettles/Evansville PCE	0.6213	0.6921	0.6921	8.65	**8.65**
Port Alsworth PCE		0.7022	0.7022	8.78	**8.78**
Cold Bay PCE	0.9850	0.7024	0.7024	8.78	**8.78**
Newtok PCE		0.7200	0.7200	9.00	**9.00**
Shungnak PCE		0.7364	0.7364	9.21	**9.21**
Slana PCE	0.6082	0.7452	0.7452	9.32	**9.32**
Noatak PCE		0.7572	0.7572	9.47	**9.47**
Tatitlek PCE		0.7600	0.7600	9.50	**9.50**
Gustavus PCE	1.2277	0.7669	0.7669	9.59	**9.59**
Chuathbaluk PCE	0.8191	0.7749	0.7749	9.69	**9.69**
Crooked Creek PCE	0.8191	0.7749	0.7749	9.69	**9.69**
Red Devil PCE	0.8191	0.7749	0.7749	9.69	**9.69**
Sleetmute PCE	0.8191	0.7749	0.7749	9.69	**9.69**
Stony River PCE	0.8191	0.7749	0.7749	9.69	**9.69**
Mentasta PCE	0.7178	0.7750	0.7750	9.69	**9.69**
Allakaket/Alatna PCE	0.7166	0.7805	0.7805	9.76	**9.76**
Aniak PCE	0.6934	0.8013	0.8013	10.02	**10.00**
Healy Lake PCE	0.7541	0.8090	0.8090	10.11	**10.00**
Ambler PCE		0.8259	0.8259	10.32	**10.00**
Ruby PCE		0.9800	0.9800	12.25	**10.00**
Egegik PCE	1.5128	0.9841	0.9841	12.30	**10.00**
Stevens Village PCE		1.0700	1.0700	13.38	**10.00**
Lime Village PCE	1.5156	1.1700	1.1700	14.63	**10.00**

Alternative Energy and Energy Efficiency Assistance Plan

July 1, 2007 to June 30, 2009

ALASKA ENERGY AUTHORITY

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Introduction

Alaska Energy Authority's (AEA) Alternative Energy and Energy Efficiency programs aim to lower the cost of power and heat to eligible communities while maintaining system safety and reliability. Projects seek to increase efficiency of existing power production and energy end use and to develop alternatives to diesel-based energy technology.

This plan, required under 3 AAC 108.310, describes 1) available funding and funding that AEA plans to request for alternative energy and energy efficiency assistance, 2) the types of assistance that AEA provides and plans to provide, and 3) the criteria for allocating funds.

Note that this plan does not address all of AEA's activities in the area of alternative energy and energy efficiency. Other program activities such as geothermal and tidal energy resource assessment or biodiesel field testing are described at AEA's website: www.akenergyauthority.org. For further information on program activities not covered by this plan, please call Peter Crimp at 269-3000

Energy Cost Reduction

Program Description

The Energy Cost Reduction program, funded chiefly by the Denali Commission, provides grant and loan financing for project proposals that reduce the cost of power and heat in Alaskan communities. The program has been conducted through a competitive request for proposals (RFP). Four RFPs have been released and awarded between 2001 and 2006. AEA plans to release a fifth RFP in late fall 2007.

Funding

Existing

All available grant funding has been allocated to projects. Over the four solicitations, $8.41 million in grant funding has been awarded for 23 projects costing $20.79 million. Life cycle savings are estimated at $40.66 million. Loan financing is available through AEA's Power Project Loan Fund (PPF).

Proposed

AEA has been granted $3.0 million from the Denali Commission for the fifth Energy Cost Reduction Program solicitation. Further information on how to apply for assistance from this additional funding will be posted on AEA's website when it becomes available.

Criteria for Funding Allocation

Eligibility

1. Power project applicants must be certificated electric utilities or independent power producers. Heat recovery project applicants must be certificated electric

utilities, independent power producers, or local governments. Energy conservation project applicants must be certificated electric utilities, independent power producers, local governments, or government entities, including tribal councils and housing authorities.

2. Projects must use commercially proven technology and operation procedures.
3. Projects must be sustainable. The owner must demonstrate plans for proper O&M, sufficient revenues to cover costs, and financial capability to replace the project after its useful life.
4. Projects must show clear intent to begin implementation within the following year.

Selection Process

AEA staff and contractors perform life cycle cost analysis of 1) the proposed measure, and 2) the status quo base case. Benefit is estimated as the savings of the proposed measure over the status quo. Projects are ranked by Benefit/Cost (B/C) ratios. Projects with B/C greater than or equal to 1 are eligible for loan and grant funding as available from the PPF and Denali Commission respectively.

For eligible projects, normal savings are estimated for the first few years. The maximum amount of debt these savings could support over the life of the project (15-30 yrs depending on project type) is calculated at the current PPF interest rate (currently 4.6%). The local share is half of this amount, while the grant is the remaining project cost.

Local cost-share is mandatory to demonstrate local "buy-in." Cost-share can be in the form of loans from the PPF or other sources, cash contribution, or a combination of loans and cash.

Energy Efficiency Technical Assistance

Program Description

The Energy Efficiency Technical Assistance Program (EETAP) addresses energy efficiency improvements to help communities with high fuel costs reduce fuel consumption to generate power and to heat major facilities. Phase I of EETAP, in progress, has assisted 10-15 communities in evaluating potential energy efficiency measures and in developing information for them to use in applying for grant or loan funding to implement the measures. Examples of possible measures are installation of electronically-controlled diesel generators, recovery of "waste" heat, replacement of inefficient transformers, installation of high-efficiency lighting in community buildings, and replacement and tuning of boiler systems at schools, and other power system generation and distribution improvements and end use efficiency (conservation) measures at major facilities. (This program does not address substitution of diesel fuel with other energy sources that are not already part of the existing energy system.)

Funding

Existing

AEA has allocated $200,000 toward this program, consisting of

1. $150,000 in Rebuild America funding ($100,000 U.S. Department of Energy (USDOE) and $50,000 AEA capital funds).

2. $50,000 in State Energy Program funding ($37,500 USDOE and $12,500 AEA capital funds.)

All available funding has been allocated.

Proposed

Rebuild America no longer exists. AEA will request additional funds for this program through USDOE's State Energy Program in FY08.

Criteria for Funding Allocation

Eligibility

Eligibility criteria are as follows:

1. The community must have an average residential electric rate of 17.0 cents per kilowatt hour or greater as listed in Table 2.4b of the publication *Alaska Electric Power Statistics 1960-2001* www.iser.uaa.alaska.edu/Publications/akelectricpowerfinal.pdf

2. Eligible participants are certificated electrical utilities, local governments (including cities, boroughs, and other governmental subdivisions), tribal entities, and State of Alaska agencies. The program does not provide assistance to individual residents or businesses.

Selection Process

Communities are selected through a Request for Statement of Interest to receive assistance as follows:

1. Each eligible entity within a community that is interested in participating in the program submits the following:

   a. Fuel Cost. The total cost of diesel and other distilled fuels used for power and heating in the latest year.

   b. Local Match. Local cash match offered for efficiency assessment or measures. Funds from state and federal sources do not qualify as local.

   c. Other Government Funding. Amount of funding assistance from state or federal government agencies that the entity has received for energy

improvements and assessments within the last five years or expects to receive within the next year. Examples of funding assistance are

i. Feasibility, design, and construction projects funded by the Denali Commission, Alaska Native Tribal Health Consortium, U.S. Department of Energy, the USDA Rural Development, the U.S. Department of Commerce, and the Village Safe Water and other State of Alaska programs. Rural Power System, Bulk Fuel upgrade programs and major power system improvements.

ii. Energy audits funded by the state or federal government.

2. AEA sums the total Fuel Cost, Local Match, and Other Government Funding by community based on the submittals from all facilities included in statements of interest. Submittals are ranked using an index based on total Fuel Cost, Local Match per capita, and Other Government Funding per capita. AEA allocates available funding according to the ranking. In order for a community to increase chances of being selected, it is strongly suggested that interested utilities and facility owners coordinate their responses to the request for statement of interest.

Biofuel Development

Program Description

As part of its fish oil biodiesel development activities, AEA will offer a grant to cost-share development and demonstration of a mobile fish oil rendering module in fall 2007.

The Alaska seafood industry processes approximately 4.4 billion pounds of fish annually, producing approximately 2.2 billion pounds of "waste," those portions of the fish not processed for human or industrial consumption. Of that waste, approximately 62 percent is discharged into state waters. The discharged fish waste contains an estimated 13 million gallons of unrecovered fish oil.

The intent of this project is to provide grant funding and technical/business support toward the development, construction, and demonstrated operation of a mobile fish oil recovery module. This module will be employed at, and relocated between, multiple existing processing sites thereby increasing its annual utilization and economic return. It is expected that at some processing sites, the fish oil product will be retained and utilized by the host facility and/or community to displace the use of conventional diesel engine or boiler fuels.

Please refer to the Alaska Energy Authority website for more information: www.akenergyauthority.org.

Funding

Existing

A total of $188,054 is available in grant financing. Project funding contributors include U.S. Environmental Protection Agency through its West Coast Collaborative Diesel Emissions Reduction Program ($90,638), AEA capital funds ($60,545), and University of Alaska Marine Advisory Program ($36,870). The grant recipient will be required to match grant funding with, at a minimum, $90,000 in cash or in kind.

Proposed

No additional funding is proposed.

Criteria for Funding Allocation

Eligibility

1. Commercial seafood processor operating in or near Alaska waters with shore-based, at-sea, and/or barge facilities.

2. Alaska community, community/regional organization, utilities, processing group, CDQ group, regional fishing or marketing association within which seafood processing occurs.

3. Any collaborative grouping or partnership of the above, existing or purpose-formed to respond to this RFP.

Selection Process

Grant applications will be ranked according to the following factors

1. Quality of the proposed operating plan and module concept
2. Fuel displacement/fish oil utilization
3. Project readiness & feasibility
4. Qualifications and experience

Rural Energy Conference Travel Stipends

Program Description

Alaska Energy Authority provides stipends to offset costs of travel to the 1½ yearly Alaska Rural Energy Conference. The Conference is scheduled for September 2008, in Southcentral. Depending on available funding travel stipends will be available. In April 2007 stipend allocations were as follows:

Closest Hub City to Point of Origin	Grant Amount
Barrow	$700
Dutch Harbor/Cold Bay	$1,000
Kodiak, Dillingham, Fairbanks	$500

Nome, Kotzebue, Bethel	$600
King Salmon	$400
Anchorage	$200
Juneau, Sitka, and Ketchikan	$800

Funding

Existing

For the last conference AEA allocated approximately $30,000 of Denali Commission funds.

Proposed

AEA will request $30,000 from the Denali Commission or other agencies for the stipend program for the 2008 conference.

Criteria for Funding Allocation

Eligibility

Stipends are available for rural utility managers, tribal and community leaders, power plant and tank farm operators, State of Alaska and federal agencies, University of Alaska and laboratory researchers, and equipment suppliers. Recent recipients of utility projects are encouraged to attend.

Selection Process

Funding is allocated on a first come-first serve basis. Attendance from one community is limited to three individuals. Applications and a detailed description of the selection process will be posed at the AEA website.

Village End Use Efficiency Measures

Program Description

The Village End Use Efficiency Measures (VEUEM) initiative has provided financing for end use efficiency (energy conservation) measures in 31 rural communities that have received bulk fuel facility or power system upgrades funded by the Denali Commission. Work is being completed by a contractor AEA selected through a request for proposal to provide a complete work package to include: furnish and installation of all wiring, fixtures, thermostats, motors, pumps, and necessary electrical and control system modifications to complete the upgrade of the lighting system and mechanical systems at various buildings. Detailed scope was provided for each building.

AEA plans to expand this program into other communities during 2007 and 2008.

Funding

Existing

AEA has currently budgeted $1.3M in Denali Commission funding for this program.

Proposed

AEA has requested $1 million from Denali Commission for state FY08.

Criteria for Funding Allocation

Eligibility

Communities that have or will receive bulk fuel facility or power system upgrades funded by the Denali Commission.

Selection Process

Communities are selected by the Denali Commission according to the bulk fuel and power system priority list, available at:
www.denali.gov/Program_Documents.cfm?Section=Energy

Wind Energy Assessment

Program Description

This program, also known as the "anemometer loan program," provides hardware and technical assistance to assess local wind resources for development of power projects. AEA maintains a fleet of 30 meteorological (met) towers for loan to communities with high potential for wind-generated electrical power that have operators capable of taking possession of the towers and associated wind monitoring equipment, operating the towers and equipment for approximately one year, and returning the towers and equipment in operable condition to AEA. The met towers are approximately 100 feet tall and consist of nesting tube sections, which are guyed to four anchors with steel cable. In fall 2007 AEA plans to obtain 60-80 meter towers that will be available to assess wind resources for potential deployment of larger turbines.

AEA assists in identifying viable sites, installing and removing the towers, and arranging for federal or state authorizations that may be needed for the placement and operation of the towers, and analyzing collected data. The operator must assume liability associated with the installation of the tower and be responsible for acquiring permission from the landowner for placement and operation of the towers for one year. The operator is responsible for visiting the site every month to replace data storage cards and check that the system is operating adequately. The operator is responsible for replacing equipment that is damaged by the operator's negligence; AEA is responsible for replacing equipment that is damaged for any reason other than the operator's negligence. All data generated from the project is publicly available. AEA staff and contractors are available to analyze data from met towers to the extent within time and budget constraints.

Funding

Existing

Funding for the wind resource assessment program currently totals $542,000 ($495,000 Federal, 47,000 State).

Proposed

AEA has requested $665,000 from USDOE for Railbelt wind energy assessment and planning activities. AEA has offered a match of $165,000 in state capital funds.

Criteria for Funding Allocation

Eligibility

Eligible entities are electric utilities, municipalities, Alaska Native villages, and ANCSA corporations.

Selection Process

In the past, because of limited availability of equipment, AEA selected participants competitively through a Request for Statement of Interest. Currently, AEA is providing wind energy assessment assistance as requested by communities due to the greater availability of MET towers. For further information, contact James Jensen at (907) 269-4682 or JJensen@aidea.org.

Wind Energy Development

Program Description

The Wind Energy Development initiative provided two rounds of funding for construction of wind generation systems in rural Alaska funded by a federal earmark through the USDOE and matching state capital funds.

Funding

Existing

Funds totaling $2.224 M have been made available through this initiative.

Proposed

No further funding requested for FY07 and no additional funding is anticipated.

Criteria for Funding Allocation

Eligibility

Eligibility included local governments (either municipal or tribal), State of Alaska agencies, boroughs and other governmental subdivisions, and certificated electrical utilities. Entities must serve a Power Cost Equalization (PCE) community.

Selection Process

AEA made funds available through a competitive solicitation. Details are posted on AEA website.

Wood Energy Development

Program Description

This program provides funding for assessment, design, and construction of facilities that demonstrate the viable use of wood and/or sawmill waste as a cost-effective way to displace fuel oil for heating schools and other larger facilities in Alaska. Expected benefits will include lower cost, improved or neutral air emissions, local economic development, reduced risk of oil spills, and use of wood waste that may otherwise need to be landfilled.

AEA has provided grant funding to the Juneau Economic Development Council to coordinate feasibility assessment. AEA is providing grant funding to the City of Craig for design and construction of a wood-fired district heating system.

Funding

Existing

Currently AEA has budgeted approximately $669,674 for existing wood energy activities ($530,329 USDOE and Denali Commission and $139,345 AEA capital funds), chiefly construction of the Craig Wood-fired District Heating system and feasibility analyses.

Proposed

No new funding is proposed for wood energy development at this time.

Criteria for Funding Allocation

Eligibility

Eligible parties are local governments (either municipal or tribal), State of Alaska agencies, federal agencies including U.S military installations, public housing authorities, boroughs and other governmental subdivisions, not-for-profit organizations, and certificated electrical utilities.

Selection Process

Projects are selected through Requests for Statements of Interest by the Alaska Wood Energy Development Task Group (Task Group), a coalition of federal and state agencies and other not-for-profit organizations coordinating the State's efforts to explore opportunities to increase the utilization of wood for energy and biofuels production in Alaska.

The Task Group has issued a for assistance for demonstration projects that displace fossil fuels through direct combustion of wood (logs, chunks, chips, bark, sawdust, etc.) for heating schools, other public facilities, and buildings owned and operated by not-for-profit organizations.

The Task Group selected participants based on the following criteria:

1. The opportunity for displacing fuel oil, natural gas, propane or diesel-generated electricity used by targeted facilities for heating needs (i.e., current fuel type, gallons of fuel per year, annual cost per year).
2. Local presence of high-hazard forest fuels and potential for utilizing these fuels for heating schools, other public facilities, and buildings owned and operated by not-for-profit organizations.
3. Availability of local wood processing residues (e.g., sawdust, planer shavings, and slabs).
4. Project cost versus yearly savings (cost-effectiveness).
5. Sustainability of the wood fuel supply.
6. Community support and project advocacy.
7. Ability to implement the project.
8. Ability to operate and maintain the project.

AIDEA Alaska Industrial Development and Export Authority

ALASKA ENERGY AUTHORITY

Alaskan Small-Scale Renewable Energy Equipment and Service Providers*

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Alaska Battery Mfg. Attn: Sales 166 E. Potter Dr., #2 Anchorage, AK 99518 Tel: (907) 562-4949 Fax: (907) 563-4900 E-Mail: abm@absak.com Web Site: http://www.absak.com	**Remote Power Inc.** Attn: Greg Egan 981 Gold Mine Trail Fairbanks, AK 99712 Tel: (907) 457-4299 Fax: (907) 457-4299 E-mail: greg@remotepowerinc.com Web Site: http://www.remotepowerinc.com
Alaska Wind & Solar Attn: John Dailey HC 1, Box 3102A Healy, AK 99743 Tel: (907) 683-2327 Fax: (907) 683-2327 E-mail: jdailey@mtaonline.net	**Solar-Alaska** Attn: Sales 2480 Killarney Way Fairbanks, Alaska USA 99708 Tel: (907) 479-2505 E-mail: info@solaralaskc.com Web Site: http://www.solaralaska.com/
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***Alaska Energy Authority does not endorse any of the listed vendors nor represent this list as complete. For proposed additions to the list, please contact James Jensen, AEA at jjensen@aidea.org or (907) 771-3043**

LAWS OF ALASKA

2008

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SCS CSHB 152(FIN) am S

Chapter No.
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AN ACT

Establishing a renewable energy grant fund and describing its uses and purposes; establishing a renewable energy grant recommendation program; for the fiscal year ending June 30, 2009, authorizing the Alaska Energy Authority to distribute renewable energy grants and setting out the procedures to be followed to award those grants; establishing a state heating assistance program in addition to the federal heating assistance program; establishing an Alaska Renewable Energy Task Force; and providing for an effective date.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

THE ACT FOLLOWS ON PAGE 1

AN ACT

Establishing a renewable energy grant fund and describing its uses and purposes; establishing a renewable energy grant recommendation program; for the fiscal year ending June 30, 2009, authorizing the Alaska Energy Authority to distribute renewable energy grants and setting out the procedures to be followed to award those grants; establishing a state heating assistance program in addition to the federal heating assistance program; establishing an Alaska Renewable Energy Task Force; and providing for an effective date.

*** Section 1.** The uncodified law of the State of Alaska is amended by adding a new section to read:

LEGISLATIVE FINDINGS AND INTENT. (a) For secs. 3 and 6 of this Act, the legislature finds that

(1) an adequate, reliable, reasonably priced, and safe supply of energy is

necessary for Alaska's basic infrastructure and economic and technological development;

(2) Alaska possesses vast amounts of renewable energy resources in the form of wind, solar, geothermal, hydrothermal, wave, tidal, biomass, river in-stream, and hydropower;

(3) the legislature established the Alaska Energy Policy Task Force in 2003 to review and analyze the state's current and long-term energy needs;

(4) the task force found that one of Alaska's long-term energy needs is to identify and evaluate long-term fuel resources, and recommended that the state should increase the proportion of renewables in long-term fuel sources;

(5) the cost of fuels such as natural gas and diesel that Alaskans rely on in large part to generate electric power is steadily rising;

(6) residents of rural Alaska pay far more for electricity than residents who live on the Railbelt energy grid;

(7) there is virtually no fuel cost associated with renewable energy resources;

(8) other states and nations are working successfully to develop their renewable energy resources;

(9) the continued competitiveness and stability of the state's economy requires that the legislature consider national trends toward renewable energy development;

(10) renewable energy technology development promotes industry and creates jobs;

(11) clean renewable energy has many environmental and health benefits;

(12) locally produced renewable energy has many security benefits;

(13) modern, affordable, and efficient renewable energy technologies now exist;

(14) it is in the interest of the public for Alaska to develop its renewable energy resources; and

(15) natural gas can be considered as a last alternative for communities with no other reasonable renewable resources.

(b) It is the intent of the legislature that each year for the next five years $50,000,000 in capital funds be appropriated to fund projects recommended by the Alaska Energy Authority as described in secs. 3 and 6 of this Act.

(c) For sec. 7 of this Act, the legislature finds that

(1) energy issues are among the most critical issues in the state; and

(2) a thorough assessment of present and future state energy needs and requirements is necessary.

* **Sec. 2.** AS 36.30.850(b) is amended by adding a new paragraph to read:

(46) contracts for delivery of home heating assistance under AS 47.25.626.

* **Sec. 3.** AS 42.45 is amended by adding a new section to read:

Sec. 42.45.045. Renewable energy grant fund and recommendation program. (a) A renewable energy grant fund is established as a separate fund to finance certain energy projects in Alaska.

(b) The authority shall administer the fund as a fund distinct from other funds of the authority. The fund consists of

(1) money appropriated to the fund by the legislature to provide grants for certain energy projects determined by the legislature;

(2) gifts, bequests, contributions from other sources, and federal money;

(3) interest earned on the fund balance; and

(4) investments to be managed by the Department of Revenue, which shall be the fiduciary of the fund under AS 37.10.071.

(c) The fund is not a dedicated fund.

(d) The authority shall, in consultation with the advisory committee established under (i) of this section and the Department of Natural Resources,

(1) develop a methodology for determining the order of projects that may receive assistance, including separate requirements for grant eligibility, and adopt regulations identifying criteria to evaluate the benefit and feasibility of projects for which an applicant applies for support from the legislature, with the most weight being given to projects that serve any area in which the average cost of energy to each resident of the area exceeds the average cost to each resident of other areas of the state, and significant weight being given to a statewide balance of grant funds and to the amount of matching funds an applicant is able to make available;

(2) make recommendations to the legislature for renewable power production reimbursement grants; and

(3) not later than 10 days after the first day of each regular legislative session, submit to the legislature a report summarizing and reviewing each grant application submitted under this section and a recommended priority for awarding grants.

(e) In consultation with the advisory committee established in (i) of this section, the authority shall make recommendations to the legislature regarding eligible applicants' projects that finance feasibility studies, reconnaissance studies, energy resource monitoring, and construction of renewable energy projects, natural gas projects, or transmission or distribution infrastructure located in Alaska that meet the requirements of (f), (g), or (h) of this section, as applicable, and shall, at least once each year, solicit from the advisory committee funding recommendations for all grants.

(f) For a renewable energy project to qualify for a grant recommendation under (e) of this section, the project must

(1) be a new project not in operation on the effective date of this section or an addition to an existing project made after the effective date of this section; and

(2) be a

(A) hydroelectric facility;

(B) direct use of renewable energy resources;

(C) facility that generates electricity from fuel cells that use hydrogen from renewable energy resources or natural gas; or

(D) facility that generates energy from renewable energy resources.

(g) To qualify for a grant recommendation under (e) of this section, a project that is a natural gas project must benefit a community that

(1) has a population of 10,000 or less; and

(2) does not have economically viable renewable energy resources it can develop.

(h) To qualify for a grant recommendation under (e) of this section, transmission or distribution infrastructure must link a renewable energy project or natural gas project to the transmission or distribution infrastructure. A grant may be recommended under this subsection even if the grant applicant is not itself financing the construction of the renewable energy project or natural gas project.

(i) An advisory committee is established and consists of seven members, appointed as follows:

(1) five members shall be appointed by the governor to staggered three-year terms, with one representative to be appointed from each of the following groups:

(A) small Alaska rural electric utilities;

(B) large Alaska urban electric utilities;

(C) Alaska Native organizations;

(D) businesses or organizations engaged in the renewable energy sector; and

(E) the Denali Commission established under P.L. 105-277, 42 U.S.C. 3121 note;

(2) one member of the house of representatives shall be appointed by the speaker of the house of representatives; and

(3) one member of the senate shall be appointed by the president of the senate.

(j) A member of the advisory committee appointed under (i) of this section serves without compensation but is entitled to travel and per diem expenses as provided in AS 39.20.180.

(k) The legislature may appropriate money for grants from the renewable energy grant fund for renewable energy projects described in this section.

(*l*) In this section,

(1) "eligible applicant" means an electric utility holding a certificate of public convenience and necessity under AS 42.05, independent power producer, local government, or other governmental utility, including a tribal council and housing authority;

(2) "fund" means the renewable energy grant fund;

(3) "hydroelectric facility" has the meaning given to the term "project" under AS 42.45.350;

(4) "natural gas project" means use or access of natural gas other than landfill or digester gas;

(5) "renewable energy resources" means

(A) wind, solar, geothermal, wasteheat recovery, hydrothermal, wave, tidal, river in-stream, or hydropower;

(B) low-emission nontoxic biomass based on solid or liquid organic fuels from wood, forest and field residues, or animal or fish products;

(C) dedicated energy crops available on a renewable basis; or

(D) landfill gas and digester gas.

* **Sec. 4.** AS 47.25 is amended by adding new sections to read:

Article 3A. Alaska Heating Assistance Program.

Sec. 47.25.621. Alaska heating assistance program. (a) The Alaska heating assistance program is established in the Department of Health and Social Services to provide expanded eligibility for Alaska residents for home heating assistance, to the extent funds are appropriated by the legislature for that purpose.

(b) The heating assistance program established under this section is in addition to the federal low-income heating and energy assistance provided under 42 U.S.C. 8621 - 8629 (Low-Income Home Energy Assistance Act of 1981), as amended, and implementing regulations.

Sec. 47.25.622. Duties. The department shall

(1) administer the Alaska heating assistance program provided under AS 47.25.621;

(2) adopt regulations under AS 44.62 (Administrative Procedure Act) to carry out the purpose of the program;

(3) coordinate payments among other heating assistance programs to avoid duplication of payments.

Sec. 47.25.623. Eligibility. An individual is eligible for home heating assistance payments under the Alaska home heating assistance program if the

individual

(1) is a resident of the state;

(2) is physically present and resides in a home in the state when the home heating costs are incurred;

(3) has gross household income above 150 percent but that does not exceed 225 percent of the federal poverty guideline for Alaska set by the United States Department of Health and Human Services and revised under 42 U.S.C. 9902(2);

(4) meets other eligibility requirements specified in regulations adopted under AS 47.25.622.

Sec. 47.25.624. Appeal rights. Except as provided in AS 47.25.626(e), an individual who receives a determination from the department that denies, limits, or modifies home heating payments under AS 47.25.621 - 47.25.626, other than a determination based on insufficient funding of the program, may request a hearing before the department under regulations adopted by the department.

Sec. 47.25.625. Ability to recover or recoup improper home heating assistance payments. An individual is liable to the department for the value of assistance improperly paid under AS 47.25.623 if the improper payment was based on inaccurate or incomplete information provided by the individual. In a civil action brought by the state to recover from the individual the value of the assistance improperly paid, the state may recover from the individual the costs of investigation and prosecution of the civil action, including attorney fees as determined under court rules.

Sec. 47.25.626. Regional heating assistance program. (a) The department may develop a regional Alaska heating assistance program for the administration of AS 47.25.621 - 47.25.626 to provide home heating assistance in a uniform and cost-effective manner in a region of this state if an Alaska Native organization is authorized to implement a federally approved tribal family assistance plan that includes that region and has been awarded a tribal energy assistance grant for a program that includes that region under 42 U.S.C. 8623(d).

(b) The department may award contracts to implement a program developed under (a) of this section. A contract authorized for delivery of home heating assistance

under a regional Alaska heating assistance program under this section is exempt from the competitive bid requirements of AS 36.30 (State Procurement Code). Subject to appropriation, a contract under this section must be in an amount that represents a fair and equitable share of the money appropriated for the Alaska heating assistance program under AS 47.25.621 - 47.25.626 to serve the state residents specified in (a) of this section. The authority provided under this section to contract is in addition to the authority to contract in AS 47.05.015 or other law.

(c) The department may award a contract under this section only to an organization that

(1) has been awarded a tribal energy assistance grant under 42 U.S.C. 8623(d) for a program that includes that region;

(2) agrees to administer home heating assistance under AS 47.25.621 - 47.25.626 to state residents in the region; and

(3) agrees to implement an appeals process as described in (e) of this section.

(d) Records pertaining to recipients of home heating assistance under a contract awarded under this section are confidential and not subject to disclosure under AS 40.25.100 - 40.25.220.

(e) An organization that receives a contract under this section shall provide an appeals process to applicants for or recipients of home heating assistance covered by the contract awarded under this section. The appeals process must be the same as the method available under AS 47.25.624, except that the decision reached shall be considered a recommended decision to the department. Within 30 days after receiving a recommended decision, the department shall review the recommended decision and issue a decision accepting or rejecting the recommended decision. If the department rejects the recommended decision, the department shall independently review the record and issue its final decision. The final decision of the department on the matter is appealable to the courts of this state.

(f) If the department establishes a regional Alaska heating assistance program and awards a contract to provide home heating assistance under this section, a person applying for home heating assistance under AS 47.25.621 - 47.25.626 in the region of

the state covered by the regional Alaska heating assistance program may obtain home heating assistance from the department only through the organization designated by the department to serve the region.

* **Sec. 5.** AS 42.45.045 is repealed June 30, 2013.

* **Sec. 6.** The uncodified law of the State of Alaska is amended by adding a new section to read:

RENEWABLE ENERGY GRANTS DURING STATE FISCAL YEAR 2009. (a) For the fiscal year ending June 30, 2009, from an appropriation made under the statement of intent set out in sec. 1(b) of this Act, the Alaska Energy Authority shall distribute grants to applicants determined by the authority and that meet the criteria in AS 42.45.045(f) - (h), added by sec. 3 of this Act, based on the procedure described in (b) of this section.

(b) For administering grants under AS 42.45.045(f) - (h), added by sec. 3 of this Act, for the fiscal year ending June 30, 2009, notwithstanding AS 42.45.045(d), (e), and (i) - (*l*), added by sec. 3 of this Act,

(1) the Alaska Energy Authority shall submit to the Legislative Budget and Audit Committee for review a revised program setting out the proposed grants;

(2) 45 days shall elapse before commencement of expenditures under the revised program unless the Legislative Budget and Audit Committee earlier recommends otherwise;

(3) should the Legislative Budget and Audit Committee recommend within the 45-day period that the Alaska Energy Authority not award the grants as set out in the revised program, the Alaska Energy Authority shall again review the grant applications and, if the Alaska Energy Authority determines to authorize the expenditures, the Alaska Energy Authority shall provide the Legislative Budget and Audit Committee with a statement of the Alaska Energy Authority's reasons before commencement of expenditures making the approved grants.

* **Sec. 7.** The uncodified law of the State of Alaska is amended by adding a new section to read:

ALASKA RENEWABLE ENERGY TASK FORCE. (a) There is established in the legislative branch of state government the Alaska Renewable Energy Task Force. The task force consists of seven voting members appointed as follows:

(1) the speaker of the house of representatives shall appoint three members from the house of representatives;

(2) the president of the senate shall appoint three members from the senate; and

(3) the governor shall appoint one member.

(b) The chair of the task force shall be a legislative member selected by a majority vote of the members of the task force. The staff of the members who are legislators shall serve as staff to the task force.

(c) The task force shall prepare a report that includes

(1) an assessment of future statewide renewable energy needs; and

(2) recommendations for a statewide energy plan to fulfill the state's renewable energy needs.

(d) Members of the task force are entitled to transportation expenses and per diem allowances provided by law.

(e) The task force shall meet at least four times. The task force may meet in communities in the state that are using or considering sources of renewable energy.

(f) The task force shall submit written reports of its findings and recommendations to the legislature

(1) before March 1, 2009; and

(2) before March 1, 2010.

(g) The Alaska Renewable Energy Task Force is terminated on April 16, 2010.

*** Sec. 8.** The uncodified law of the State of Alaska is amended by adding a new section to read:

TRANSITION: RENEWABLE ENERGY PROJECT ADVISORY COMMITTEE. For the initial appointments made to the advisory committee under AS 42.45.045(i)(1), added by sec. 3 of this Act, two members serve for one year, two for two years, and three for three years.

*** Sec. 9.** The uncodified law of the State of Alaska is amended by adding a new section to read:

TRANSITION: RETROACTIVITY OF REGULATIONS. Notwithstanding a contrary provision of AS 44.62.240, if the Department of Health and Social Services expressly

designates in a regulation adopted under AS 47.25.622(2), enacted by sec. 4 of this Act, that the regulation applies retroactively to November 1, 2007, and is necessary to implement, interpret, make specific, or otherwise carry out AS 47.25.621 and 47.25.623, enacted by sec. 4 of this Act, the regulation may apply retroactively to November 1, 2007.

*** Sec. 10.** Sections 1(c) and 7 of this Act are repealed April 16, 2010.

*** Sec. 11.** The uncodified law of the State of Alaska is amended by adding a new section to read:

RETROACTIVITY OF CERTAIN PROVISIONS OF THIS ACT. AS 47.25.621 and 47.25.623, enacted by sec. 4 of this Act, are retroactive to November 1, 2007.

*** Sec. 12.** Sections 2, 4, 9, and 11 of this Act takes effect immediately under AS 01.10.070(c).