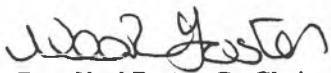


HB

46

<TARGET><BILL>HB 46</BILL><SUBJECT>HB
46</SUBJECT><COMM>HENE27</COMM></TARGET>



Rep. Neal Foster, Co-Chair
Alaska State Capitol, Room 434
Juneau, Alaska 99801

Phone: (907) 465-3789
Fax: (907) 465-3242

Alaska House of Representatives



Rep. Lance Pruitt, Co-Chair
Alaska State Capitol, Room 421
Juneau, Alaska 99801

Phone: (907) 465-3438
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House Special Committee on Energy

Friday, May 6, 2011

House Finance Committee Room, Room 519

- + Review of energy projects in CSSB 46 Version T, Section 4, page 98, line 1, through page 101, line 27

10:00 a.m. to noon:

Alaska Energy Authority requests submitted by the administration

2:00 p.m. to 4:00 p.m.:

Gas, geothermal, wind, coal-to-liquids, and other projects

Saturday, May 7, 2011

House Finance Committee Room, Room 519

- + Review of energy projects in CSSB 46 Version T, Section 4, page 98, line 1, through page 101, line 27

10:00 a.m. to noon:

Hydroelectric projects

2:00 p.m. to 4:00 p.m.:

ARCTEC (Alaska Railbelt Cooperative Transmission and Electric Company) projects

+ Teleconferenced

* First Hearing

= Previously Heard

For more information, contact committee aide, Christopher Clark, 465-3789.

Alaska House of Representatives

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House Special Committee on Energy

House Committees Schedule Energy Projects Review

House Special Committee on Energy and House Resources Committee to meet Friday and Saturday

For immediate release

May 4, 2011

Juneau, Alaska – The House Special Committee on Energy, in conjunction with the House Resources Committee, has scheduled two days of hearings on energy projects in the most recent draft capital budget bill.

The committee will review various hydroelectric, gas, geothermal, wind, coal-to-liquids, and other energy projects **from 10 a.m. to noon and 2 p.m. to 4 p.m., Friday, May 6, and Saturday, May 7**, in the House Finance Committee Room, Room 519, of the Alaska State Capitol. The meetings will be teleconferenced statewide at Legislative Information Offices.

Anticipating the Senate sending the capital budget before the end of the 30-day special session on May 17, the House committees have invited state officials and utility representatives to provide details on their projects. Committee members want to hear about each proposal's benefits and costs and how each one will lower Alaskans' energy expenses. Project proponents also are encouraged to explain how their requests fit into the state energy policy approved last year by the legislature.

House Energy Co-chair Lance Pruitt (R-Anchorage) said the hearings will focus on 28 projects that add up to more than \$310 million. These do not include items reviewed last week by the House Finance Committee such as energy rebates and the state weatherization program or those that have been vetted by the Alaska Energy Authority through its renewable energy grant guidelines.

"Although the Senate hasn't yet passed its capital budget to the House, time is running short in the special session and the House is adamant that we have a chance to review the plan thoroughly," he said. "We can begin that process now, with the understanding that these projects are important to communities statewide."

"Our goal is to help make energy more affordable for all Alaskans while allowing the State of Alaska to get a bigger bang for its buck," House Energy Co-chair Rep. Neal Foster (D-Nome) said.

Attached to the electronic version of this press release are:

- Energy projects in CSSB 46 Version T, page 98, line 1, through page 101, line 27
- A one-page spreadsheet of those projects
- The House Special Committee on Energy schedule
- Alaska Statute 44.99.115, the state energy policy

For more information, contact Christopher Clark, Rep. Neal Foster's office: (907) 465-3789.

####

Alaska Statute 44.99.115. Declaration of state energy policy.

The State of Alaska recognizes that the state's economic prosperity is dependent on available, reliable, and affordable residential, commercial, and industrial energy to supply the state's electric, heating, and transportation needs. The state also recognizes that worldwide supply and demand for fossil fuels and concerns about global climate change will affect the price of fossil fuels consumed by Alaskans and exported from the state to other markets. In establishing a state energy policy, the state further recognizes the immense diversity of the state's geography, cultures, and resource availability. Therefore, it is the policy of the state to

(1) institute a comprehensive and coordinated approach to supporting energy efficiency and conservation by

(A) encouraging statewide energy efficiency codes for new and renovated residential, commercial, and public buildings;

(B) decreasing public building energy consumption through conservation measures and energy-efficient technologies; and

(C) initiating and supporting a program to educate state residents on the benefits of energy efficiency and conservation, including dissemination of information on state and federal programs that reward energy efficiency;

(2) encourage economic development by

(A) promoting the development of renewable and alternative energy resources, including geothermal, wind, solar, hydroelectric, hydrokinetic, tidal, and biomass energy, for use by Alaskans;

(B) promoting the development, transport, and efficient use of nonrenewable and alternative energy resources, including natural gas, coal, oil, gas hydrates, heavy oil, and nuclear energy, for use by Alaskans and for export;

(C) working to identify and assist with development of the most cost-effective, long-term sources of energy for each community statewide;

(D) creating and maintaining a state fiscal regime and permitting and regulatory processes that encourage private sector development of the state's energy resources; and

(E) promoting the efficiency of energy used for transportation;

(3) support energy research, education, and workforce development by investing in

(A) training and education programs that will help create jobs for Alaskans and that address energy conservation, efficiency, and availability, including programs that address workforce development and workforce transition; and

(B) applied energy research and development of alternative and emerging technologies, including university programs, to achieve reductions in state energy costs and stimulate industry investment in the state;

(4) coordinate governmental functions

(A) by reviewing and streamlining regulatory processes and balancing the economic costs of review with the level of regulation necessary to protect the public interest;

(B) by using one office or agency, as may be specified by law, to serve as a clearinghouse in managing the state's energy-related functions to avoid fragmentation and duplication and to increase effectiveness; and

(C) by actively collaborating with federal agencies to achieve the state's energy goals and to meet emissions, renewable and alternative energy, and energy production targets.

History -

(Sec. 2 ch 82 SLA 2010)

Cross References -

For statement of legislative intent related to implementation of state energy policy, see Sec. 1, ch. 82, SLA 2010, in the 2010 Temporary and Special Acts.

Effective Date Notes -

Section 2, ch. 82, SLA 2010, which enacted this section, is effective September 14, 2010.

Energy projects in CSSB 46 Version T, Section 4

Page 98, line 1, through page 101, line 27

Updated: 5 May 2011, 1:18 p.m.

Alaska Energy Authority requests submitted by the administration

Southeast Energy Fund	Page 98	\$10,000,000
Susitna Hydroelectric Energy Plan	Pages 98, 99	\$65,700,000
Alaska Energy Plan Implementation	Page 99	\$1,000,000
Bulk Fuel Upgrades	Page 99	\$5,000,000
Electrical Emergencies Program	Page 99	\$330,000
Rural Power System Upgrades	Page 99	\$10,000,000
Subtotal		\$92,030,000

Gas, geothermal, wind, coal-to-liquids, and other projects

AIDEA coal-to-liquids certification project	Page 98	\$500,000
Akiak Community Electrical Generation System Upgrade	Page 99	\$4,000,000
Golden Valley Electric Association Eva Creek Wind Farm	Page 100	\$10,000,000
Homer Area Natural Gas Pipeline	Page 100	\$10,053,000
Homer Electric Association Soldotna to Nikiski Transmission Upgrade	Page 100	\$25,000,000
Mount Spurr Geothermal Project Development	Page 101	\$18,000,000
Subtotal		\$67,553,000

Hydroelectric projects

Nuvista Light & Power Chikuminuk Hydroelectric & Alternative Energy Project	Page 98	\$17,630,000
Copper Valley Electric Association Allison Creek Hydroelectric Project	Page 100	\$10,000,000
Gustavus Electric Company Falls Creek Hydroelectric Debt Reimbursement	Page 100	\$1,300,000
Ketchikan Whitman Lake Hydroelectric Project	Page 100	\$8,025,000
Kodiak Electric Association Terror Lake Hydroelectric Facility Expansion	Page 100, 101	\$3,750,000
Metlakatla Indian Community Metlakatla-Ketchikan Intertie	Page 101	\$10,500,000
Sitka Blue Lake Hydroelectric Project Expansion	Page 101	\$28,500,000
Subtotal		\$79,705,000

ARCTEC (Alaska Railbelt Cooperative Transmission and Electric Company) projects

Anchorage to Quartz Creek Transmission Line Maintenance and Repair	Page 99	\$25,000,000
Battle Creek Diversion	Page 99	\$15,000,000
Cook Inlet Gas Gathering System Remodel	Page 100	\$2,000,000
Daves Creek to Seward Transmission Line Completion	Page 100	\$1,500,000
Girdwood and Substation Improvements	Page 100	\$4,000,000
Quartz Creek to Soldotna Transmission Maintenance and Repair	Page 101	\$10,000,000
Seward Power Plant Integration	Page 101	\$4,000,000
Soldotna to Quartz Creek Transmission Study Design and Permitting	Page 101	\$5,000,000
Teiland to Healy Substation Improvements and Repair	Page 101	\$5,000,000
Subtotal		\$71,500,000

Total \$310,788,000

1 * **Sec. 4.** The following appropriation items are for capital projects and grants from the
 2 general fund or other funds as set out in section 5 of this Act by funding source to the
 3 agencies named for the purposes expressed and lapse under AS 37.25.020, unless otherwise
 4 noted.

5
 6 It is the intent of the legislature that the following appropriations and projects are needed to
 7 carry out the state's energy policy described in AS 44.99.115. As the energy policy states, the
 8 legislature recognizes the immense diversity of the state's geography, cultures, and resource
 9 availability and the need to identify and assist with development of the most cost-effective,
 10 long-term sources of energy for each community statewide. Therefore, the legislature intends
 11 that the package of appropriations and projects listed below are all necessary to achieve a
 12 statewide balance in addressing the state's diverse energy needs.

	Appropriation	General	Other
	Allocations	Items	Funds
			Funds
	*****		*****
	***** Department of Commerce, Community and Economic Development *****		
	*****		*****
18	Alaska Industrial	500,000	500,000
19	Development & Export		
20	Authority - Coal to Liquids		
21	Certification Project (HD		
22	1-40)		
23	Alaska Energy Authority -	17,630,000	17,630,000
24	Nuvista Light & Power		
25	Chikuminuk Hydroelectric		
26	and Alternative Energy		
27	Project (HD 36-38)		
28	Alaska Energy Authority -	10,000,000	10,000,000
29	Southeast Energy Fund (HD		
30	1-5)		
31	Alaska Energy Authority -	65,700,000	65,700,000

	Appropriation		General	Other
	Allocations	Items	Funds	Funds
1				
2				
3	Susitna Hydroelectric			
4	Energy Plan (HD 12-35)			
5	Alaska Energy Authority -	16,330,000	10,330,000	6,000,000
6	Energy Programs			
7	Alaska Energy Plan	1,000,000		
8	Implementation (HD 1-40)			
9	Bulk Fuel Upgrades (HD	5,000,000		
10	1-40)			
11	Electrical Emergencies	330,000		
12	Program (HD 1-40)			
13	Rural Power System	10,000,000		
14	Upgrades (HD 1-40)			
15	Alaska Energy Authority -			
16	Energy Projects			
17	It is the intent of the Legislature that the state's capital investment into any of these energy			
18	projects not exceed 50% of the total investment required to fully complete each project. The			
19	Alaska Energy Authority (AEA) should evaluate each of the energy projects in this section			
20	using criteria similar to that established for the renewable energy grant fund (AS 42.45.045)			
21	by the Renewable Energy Fund Advisory committee. If during their evaluation, AEA			
22	determines that an appropriation below exceeds the 50% state funding threshold, the authority			
23	shall submit to the legislature recommendations for reductions or reappropriation by February			
24	1, 2012.			
25	AEA - Akiak Community	4,000,000	4,000,000	
26	Electrical Generation			
27	System Upgrade (HD 38)			
28	AEA - Anchorage to Quartz	25,000,000	25,000,000	
29	Creek Transmission Line			
30	Maintenance and Repair (HD			
31	17-32)			
32	AEA - Battle Creek	15,000,000	15,000,000	
33	Diversion (HD 33-35)			

	Appropriation		General	Other
	Allocations	Items	Funds	Funds
1				
2				
3	AEA - Cook Inlet Gas	2,000,000	2,000,000	
4	Gathering System Remodel			
5	(HD 12-35)			
6	AEA - Copper Valley	10,000,000	10,000,000	
7	Electric Association			
8	Allison Creek Hydroelectric			
9	Project (HD 12-35)			
10	AEA - Daves Creek to	1,500,000	1,500,000	
11	Seward Transmission Line			
12	Completion (HD 33-35)			
13	AEA - Girdwood and	4,000,000	4,000,000	
14	Substation Improvements			
15	(HD 17-32)			
16	AEA - Golden Valley	10,000,000	10,000,000	
17	Electric Association Eva			
18	Creek Wind Farm (HD 7-11)			
19	AEA - Gustavus Electric	1,300,000	1,300,000	
20	Company Falls Creek			
21	Hydroelectric Debt			
22	Reimbursement (HD 5)			
23	AEA - Homer Area Natural	10,053,000	10,053,000	
24	Gas Pipeline (HD 33-35)			
25	AEA - Homer Electric	25,000,000	25,000,000	
26	Association Soldotna to			
27	Nikiski Transmission			
28	Upgrade (HD 33-35)			
29	AEA - Ketchikan Whitman	8,025,000	8,025,000	
30	Lake Hydroelectric Project			
31	(HD 1)			
32	AEA - Kodiak Electric	3,750,000	3,750,000	
33	Association Terror Lake			

	Appropriation		General	Other
	Allocations	Items	Funds	Funds
1				
2				
3	Hydroelectric Facility			
4	Expansion (HD 36)			
5	AEA - Metlakatla Indian	10,500,000	10,500,000	
6	Community			
7	Metlakatla-Ketchikan			
8	Intertie (HD 1-5)			
9	AEA - Mount Spurr	18,000,000	18,000,000	
10	Geothermal Project			
11	Development (HD 12-35)			
12	AEA - Quartz Creek to	10,000,000	10,000,000	
13	Soldotna Transmission			
14	Maintenance and Repair (HD			
15	33-35)			
16	AEA - Seward Power Plant	4,000,000	4,000,000	
17	Integration (HD 33-35)			
18	AEA - Sitka Blue Lake	28,500,000	28,500,000	
19	Hydroelectric Project			
20	Expansion (HD 2)			
21	AEA - Soldotna to Quartz	5,000,000	5,000,000	
22	Creek Transmission Study,			
23	Design and Permitting (HD			
24	33-35)			
25	AEA - Teeland to Healy	5,000,000	5,000,000	
26	Substation Improvements			
27	and Repair (HD 7-11)			
28	Alaska Energy Authority -	36,620,231	36,620,231	
29	Round IV Renewable Energy			
30	Project Grants (AS			
31	42.45.045)			
32	Inside Passage Electric	475,000		
33	Cooperative, Inc. - Hoonah			

		Appropriation	General	Other
		Allocations	Items	Funds
			Funds	Funds
1				
2				
3	Heat Recovery Project (HD			
4	5)			
5	University of Alaska Center	1,330,467		
6	for Energy and Power -			
7	Pilgrim Hot Springs			
8	Geothermal Assessment (HD			
9	39)			
10	Northwest Inupiat Housing	250,000		
11	Authority - Upper Kobuk			
12	River Biomass (HD 40)			
13	Southeast Island School	300,000		
14	District - Thorne Bay			
15	School Wood Fired Boiler			
16	Project (HD 1)			
17	G&K, Inc. - Cold Bay	99,075		
18	Electric Utility Wind			
19	Energy Project (HD 37)			
20	Kodiak Electric Association,	3,751,840		
21	Inc. - Terror Lake			
22	Hydroelectric Project (HD			
23	36)			
24	Kootznoowoo, Inc. - Thayer	1,060,500		
25	Lake Hydroelectric Project			
26	(HD 5)			
27	Alaska Power & Telephone	380,000		
28	Company - Upper Tanana			
29	Biomass CHP Project (HD			
30	6)			
31	TDX Power, Inc. - Bethel	213,690		
32	Renewable Energy Project			
33	(HD 38)			

	Appropriation	General	Other
	Allocations	Funds	Funds
	Items		
1			
2			
3	Chugach Electric	500,000	
4	Association, Inc. - Battle		
5	Creek Diversion Project		
6	(HD 33-35)		
7	Alaska Village Electric	237,500	
8	Cooperative, Inc. - Old		
9	Harbor Hydroelectric (HD		
10	36)		
11	Lake & Peninsula Borough -	250,000	
12	Port Heiden Wind Turbine		
13	Project (HD 37)		
14	Golden Valley Electric	1,463,200	
15	Association - Eva Creek		
16	Wind Turbine Purchase (HD		
17	7-11)		
18	Alaska Electric Light &	2,000,000	
19	Power Company - Snettisham		
20	Transmission Line		
21	Avalanche Mitigation (HD		
22	3-4)		
23	Pelican - Hydroelectric	1,896,836	
24	Upgrade Project (HD 2)		
25	Tenakee Springs - Indian	203,000	
26	River Hydroelectric Project		
27	(HD 5)		
28	University of Alaska Center	472,787	
29	for Energy and Power -		
30	Organic Rankine Cycle		
31	Field Testing (HD 6)		
32	Lake & Peninsula Borough -	369,900	
33	Wood Boilers (HD 36)		

	Appropriation	General	Other
	Allocations	Funds	Funds
	Items		
1			
2			
3	Chitina Electric, Inc. -	277,000	
4	Fivemile Creek		
5	Hydroelectric Project (HD		
6	6)		
7	Ormat Nevada, Inc. - Mount	1,999,972	
8	Spurr Geothermal Project		
9	(HD 33-35)		
10	Napaskiak Electric Utility	61,225	
11	- Wind Power and Heat		
12	Recovery (HD 38)		
13	Alaska Village Electric	275,554	
14	Cooperative - St. Marys/		
15	Pitkas Point Wind		
16	Construction (HD 39)		
17	Louden Tribal Council -	100,000	
18	Renewable Energy		
19	Feasibility Study (HD 6)		
20	Chugach Electric	600,000	
21	Association, Inc. -		
22	Transmission to Renewable		
23	Energy Resources (HD		
24	33-35)		
25	Interior Regional Housing	154,477	
26	Authority - Wood Heating		
27	Feasibility Assessments		
28	(HD 6)		
29	Lime Village Traditional	25,000	
30	Council - Photovoltaic		
31	System Retrofit (HD 6)		
32	Craig - Biomass Fuel Dryer	350,000	
33	Project (HD 5)		

		Appropriation	General	Other
		Allocations	Funds	Funds
		Items		
1				
2				
3	Independence Power, LLC -	136,500		
4	Fourth of July Creek			
5	Hydroelectric Project (HD			
6	33-35)			
7	Kotzebue - Paper and Wood	85,000		
8	Waste to Energy (HD 40)			
9	Village of Atmautluak -	100,000		
10	Wind Renewable Energy (HD			
11	38)			
12	Alaska Village Electric	137,750		
13	Cooperative, Inc. -			
14	Stebbins Wind Feasibility			
15	(HD 39)			
16	Elfin Cove - Hydroelectric	347,000		
17	Project (HD 2)			
18	Ketchikan - Whitman Lake	700,000		
19	Hydroelectric Project (HD			
20	1)			
21	Alaska Village Electric	142,500		
22	Cooperative, Inc. - Eek			
23	Wind Feasibility (HD 38)			
24	Organized Village of	145,000		
25	Kwethluk - Wind Feasibility			
26	(HD 38)			
27	Sitka - Japonski Island	125,000		
28	Boathouse Heat Pump (HD			
29	2)			
30	Alaska Village Electric	111,150		
31	Cooperative, Inc. -			
32	Marshall Wind Feasibility			
33	(HD 6)			

		Appropriation	General	Other
		Allocations	Funds	Funds
		Items		
1				
2				
3	Nelson Lagoon Electrical	99,075		
4	Cooperative - Wind Energy			
5	Project (HD 37)			
6	North Slope Borough -	210,000		
7	Atqasuk Transmission Line			
8	(HD 40)			
9	Alaska Village Electric	90,000		
10	Cooperative, Inc. - Kaltag			
11	Solar Construction (HD 6)			
12	Alaska Village Electric	142,500		
13	Cooperative, Inc. -			
14	Scammon Bay Wind			
15	Feasibility (HD 39)			
16	Chugach Electric	576,080		
17	Association, Inc. - Stetson			
18	Creek Diversion and Cooper			
19	Lake Dam Facilities (HD			
20	33-35)			
21	New Koliganek Village	105,050		
22	Council - Wind and Heat			
23	Recovery Feasibility Study			
24	(HD 37)			
25	North Slope Borough -	298,000		
26	Wainwright Wind Turbine			
27	Design (HD 40)			
28	North Slope Borough -	132,000		
29	Kaktovik Wind Diesel (HD			
30	40)			
31	North Slope Borough -	298,000		
32	Point Hope Wind Turbine			
33	Design (HD 40)			

		Appropriation	General	Other
		Allocations	Funds	Funds
		Items		
1				
2				
3	North Slope Borough -	298,000		
4	Point Lay Wind Generation			
5	Design (HD 40)			
6	Kenai Hydro, LLC - Grant	1,184,000		
7	Lake Hydroelectric Facility			
8	(HD 33-35)			
9	Alaska Village Electric	85,000		
10	Cooperative, Inc. - Selawik			
11	Hybrid Wind Diesel System			
12	Turbine Upgrade (HD 40)			
13	Alaska Power Company -	2,000,000		
14	Reynolds Creek			
15	Hydroelectric Project (HD			
16	5)			
17	AVTEC - Hydroelectric	67,500		
18	Training Facility (HD			
19	33-35)			
20	Alaska Village Electric	142,500		
21	Cooperative, Inc. - Koyuk			
22	Wind Feasibility (HD 39)			
23	Chefomak - Wind	136,750		
24	Feasibility (HD 38)			
25	Alaska Village Electric	142,500		
26	Cooperative, Inc. - Elim			
27	Wind Feasibility (HD 39)			
28	Akutan - Geothermal	2,695,000		
29	Development Project (HD			
30	37)			
31	Akiachak Native Community	110,000		
32	- Wind Feasibility and			
33	Conceptual Design (HD 38)			

		Appropriation	General	Other
		Allocations	Funds	Funds
		Items		
1				
2				
3	ORPC Alaska, LLC - Cook	2,000,000		
4	Inlet Tidal Generation			
5	Project (HD 33-35)			
6	Alaska Power Company -	468,000		
7	Connelly Lake Hydroelectric			
8	Project (HD 5)			
9	False Pass - Wind Energy	69,075		
10	Project (HD 37)			
11	Native Village of Eyak -	75,000		
12	Biomass Feasibility Study			
13	(HD 5)			
14	Eklutna, Inc. - Hunter	84,000		
15	Creek Hydroelectric Project			
16	(HD 13-16)			
17	Port Graham Village	75,000		
18	Council - Biomass Waste			
19	Heat Demonstration Project			
20	(HD 33-35)			
21	Matanuska-Susitna Borough -	750,000		
22	Susitna Valley High School			
23	Wood Heat (HD 13-16)			
24	Copper River School	565,485		
25	District - Kenny Lake			
26	School Wood Fired Boiler			
27	(HD 6)			
28	Alaska Power Company -	80,000		
29	Schubee Lake Hydroelectric			
30	Project (HD 5)			
31	Bering Pacific Engineering	37,000		
32	- Eska Creek Hydroelectric			
33	Project (HD 12)			

	Appropriation	General	Other
	Allocations	Funds	Funds
	Items		
1			
2			
3	Metlakatla Indian	1,180,000	
4	Community -		
5	Metlakatla-Ketchikan		
6	Intertie (HD 1-5)		
7	Haines - Excursion Inlet	93,593	
8	Hydro Project (HD 5)		
9	Native Village of Cantwell	30,000	
10	- Jack River Hydro Project		
11	(HD 7-11)		
12	Wrangell - Electric Vehicle	25,000	
13	Feasibility Study (HD 2)		
14	Sitka - Centennial Hall and	30,000	
15	Library Renewable Energy		
16	Feasibility Study (HD 2)		
17	Sitka - Wastewater	20,000	
18	Treatment Plant Renewable		
19	Energy Feasibility Study		
20	(HD 2)		
21	Inside Passage Electric	599,200	
22	Cooperative - Tenakee Inlet		
23	Geothermal Resource Study		
24	(HD 5)		
25	Metlakatla Indian	500,000	
26	Community - Triangle Lake		
27	Hydroelectric Project (HD		
28	5)		
29	*****	*****	
30	***** Department of Revenue *****		
31	*****	*****	
32	Alaska Housing Finance		
33	Corporation		

		Appropriation	General	Other
		Allocations	Items	Funds
			Funds	Funds
1				
2				
3	Alaska Gasline Development		5,500,000	5,500,000
4	Corporation - Year 2			
5	In-State Gas Project (HD			
6	12-35)			
7	AHFC Weatherization and		51,500,000	50,000,000
8	Home Energy Rebate			1,500,000
9	Programs			
10	AHFC Weatherization	31,500,000		
11	Program (HD 1-40)			
12	AHFC Home Energy Rebate	20,000,000		
13	Program (HD 1-40)			
14	(SECTION 5 OF THIS ACT BEGINS ON THE NEXT PAGE)			

Alaska Energy Authority - Energy Projects

FY2012 Request: \$16,000,000

Reference No: 38950

AP/AL: Appropriation

Project Type: Energy

Category: Development

Location: Statewide

Contact: Sara Fisher-Goad

House District: Statewide (HD 1-40)

Contact Phone: (907)771-3000

Estimated Project Dates: 07/01/2011 - 06/30/2016

Brief Summary and Statement of Need:

This request addresses multiple federally funded energy programs, including Bulk Fuel Upgrades, Rural Power Systems Upgrades, and the state funded energy planning project. This program contributes to the Department's mission of promoting a healthy economy and strong communities by providing economic growth in the communities it serves.

Funding:	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Total
AIDEA Div	\$10,000,000						\$10,000,000
AK Cap Inc		\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000		\$40,000,000
Fed Rcpts	\$6,000,000	\$20,000,000	\$20,000,000	\$20,000,000	\$20,000,000		\$86,000,000
I/A Rcpts		\$500,000	\$500,000	\$500,000	\$500,000		\$2,000,000
Stat Desig		\$500,000	\$500,000	\$500,000	\$500,000		\$2,000,000
Total:	\$16,000,000	\$31,000,000	\$31,000,000	\$31,000,000	\$31,000,000	\$0	\$140,000,000

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

Operating & Maintenance Costs:

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

Additional Information / Prior Funding History:

Refer to the funding matrix in the detailed description.

Project Description/Justification:

This request addresses the long-standing federally funded energy programs of Bulk Fuel Upgrades and Rural Power System Upgrades (RPSU), and the state funded energy plan implementation. The specifics are:

(1) Bulk Fuel Upgrades: When Alaska Energy Authority (AEA) began upgrading bulk fuel tank farms, there were approximately 1100 above-ground tank farms in 171 remote villages in rural Alaska. Most of these tank farms had serious deficiencies that typically included:

- Inadequate dikes to contain fuel spills
- Inadequate foundations, which could cause gradual tank movement and fuel leakage
- Improper piping systems and joints - the most common source of fuel leaks
- Improper siting near wells, beaches, and buildings, or within a flood plain

-
- Tanks that are rusted or damaged beyond repair
 - Electrical code violations
 - Inadequate security

This program's mission is to replace these tank farms with new or refurbished facilities that meet all applicable safety and environmental codes. \$20 million is the estimated need to complete the bulk fuel upgrades for the remaining nine communities identified on the Bulk Fuel Deficiency list.

This program began in approximately 1997 and has expanded since fiscal year 1999 with federal funding from the Denali Commission. In fiscal year 2012 AEA anticipates \$2 million in federal funds. AEA anticipates using approximately \$3 million in state funds for Bulk Fuel Upgrades.

(2) Rural Power System Upgrades (RPSU): The electric utility systems are part of the basic infrastructure of rural communities. The power plant and distribution systems in rural communities may not meet accepted utility standards for safety, reliability, and environmental protection. Due to high costs and limited economies of scale, most local communities cannot make the capital investments needed to meet accepted utility standards.

AEA gives priority to electric utility systems that have the highest need. AEA has built a detailed database of electric utility conditions and characteristics. Deficiencies of each utility have been scored with respect to generating equipment, distribution systems, powerhouse structures, and other major physical components. Rural systems are then ranked according to the level of these deficiencies. Additional criteria that are applied to the project selection process include:

- Imminent threat to health and safety
- Imminent threat of system failure during winter conditions
- Financial need based on the level of existing rates, average income, availability of other financing, and project cost compared with utility revenue
- The utility's ability to operate and maintain the facility without future state assistance or the community's willingness to join an established qualified regional utility
- Projects needed in order to meet efficiency guidelines under the Power Cost Equalization Program

Once upgraded, to ensure a thirty-year plus useful asset life, the rural utility is required to employ a qualified operator to ensure that the system is properly operated and maintained.

\$112 million is the estimated need to complete the Rural Power System Upgrades for the remaining 47 communities identified on the deficiency list. This is a long standing energy program that has expanded since fiscal year 1999 with federal funding from the Denali Commission. In fiscal year 2012 AEA anticipates \$4 million in federal funds. AEA anticipates using approximately \$6 million in state funds for RPSU projects.

(3) Alaska Energy Plan Implementation:

The objective is to develop a statewide Alaska energy plan. An estimated \$1 million of general funds is required for the continued development of the energy plan, in particular AEA will work with regional organizations to further refine regional resource assessments and project development plans. The completion of the following activities and work tasks are required:

- 1) determination of fuel usage by community for electricity, space heating and transportation
- 2) determination of locally available energy sources
- 3) evaluation of existing technology
- 4) evaluation of energy delivery systems
- 5) evaluation and rank of energy sources
- 6) deployment to the private sector by providing business plan to existing or new enterprises, and
- 7) organization of public workshops to assist in the communication of the plan by gathering feedback and providing periodic updates.

Summary of Anticipated Funding:

AGENCY	FEDERAL	GENERAL FUNDS	TOTAL
Denali Comm	\$ 6,000,000	\$ 9,000,000	\$ 15,000,000
Energy Plan		\$ 1,000,000	\$ 1,000,000
Total	\$ 6,000,000	\$ 10,000,000	\$ 16,000,000

Funding History (includes both State and Federal funding)

YEAR	AMOUNT	LEGISLATION
FY11	\$24,500,000	SLA 10, Ch 43, Sec 7, Pg 20, Ln 22
FY10	\$25,500,000	SLA 09, Ch 15, Sec 1, Pg 2, Ln 30
FY09	\$41,000,000	SLA 08, Ch 29, Pg 87, Ln 18
FY08	\$31,700,000	SLA 07, Ch 30, Pg 84, Ln 22
FY07	\$15,200,000	SLA 06, Ch 82, Pg 2, Ln 29
FY06	\$23,220,000	FSSLA 05, Ch 3, Pg 3, Ln 26
FY05	\$35,750,000	SLA 04, Ch, 159, Pg 3, Ln 7
FY04	\$35,100,000	SLA 03, Ch 82, Pg 3, Ln 10, 13
FY03	\$31,600,000	SSLA 02, Ch 1, Pg 3, Ln 15, 32
FY02	\$20,437,000	SLA 01, Ch 61, Pg 3, Ln 13, 15, 177
FY01	\$32,050,000	SLA 00, Ch 135, Pg 3, Ln 6, 9
FY00	\$ 1,600,000	SSLA 99, Ch 2, Pg 84, Ln 27
FY99	\$31,600,000	SLA 98, Ch 139, Pg 40, Ln 14, 21
FY98	\$12,200,000	SLA 97, Ch 100, Pg 42, Ln 20, 21, and 27
FY97	\$ 22,00,000	SLA 96, Ch 123, Pg 45, Ln 25, 31 and 37

Alaska Energy Authority - Southeast Energy Fund

FY2012 Request: \$10,000,000

Reference No: 51767

AP/AL: Appropriation

Project Type: Research / Studies / Planning

Category: Development

Location: Southeast Alaska

Contact: Sara Fisher-Goad

House District: Southeast Areawide (HD 1-5)

Contact Phone: (907)771-3000

Estimated Project Dates: 07/01/2011 - 06/30/2016

Brief Summary and Statement of Need:

This project provides fund capitalization of the Alaska Energy Authority Energy Fund. This project contributes to the Department mission by promoting strong economies and healthy communities in Southeast Alaska.

Funding:	<u>FY2012</u>	<u>FY2013</u>	<u>FY2014</u>	<u>FY2015</u>	<u>FY2016</u>	<u>FY2017</u>	<u>Total</u>
AHCC Rcpts	\$10,000,000						\$10,000,000
Total:	\$10,000,000	\$0	\$0	\$0	\$0	\$0	\$10,000,000

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

Operating & Maintenance Costs:

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

Additional Information / Prior Funding History:

Project Description/Justification:

This request is for fund capitalization for future Southeast Alaska energy projects to be granted by the Alaska Energy Authority under AS 42.45.040. The Southeast energy fund is established as a separate fund. The fund consists of money transferred to it under former AS 42.45.050.

Alaska Energy Authority - Susitna Railbelt Energy Plan

FY2012 Request: \$65,731,063

Reference No: 45811

AP/AL: Appropriation

Project Type: Energy

Category: Development

Location: Statewide

Contact: Sarah Fisher-Goad

House District: Statewide (HD 1-40)

Contact Phone: (907)771-3000

Estimated Project Dates: 07/01/2011 - 06/30/2016

Brief Summary and Statement of Need:

This request is for environmental permitting and necessary field work for large scale hydroelectric projects. This project contributes to the Department mission of reducing the cost of energy in Alaska.

Funding:	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Total
Rail Enrgy	\$65,731,063	\$32,600,000	\$33,800,000	\$20,100,000	\$10,400,000		\$162,631,063
Total:	\$65,731,063	\$32,600,000	\$33,800,000	\$20,100,000	\$10,400,000	\$0	\$162,631,063

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

Operating & Maintenance Costs:

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

Additional Information / Prior Funding History:

Refer to the funding matrix in the detailed description.

Project Description/Justification:

This request is for environmental permitting and necessary fieldwork for large-scale hydroelectric projects. Large hydroelectric projects are the only way for the state to become electrical energy secure, provide long term predictable costs of energy and obtain the goal of 50% renewable energy by 2025. These funds will enable Alaska Energy Authority to carry out preparation and filing of Federal Energy Regulatory Commission (FERC) Preliminary Permit, begin work on a FERC license application, required engineering design, environmental studies, financing, and regulatory and resource agency coordination for Susitna and other hydroelectric projects.

Funding History:

YEAR	AMOUNT	LEGISLATION
FY11	\$ 10,000,000	SLA 10 Ch 43 Sec 7 Pg 19 Ln 16
FY09	\$ 2,500,000	SLA 08 Ch 29 Sec 13 Pg 87 Ln 14

AP/AL: Appropriation **Project Type:** Energy
Category: Development **Contact:** Sara Fisher-Goad
Location: Statewide **Contact Phone:** (907)771-3000
House District: Statewide (HD 1-40)
Estimated Project Dates: 07/01/2011 - 06/30/2016

Brief Summary and Statement of Need:

The Electrical Emergencies Program provides technical support when an electric utility has lost, or will lose, the ability to generate or transmit power to its customers and the condition is a threat to life, health, and/or property. This program contributes to the Department mission of promoting a healthy economy and strong communities as electricity is considered essential for both community development and economic growth.

Funding:	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Total
Gen Fund	\$330,000	\$330,000	\$330,000	\$330,000	\$330,000	\$330,000	\$1,980,000
Total:	\$330,000	\$330,000	\$330,000	\$330,000	\$330,000	\$330,000	\$1,980,000

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

Operating & Maintenance Costs:

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

Additional Information / Prior Funding History:

Please refer to the funding matrix in the detailed description.

Project Description/Justification:

The Electrical Emergencies Program provides funds and technical support when an electric utility has lost, or will lose, the ability to generate or transmit power to its customers and the condition is a threat to life, health, and/or property.

Emergencies of this type result in the loss of communications, lights, refrigeration systems, washeterias, water and sewer systems, and the use of other basic infrastructure and equipment.

Extended power outages during the winter months can be expensive and they compromise public safety:

- Water and sewer systems are subject to freezing and bursting
- Fire hazards increase
- Medical clinics and other public facilities may close

These emergencies may involve power plant failures and/or distribution system failures.

Funding History:

YEAR	AMOUNT	LEGISLATION
FY11	\$ 330,400	SLA 10, Ch 43, Sec 7, Pg 19, Ln 13
FY10	\$ 330,400	SLA 09, Ch 15, Sec 1, Pg 2, Ln 20
FY09	\$ 330,400	SLA 08, Ch 29, Sec 39(a) & (b), Pg 213, Ln 22
FY08	\$ 337,400	SLA 07, Ch 30, Pg 156-157, Ln 28 & Ln 2
FY07	\$ 349,100	SLA 06, Ch 82 Pg 146, Ln 20 & Ln 25
FY06	\$ 333,100	FSSLA 05, Ch 3, Pg 102, Ln 8
FY05	\$ 331,900	SLA 04, Ch 159, Pg 58, Ln 14
FY04	\$ 349,500	SLA 03, Ch 82, Pg 87, Ln 10
FY03	\$ 378,000	SLA 02, Ch 1, Pg 110, Ln 14
FY02	\$ 425,200	SLA 01, Ch 61, Pg 75, Ln 22
FY01	\$ 603,000	SLA 00, Ch 135, Pg 66, Ln 30
FY00	\$ 351,500	SLA 99, Ch 2, Pg 5, Ln 20
FY99	\$ 392,700	SLA 98, Ch 139, Pg 3, Ln 13
FY98	\$ 375,400	SLA 97, Ch 100, Pg 21, Ln 19

**Questions for Energy Project Supporters
Who Come Before
The House Special Committee on Energy and the House Resources Committee**

May 6 and 7, 2011

1. How much local support do you have for your project? For example, do you have a resolution from a city council?
2. How much local matching funds or other funds do you have, expect to have, or might be available for your project?
3. What are the total costs of your project?
4. What are all funding sources for it?
5. What is the entire funding plan over the next five years? What might you need after five years? How many years of work are funded in this appropriation and how many years remain after this funding is approved?
6. What phase is your project in now and what phase or phases would be addressed by this appropriation? For example, does the funding apply to design, permitting, or construction?
7. Upon completion of your project, what are the expected costs to rate payers compared with current costs?
8. Where is your project on the priority list of the area's regional energy plan?
9. Has your project been vetted by the Alaska Energy Authority? If so, how? For example, has it received state funding through the renewable energy fund grant program? Has it received state or federal funding in the past? Has the agency worked with you on a conceptual design of your project? Is your request part of a state integrated resource plan? Have you received state leases or permits for it?
10. For those who have projects to which the intent language relating to a 50 percent state investment applies (see page 99, lines 15 through 24 of the attached document), how does this provision affect your project?

**DENALI BOROUGH, ALASKA
RESOLUTION NO. 11-03**

A RESOLUTION OF THE DENALI BOROUGH ASSEMBLY SUPPORTING THE GOLDEN VALLEY ELECTRIC ASSOCIATION EVA CREEK WIND PROJECT AND REQUESTING STATE ASSISTANCE IN LAND RIGHTS AND PERMITTING

WHEREAS, the State has established a goal of achieving 50 percent of Alaska's energy needs from renewable sources by 2025; and

WHEREAS, renewable resource development can be vital to the economy of the Denali Borough and the Interior of Alaska; and

WHEREAS, Golden Valley Electric Association proposes to build a utility-scale 24MW wind farm, called Eva Creek, north of Healy Alaska in the Denali Borough; and

WHEREAS, the Eva Creek Wind Project will be capable of producing electric energy to meet approximately 10% of the renewable energy needs of the Interior; and

WHEREAS, the Eva Creek Wind Project is proposed to be strategically located on land owned by the State of Alaska, Department of Natural Resources; and

WHEREAS, Golden Valley Electric Association's Northern Intertie transmission line crosses through a portion of this land and will connect the Eva Creek wind project to the Railbelt grid; and

WHEREAS, Golden Valley Electric Association must secure various land rights from the State of Alaska, Department of Natural Resources, including a land lease, material sales contract, and various rights-of way and permits for the wind project.

NOW THEREFORE BE IT RESOLVED: that the Denali Borough Assembly supports the Golden Valley Electric Association Eva Creek wind project.

NOW THEREFORE BE IT RESOLVED: that the Denali Borough Assembly encourages the State of Alaska and specifically the Department of Natural Resources to work expeditiously with Golden Valley Electric Association in securing land rights and permitting for the Eva Creek wind project.

BE IT FURTHER RESOLVED: that the Denali Borough Assembly asks Governor Parnell and the Alaska State Legislature to support Golden Valley Electric Association's Eva Creek wind project by encouraging the Administration and State Officials to provide the resources necessary to aid in securing land rights and permitting in a timely manner.

AND BE IT FURTHER RESOLVED, that this resolution be distributed to:
Governor Sean Parnell
Acting Commissioner John Cramer, Administration
Commissioner Susan Bell, Department of Commerce, Community & Economic Development
Commissioner Larry Hartig, Alaska Department of Environmental Conservation
Commissioner Click Bishop, Alaska Department of Labor & Workforce Development
Commissioner Daniel Sullivan, Alaska Department of Natural Resources
Commissioner Bryan Butcher, Alaska Department of Revenue
Commissioner Marc Luiken, Alaska Department of Transportation & Public Facilities
Alaska Attorney General, John Burns

PASSED AND APPROVED by the Denali Borough Assembly this 12TH day of JANUARY, 2011.



Mayor David M. Talerico

ATTEST: 
Gail Pieknik, Borough Clerk



AYES: PASSED UNANIMOUSLY
ABSENT: HOLMES and COOPER

Greater Fairbanks Chamber of Commerce

A RESOLUTION IN SUPPORT OF THE GOLDEN VALLEY ELECTRIC ASSOCIATION EVA CREEK WIND PROJECT AND REQUESTING A CAPITAL APPROPRIATION AND STATE ASSISTANCE IN LAND RIGHTS AND PERMITTING

WHEREAS, the State has established a goal of achieving 50 percent of Alaska's energy needs from renewable sources by 2025; and

WHEREAS, renewable resource development can be vital to the economy of Fairbanks and the Interior of Alaska; and

WHEREAS, Golden Valley Electric Association proposes to build a utility-scale 24MW wind farm, called Eva Creek, north of Healy Alaska in the Denali Borough; and

WHEREAS, the Eva Creek Wind Project will be capable of producing electric energy to meet approximately 10% of the renewable energy needs of the Interior; and

WHEREAS, the Eva Creek Wind Project is proposed to be strategically located on land owned by the State of Alaska, Department of Natural Resources; and

WHEREAS, Golden Valley Electric Association's Northern Intertie transmission line crosses through a portion of this land and will connect the Eva Creek wind project to the Railbelt grid; and

WHEREAS, Golden Valley Electric Association is seeking a \$10 million capital appropriation for a portion of the infrastructure costs, similar to the funds appropriated to AEA for CIRI's Fire Island Wind project; and

WHEREAS, Golden Valley Electric Association must secure various land rights from the State of Alaska, Department of Natural Resources, including a land lease, material sales contract, and various rights-of way and permits for the wind project.

NOW THEREFORE BE IT RESOLVED: that the Greater Fairbanks Chamber of Commerce supports the Golden Valley Electric Association Eva Creek wind project.

NOW THEREFORE BE IT RESOLVED: that the Greater Fairbanks Chamber of Commerce encourages the State of Alaska and specifically the Department of Natural Resources to work expeditiously with Golden Valley Electric Association in securing land rights and permitting for the Eva Creek wind project.

[Type text]

BE IT FURTHER RESOLVED: that the Greater Fairbanks Chamber of Commerce asks Governor Parnell and the Alaska State Legislature to support Golden Valley Electric Association's Eva Creek wind project by appropriating \$10 million of capital funds to the project and by encouraging the Administration and State Officials to provide the resources necessary to aid in securing land rights and permitting in a timely manner.

AND BE IT FURTHER RESOLVED, that this resolution be distributed to:

Governor Sean Parnell

Interior Legislative Delegation:

Senators Thomas, Paskvan, and Coghill

Representatives: Thompson, Miller, Kawasaki, Guttenberg, Wilson, and Feige

Acting Commissioner John Cramer, Administration

Commissioner Susan Bell, Department of Commerce, Community & Economic Development

Commissioner Larry Hartig, Alaska Department of Environmental Conservation

Commissioner Click Bishop, Alaska Department of Labor & Workforce Development

Commissioner Daniel Sullivan, Alaska Department of Natural Resources

Commissioner Bryan Butcher, Alaska Department of Revenue

Commissioner Marc Luiken, Alaska Department of Transportation & Public Facilities

Alaska Attorney General, John Burns

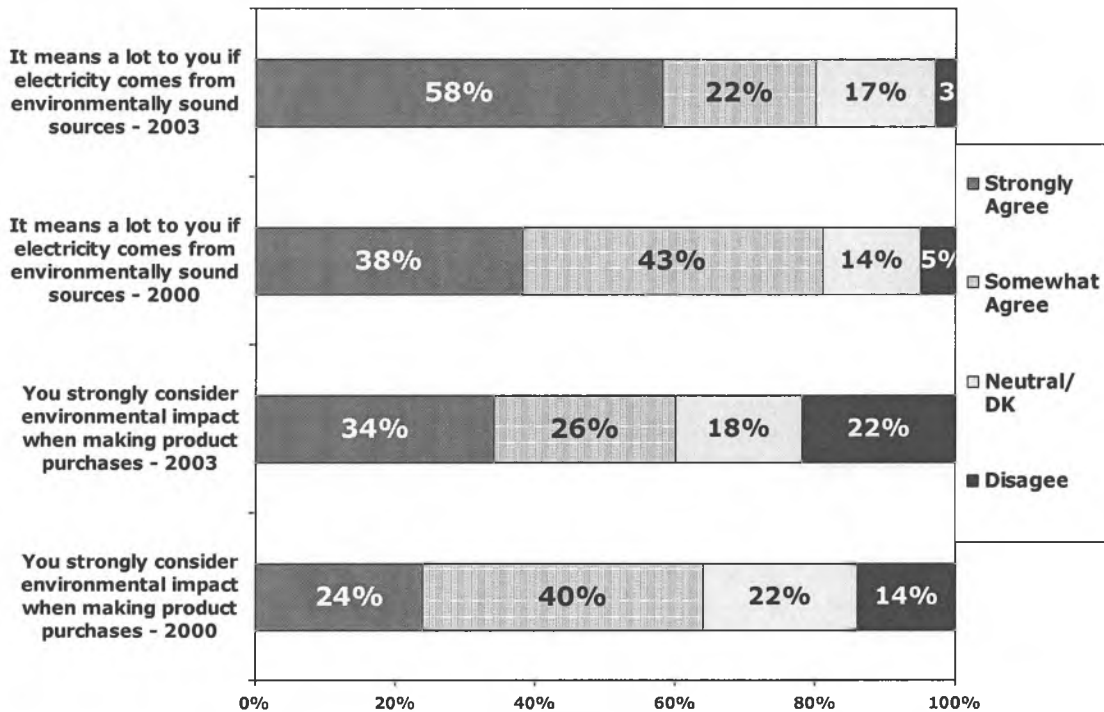
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SECTION 8- LOCAL SUPORT

Discuss what local support or possible opposition there may be regarding your project. Include letters of support from the community that would benefit from this project.

GVEA has regularly monitored the interest of its members to green power. The following table from our latest survey identifies an increased commitment to power generated from environmentally sound sources:

**Member Interest in/Commitment to Green Power
2003 vs. 2000**



The Eva Creek Project will be constructed in a remote area. The nearest community of about a dozen families is Ferry. We have met twice with the local residents of Ferry to share what is going on with this project. There have been no complaints at this time. There will be a public process as part of the permit process where we will gain any further questions and mitigate any of their concerns.

Representative Bob Herron

Rep.Bob.Herron@legis.state.ak.us

State Capitol • Juneau, Alaska 99801-1182

Phone: (907) 465-4942 • Fax: (907) 465-4589



House District 38
Kuskokwim & Johnson Rivers
Kuskokwim Bay & Nelson Island

Akiachak

Akiak

Atmautluak

Bethel

Cheforak

Eek

Goodnews Bay

Kasigluk

Kipnuk

Kongiganak

Kwethluk

Kwigillingok

Lower Kalskag

Mekoryuk

Mertarvik

Napakiaak

Napaskiak

Newtok

Nightmute

Nunapitchuk

Oscarville

Platinum

Quinhagak

Toksook Bay

Tuluksak

Tununak

Tuntutuliak

Upper Kalskag

TO: Members of the House Special Committee on Energy
Members of the House Resources Committee

DATE: May 6, 2011

RE: SB 46: City of Akiak's \$4 Million electrical generation system upgrade request

Colleagues,

Unfortunately, I am unable attend this afternoon's hearing. I wanted to leave you with some thoughts on the importance of this project, and I am confident that City of Akiak Mayor Debra Jackson, Administrator Ivan M. Ivan (a former member of the House of Representatives), and others will be able to speak well to any questions you might have.

Akiak is a remote village located on the west bank of the Kuskokwim River, 42 air miles northeast of Bethel. By 2010 U.S. Census figures, it is home to 342 Alaskans. The community enjoys strong leaders who for years have worked tirelessly to upkeep a failing electrical system. The current system is clearly beyond its useful life. Year round, frequent power outages and surges spoil food supplies, destroy appliances, and interrupt business operations, outside communication, and students' education at the school. In the winter, when temperatures frequently drop below zero, the outages are outright dangerous.

To date, the City and Akiak Native Community, working together, have dedicated countless hours and at least \$1.25 Million of funding received through federal Indian Community Development and Community Development Block Grant programs to this project. Other community partners have also shown support.

The Alaska Energy Authority has been involved with this project for quite some time. You heard from Executive Director Sara Fisher-Goad this morning that this is AEA priority, and funding given through the FY 2012 capital budget will free up Rural Power Systems Upgrade funding for other projects needed by the communities of Fort Yukon and Atmautluak. It is also important that the 50% non-State match required of the project due to its placement in the bill not be kept – as this is a regular RPSU project and the match requirement has not been present through the planning process up to this point.

To clarify an issue raised at the post-Floor Session continuation of this morning's meeting: Over time, Akiak's upgrade has worked its way to the top of AEA's RPSU priority list - but last winter, when CAPSIS opened for FY12 requests, we still did not know how much money would be made available to the RPSU program, or when Akiak would rank high enough to receive funds. Under considerable pressure to complete this critical upgrade to protect the residents' welfare, the community independently requested this \$4M. This was not an attempt on the part of either the community or AEA to indirectly draw more money to either project or program but, if both are funded, it will have that effect - and will enable AEA to serve two additional priority communities in need this year.

Thank you for your consideration. Please feel free to contact me any time at (907) 465-4942.

Cc: The Honorable Debra Jackson, Mayor, City of Akiak
Ivan M. Ivan, City Administrator, City of Akiak
Sara Fisher-Goad, Executive Director, Alaska Energy Authority

HOMER AREA NATURAL GAS PIPELINE

JOINT HEARING HOUSE RESOURCES COMMITTEE AND HOUSE SPECIAL COMMITTEE ON ENERGY

Testimony by Walt Wrede / Homer City Manager

May 6, 2011

Thank you Co-Chairs Seaton, Feige, Foster and Pruitt and members of the House Resources Committee and House Special Committee on Energy. For the record, my name is Walt Wrede and I am the City Manager of the City of Homer. The City deeply appreciates the opportunity to discuss the Homer Area Natural Gas Pipeline project with you today.

Background:

The City of Homer is located within the Enstar Natural Gas Service Area but is not connected to the Southcentral gas distribution system. The City has been trying to get connected for decades but has been unsuccessful. Lack of access to this clean, affordable, locally produced and reliable energy source has driven up the cost of living and served as a barrier to economic development and job creation. New gas discoveries and production along the North Fork Road, less than twenty miles from Homer, have heightened the community's resolve to make natural gas available. Gas is now flowing from the new field to Anchor Point and north along the Sterling Highway to a connection with the existing infrastructure at Ninilckik.

Project Phasing:

Phase I of the project was funded by the Legislature last year and construction is now complete. Phase I consisted of building a new pressure reducing station in Anchor Point and the first 3,200 of 8 inch transmission pipe south in the direction of Homer. The project was completed with \$525,000 from the legislature and a significant contribution from Enstar Natural Gas Company. The Capital Budget approved by the Legislature contained \$4.8 Million for this project which would have brought the transmission line all the way to the Homer City Limits. The project was partially vetoed by the Governor.

Scope of Work:

The legislative capital request before you is for Phase II of the project. Phase II would bring natural gas into downtown Homer and the surrounding area. The project consists of constructing approximately 23 miles of 8 inch gas transmission line from the Chapman School in Anchor Point to Kachemak City on the eastern edge of Homer.

Total Project Cost: This request is for \$10, 053,000. It is important to note that the State is being asked to fund only the large transmission line that would bring gas to the Homer area. The gas distribution system that would transport the gas to local homes and businesses would be paid for entirely by local sources. Based upon estimates provided by Enstar Natural Gas Company, the City anticipates that 110 miles of 2 inch main line (lines in the street) will have to be constructed within the Homer City limits at a cost of about \$10,000,000. 'Build-out' within the Homer City Limits is likely to take up to 10 years depending up economic conditions and the financing mechanisms used. The City of Homer would convert its facilities to natural gas as soon as possible and has already planned for the conversion as part of the City Hall renovation project. The local contribution to the total project cost is even larger than 50% when the distribution system outside of the Homer City limits and the cost to build service lines to homes and businesses from the street is taken into consideration.

Changes in Project Cost: Some legislators have inquired as to why the project cost went from \$4.8 million to just over \$10 Million. There are two parts to the answer. First, Enstar has chosen a different route since the first cost estimate was provided, going along the Old Sterling Highway instead of the New Sterling Highway. This route is longer but it takes the line closer to many more potential customers and presents a better permitting environment. Second, the Legislature added intent language to the appropriation last year. One of the things included in the language was that Homer make provisions to extend the transmission line through Homer and beyond its City limits. This request complies with the intent language by extending the line from Homer's western boundary, through the heart of Homer, and on to Kachemak City to the east. This added approximately 8 miles of transmission line.

Homer is Ready for Natural Gas: The capital budget last year contained legislative intent language inserted by the House Finance Committee which was referenced by the Governor when he vetoed part of the funding. In essence, the Governor said he would look at this project again if Homer did a bit more planning in preparation for the arrival of natural gas. The intent language included four points. The first three points addressed supply and cost impacts for other consumers already connected to the distribution system. These points have all been addressed by Enstar, the RCA, and the Legislature and I would be happy to address them if the members wish. Point four is directly related to the City and stated that "the City of Homer develop a plan (A) for a distribution system that identifies residential users, commercial users, public facility users, and industrial users within its municipal boundary (B) that provides access to the pipeline along the route of the pipeline for potential users who are outside of the municipal boundary; and (C) that provides extension of the pipeline beyond the municipal boundary." The City has complied fully with the intent of the Legislature and is prepared for the arrival of natural gas. The City Council formed a task force which has advised it on matters like distribution system build-out and financing. Potential customers have been identified, including large customers most likely to hook up first. The City staff has prepared draft code amendments related to project financing and regulations governing the insertion of gas lines in public rights-of way. Enstar designed the project with low pressure 8 inch plastic pipe so that stub-outs and take-off points could occur anywhere along the line between Anchor Point and Homer. Finally, the project has been expanded to include areas outside of the Homer City Limits to the East.

Project Benefits: The benefits associated with this project are substantial. Benefits include, but are not limited to, a lower cost of living, a lower cost of doing business, energy security, economic development including more local jobs, increased in-state demand for Alaska's natural gas, and less carbon pollution.

Consumer Savings: I have provided the Committee members with several spread sheets which demonstrate projected savings in energy costs for local residents, businesses, and government institutions at today's prices. These spreadsheets were prepared by Bill Smith, a local heating and mechanical contractor and member of the Kenai Peninsula Borough Assembly. Mr. Smith is also scheduled to testify at this hearing. You can very quickly see that for a typical single family home, natural gas used for heating would cost 70% less than fuel oil, 82% less than propane, and 75% less than electricity. The savings for government institutions (the taxpayers) is substantial. The City of Homer anticipates that it will save at least \$175,000 per year. The Kenai Peninsula Borough School District will save \$367,225 for schools within the Homer city limits. The estimated annual savings realized by listed public facilities in Homer alone is \$1,119,811. It is important to point out that many of these institutions are State facilities including the airport complex, the courthouse, the Fish and Game office, the Division of Forestry, the Kenai Peninsula College, and the Kachemak Bay Research Reserve, to name a few.

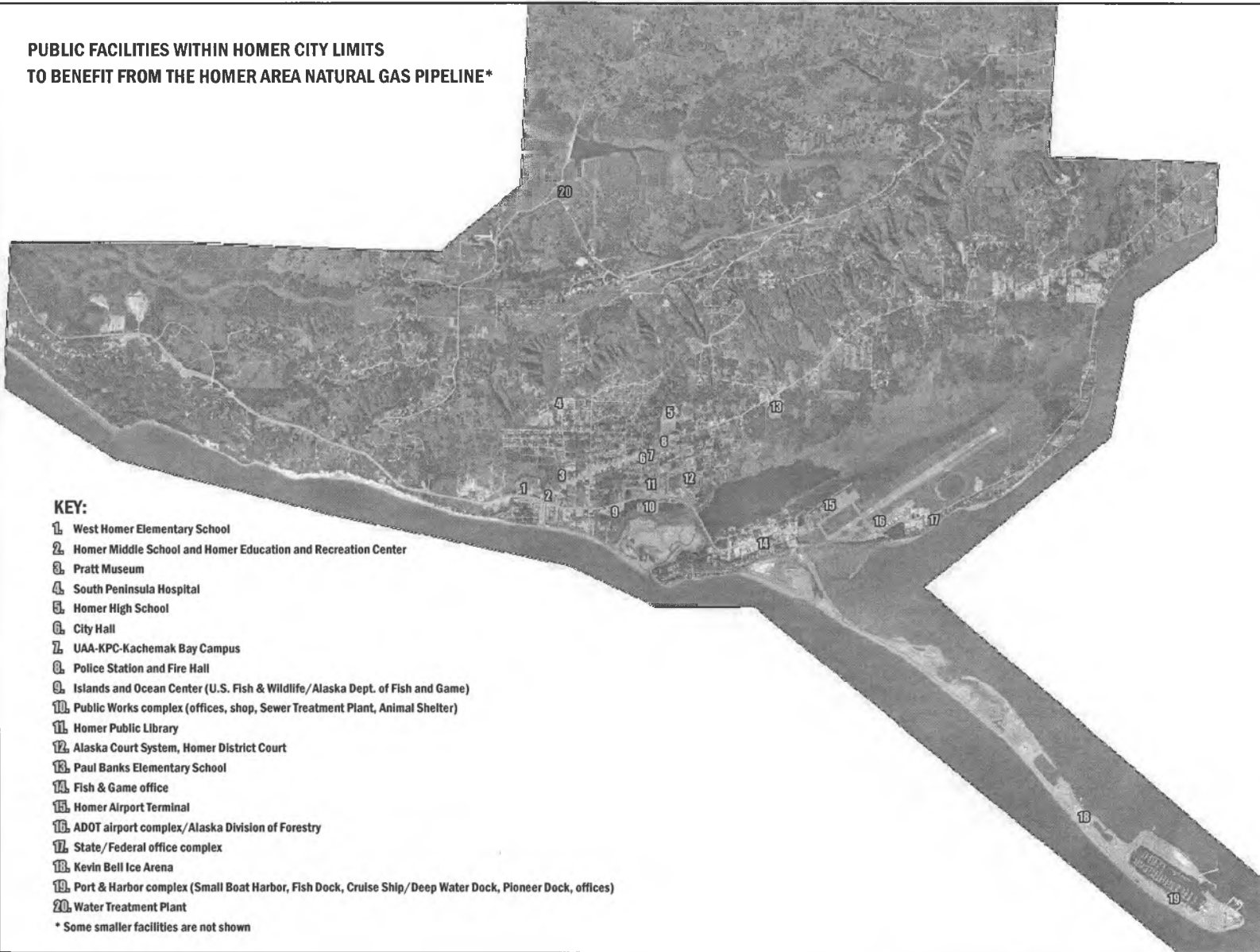
Community Support:

Even though this project has the word "Homer" on it, it is very important to recognize that this is a regional project that will benefit the entire southern Kenai Peninsula. The Homer City Council has adopted multiple resolutions in favor of bringing natural gas to Homer and this project specifically. This project enjoys very broad support from the entire Homer area. It is Number 2 on the adopted CIP Lists of both the City of Homer and the Kenai Peninsula Borough. In the past few months resolutions and/or letters of support have been generated by a diverse set of organizations including the Kenai Peninsula Borough School District, the Kenai Peninsula Economic Development District, South Peninsula Hospital, Kachemak City, the Homer Chamber of Commerce, the Kachemak Board of Realtors, and many businesses and individuals.

Funding Pipelines: The State has a long history of funding a variety of energy projects (including pipelines) and will likely continue to do so in the future. One of the roles of government is to provide for the basic infrastructure that is needed to support health, safety, and a thriving economy, especially when the private sector cannot justify doing so on its own. The community is simply asking for state assistance to get natural gas into the area. Local government, businesses, and residents will do the rest.

Enstar Natural Gas Company: Some have questioned why the state should give funding to a private company to help expand its infrastructure. The City's position is that this is appropriate because even though Enstar is privately owned and is organized differently from a cooperative, it essentially operates in most respects like a public utility. It is the only gas utility sanctioned and regulated by the RCA in our area. Further, the state has already provided funding for other Enstar projects.

**PUBLIC FACILITIES WITHIN HOMER CITY LIMITS
TO BENEFIT FROM THE HOMER AREA NATURAL GAS PIPELINE***



KEY:

- 1. West Homer Elementary School
- 2. Homer Middle School and Homer Education and Recreation Center
- 3. Pratt Museum
- 4. South Peninsula Hospital
- 5. Homer High School
- 6. City Hall
- 7. UAA-KPC-Kachemak Bay Campus
- 8. Police Station and Fire Hall
- 9. Islands and Ocean Center (U.S. Fish & Wildlife/Alaska Dept. of Fish and Game)
- 10. Public Works complex (offices, shop, Sewer Treatment Plant, Animal Shelter)
- 11. Homer Public Library
- 12. Alaska Court System, Homer District Court
- 13. Paul Banks Elementary School
- 14. Fish & Game office
- 15. Homer Airport Terminal
- 16. ADOT airport complex/Alaska Division of Forestry
- 17. State/Federal office complex
- 18. Kevin Bell Ice Arena
- 19. Port & Harbor complex (Small Boat Harbor, Fish Dock, Cruise Ship/Deep Water Dock, Pioneer Dock, offices)
- 20. Water Treatment Plant

* Some smaller facilities are not shown

Soldotna – Nikiski Transmission Line Upgrade

Homer Electric Association, Inc.

Executive Summary

The proposed upgrade of the existing 69 kV transmission line between Nikiski and Soldotna to 115 kV is critically important in preserving the ability to move energy off the Kenai Peninsula and ensuring reliable service to some of the State's largest industrial facilities. This upgrade benefits not only the residents on the Kenai Peninsula, but also provides benefits to the entire Railbelt region.

The upgrade will replace an aging transmission line with older poles and smaller wire with new pole structures and a larger conductor. The new construction will allow operation of the line at 115 kV, creating a second looped path between Nikiski and Soldotna. Benefits include additional electrical capacity, increased transmission system reliability, and improved operational flexibility.

Near-term generation changes by several of the Railbelt utilities, and a potential upgrade at the Bradley Lake Hydroelectric Project will increase the amount of low cost energy available on the Kenai Peninsula. Operation of the single transmission tie-line between Soldotna and Anchorage is sensitive to the amount of high-inertia generation operating on the Kenai during energy transfers to the north. Much of the high inertia on the Kenai is presently connected to the Railbelt grid by a single 115 kV between the two generation plants in Nikiski, and Soldotna. Any outage of the single line means Nikiski generation facilities are unavailable to support energy transfers to the north. This results in islanding of some inexpensive energy, and reduced transfer capability for Bradley Lake Power. In addition, industrial energy customers in Nikiski are also isolated from the Railbelt grid and operate with a reduced amount of electrical reliability. Future development of renewable energy sources in Nikiski (wind, and more recently tidal) may also be impacted by the limited transfer capability from Nikiski to the rest of the Railbelt.

An upgrade of an older 69 kV transmission line to 115 kV will provide a second transfer path between Nikiski and Soldotna. During a planned or unplanned outage on either line, the Nikiski based generation will be able to stay online to provide energy and improve system stability for all Railbelt utilities. Bradley Lake energy will be able to be transferred off the Kenai to the utilities in a highly reliable manner. Existing and future industrial development in the Nikiski area and potential renewable energy projects will be supported by this transmission grid improvement. Since both substations serving the City of Kenai are connected to the older line, the upgrade will improve reliability to this area as well.

Overview

Today, a significant portion of the output from the Bradley Lake Hydroelectric Project (Bradley Lake) flows across Homer Electric Association's (HEA) transmission system en route to the rest of the Railbelt utilities via a single transmission line that traverses from Soldotna to Anchorage, adjacent to the Sterling Hwy / Seward Hwy corridor. Although the 140 mile transmission line between Soldotna and Anchorage was appropriately sized several decades ago, the construction of Bradley Lake has greatly increased the original performance expectations. The ability for Bradley Lake energy to flow off the Peninsula has been very good, particularly since HEA's 40 MW Frame VI combustion turbine was placed into base-load operation in 2001, adjacent to the Agrium facility in Nikiski. Industrial "frame" turbines like those at Nikiski and the nearby Bernice Lake Power Plant provide substantial "inertia" to the system which helps keep the bulk transmission system stable during grid disturbances. This "grid stability" is something very difficult to do on long transmission lines commonly found on the Railbelt system.

Recently, plans have been made by HEA to construct additional natural gas-fired generation in the Nikiski area, and near Soldotna. The decision to add new generation was based on several factors including access to key natural gas fuel supply infrastructure, and the ability to increase the efficiency of HEA's existing 40 MW combustion turbine in Nikiski. HEA will improve the efficiency at this location by roughly 45% through the installation of a steam turbine. The new "combined-cycle" generation plant will produce additional electrical energy with no additional fuel costs, and it will further improve grid stability by contributing its inertia to the system. There is also a plan in place to increase water, and electrical energy available, from Bradley Lake by adding a new diversion at Battle Creek. The addition of HEA's new steam turbine, and the addition of additional capacity at Bradley Lake, means the Kenai Peninsula becomes a larger source of less expensive electrical energy for all of the Railbelt utilities. Access to this inexpensive energy will place more emphasis on operating the Soldotna – Anchorage transmission line in a high capacity, highly reliable manner.

There are several potential solutions to improving the capabilities of the transmission system, but in all cases, keeping the southern grid stable while exporting power is highly dependent on keeping high inertia generation connected on the Kenai. Today, high inertia generation assets in Nikiski are connected to the Railbelt transmission system through a single 115 kV transmission line between Nikiski and Soldotna (see Figure 1 below). A second, smaller 69 kV line between Nikiski and Soldotna cannot be operated in parallel with this line due to several technical issues. Increased circulating currents and gross overloading in the event of an outage of the existing 115 kV line are two of the numerous technical challenges. In addition, the 69 kV line is older and near the end of its useful service life.

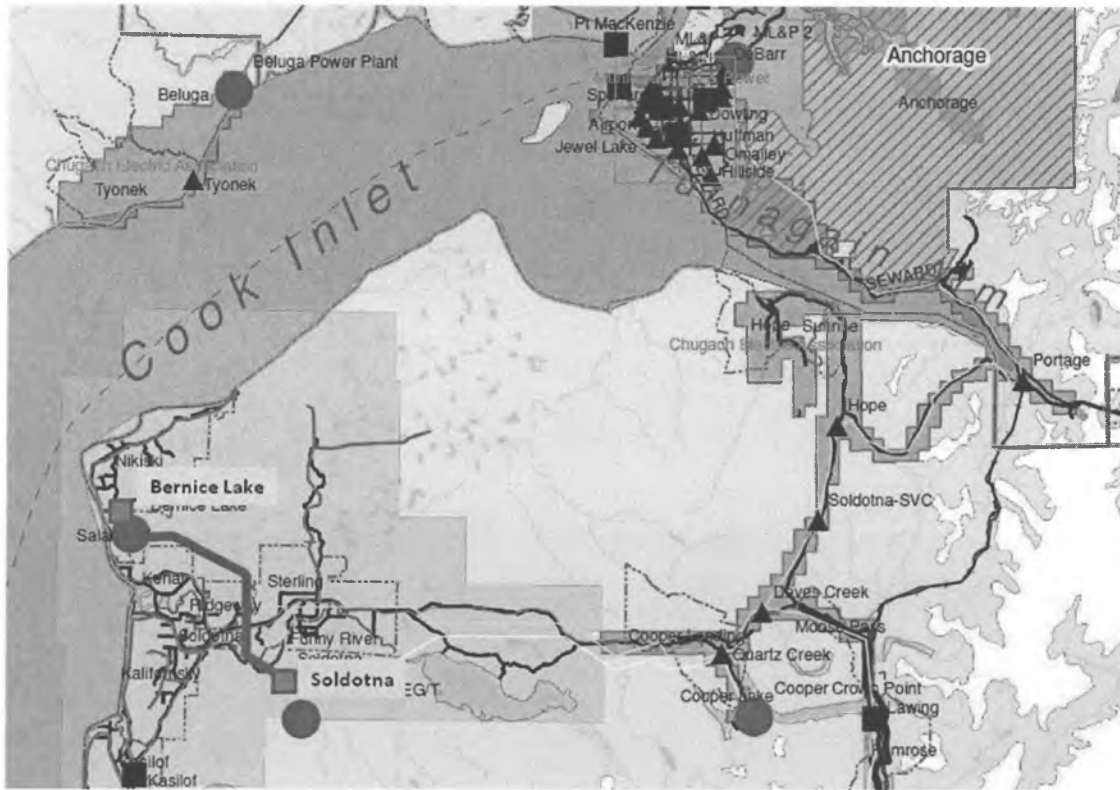


Figure 1 – Proposed Soldotna – Nikiski Line Upgrade Overview¹

Maintenance on the existing 115 kV line or unscheduled outages (equipment failures, trees, etc.) require the Nikiski based generation units to be shut down and replaced by power from lower inertia generation which will greatly reduce the ability to export Bradley power. This shut down not only impacts the ability to get Bradley Lake produced energy off the Kenai, but impacts electric service to two of the State’s largest industrial customers. Tesoro’s Nikiski refinery and Chevron’s Swanson River oil and gas field are both served from resources in the Nikiski area, and are backed up from Soldotna and the rest of the Railbelt grid. Finally, the two substations that provide electrical energy for the City of Kenai are both located on the older 69 kV line.

In addition to being an attractive location for future industrial development, Nikiski has been identified as a potential location for future wind resources. The Forelands area in Nikiski has been identified as one of the most attractive locations for tidal power in Alaska and North America. The upgrade project was also identified in the Alaska Energy Authority’s (AEA) recently completed Railbelt Integrated Resource Plan.

The proposed upgrade of the existing 69 kV system to 115 kV between Nikiski and Soldotna will replace the older poles and smaller wire with a larger conductor. The new construction will allow operation of the line at 115 kV, creating a second looped path between Nikiski and Soldotna. Benefits include additional electrical capacity, increased transmission system reliability, and improved operational flexibility. During a planned or unplanned outage on either line, the Nikiski based generation will be able to stay online to provide energy and system stability to the Railbelt utilities. Bradley Lake energy will be able to be transferred off the Kenai to all of the utilities in a highly reliable manner. Existing and future industrial development in the Nikiski area and potential renewable energy projects will be supported by this transmission grid improvement.

¹ Figure taken from *Railbelt Integrated Resource Plan (Final Report)*, by Black & Veatch, February 2011.



"Village with a Past, City with a Future"

210 Fidalgo Avenue, Kenai, Alaska 99611-7794
Telephone: (907) 283-7535 / FAX: (907) 283-3014
www.ci.kenai.ak.us

January 27, 2011

To whom it may concern:

The City of Kenai fully supports Homer Electric Association's project to upgrade the 69 kV transmission line between Nikiski and Soldotna to a 115 kV line.

Currently, the City of Kenai is served by two substations that are connected to the transmission line that is being upgraded. The successful completion of this project will result in dual 115 kV transmission lines between Nikiski and Soldotna. The end result of the project will be improved reliability for the City of Kenai in the event a problem occurs on one of the transmission lines.

The City of Kenai has seen a surge of economic activity in recent years. Companies such as Home Depot, Lowes, and Wal Mart have all chosen to locate their business here in Kenai. As we continue to actively market our town, it is imperative that we are able to assure prospective businesses that there will continue to be a reliable source of power available in the community.

An interruption of power creates a series of very expensive problems for local businesses and any steps HEA can take to improve reliability is supported by the City of Kenai. Thank you for considering this request.

Sincerely,

CITY OF KENAI

A handwritten signature in black ink, appearing to read "Rick Koch", written over a white background.

Rick Koch,

City Manager

City of Soldotna

177 North Birch • Soldotna Alaska 99669 • Phone (907) 262-9107



Office of the Mayor

Date: January 5, 2011

To whom it may concern:

I am writing to express strong support for Homer Electric Association's project to upgrade the 69 kV transmission line between Nikiski and Soldotna to a 115 kV line.

As Mayor of Soldotna, I have made it a priority to support existing and attract new businesses to our community. The issue of electric service reliability is one of the first questions raised by companies interested in locating businesses in our community. We are fortunate to be able to demonstrate that Homer Electric provides an excellent level of service reliability.

Yet, the key to reliable infrastructure includes a consistent level of maintenance and upgrading to new technology and greater reliability. In the case of Soldotna's service from HEA, it is clear that in order to maintain and improve that reliability, the transmission line between Soldotna and Nikiski requires upgrading from the 69 kV service.

The successful completion of this project will result in dual 115 kV transmission lines between Nikiski and Soldotna. The end result of the project will be improved reliability for the City of Soldotna in the event a problem occurs on one of the transmission lines.

Economic development is critically important to the City of Soldotna. We have been very successful in achieving a unique blend of quality residential developments, small, local businesses and larger retail facilities in our city. Regardless of the size of a home or business, it is important that they all have access to reliable and affordable power. Homer Electric should be commended for seeking to upgrade and improve the overall level of reliability. As the Mayor of the City of Soldotna, I want to state that the project that has our full support.

Thank you for considering this request.

Sincerely,

A handwritten signature in black ink, appearing to read "P.A. Micciche", written over a horizontal line.

Mayor Peter A. Micciche

City of Soldotna, Alaska



TESORO

Tesoro Alaska Company
P.O. Box 3369
Kenai, Alaska 99611-3369
907 776 8191
907 776 5546 Fax

January 24, 2011

To whom it may concern:

Tesoro Alaska Company fully supports Homer Electric Association's request for funding to upgrade the transmission line between Nikiski and Soldotna. The importance of having a dual 115 kV system in place cannot be overstated from Tesoro's point of view.

The Tesoro refinery is a complex industrial facility and it is of paramount importance that there is a reliable source of power available at all times. The current situation leaves the refinery and other industrial facilities in the Nikiski area at risk should there be a problem on the single 115kV line currently serving the Tesoro plant.

This important upgrade will not only improve reliability for the State's largest refinery, but it will also benefit the entire Railbelt by improving stability on the existing transmission line that connects Soldotna to Anchorage.

Tesoro Alaska appreciates your consideration of this request.

Sincerely,

Stephen W. Hansen
Vice President, Kenai Refinery
Tesoro Alaska Company



Kevin A. Tabler, Manager
Land/Governmental Affairs
MidContinent/Alaska BU

Union Oil Company of California
3800 Centerpoint Dr., Suite 100
Anchorage, AK 99503
Tel 907 263 7600
Fax 907 263 7698
Email tablerk@chevron.com

January 25, 2011

To whom it may concern:

Homer Electric Association's request for funding to upgrade the transmission line between Nikiski and Soldotna has the full support of Union Oil Company of California (Union Oil).

As the owner and operator of the Swanson River Oil Field on the Kenai Peninsula, Union Oil is fully aware of the importance of a reliable source of power. Union Oil has recently installed large electric pumps in the Swanson Field. Any interruption of power creates a series of very expensive problems for these new pumps and it is our goal to work with Homer Electric to devise a system that can provide the best service possible.

The construction of a dual 115kV line will provide much needed redundancy in the system and allow Union Oil to continue producing oil in the Swanson River Oil Field in the most efficient way possible.

The Swanson River Oil Field has been producing oil and providing jobs for Alaska residents since 1961. Union Oil is working hard to continue that legacy and secure a bright future for the Swanson River field. Homer Electric's proposal to upgrade the transmission line between Nikiski and Soldotna will help us move in that direction.

While we are most concerned about our needs at Swanson River, this project will also benefit the entire Railbelt and have a positive impact on the transmission line to Anchorage.

Thank you for considering this request.

Sincerely,

A handwritten signature in black ink that reads "Kevin A. Tabler".

Kevin A. Tabler

Mount Spurr Geothermal Project Development

8 reasons for the State of Alaska to provide Ormat with an \$18 million grant in support of Mt Spurr geothermal drilling:

- 1. Because it is not State money going to the pockets of a private developer. It is a Public-Private-Partnership.** It is State money, controlled and administered by the State (by AEA), with all geological data co-owned by the State (administered by both AEA and DNR), and with every State dollar invested in the project passed-through transparently to the ratepayers in the form of lower power prices (supervised by the RCA or AEA). Additional details:
 - The State investment of \$18 million, in addition to the \$2 million Ormat is expected to receive through round IV of the AEA Renewable Energy Fund Grant (REFG), will be transparently conveyed to ratepayers in the form of an approximate reduction of 0.3~0.5 c/kWh in the price of energy sold from the project to Railbelt utilities. This will be verified by RCA or by AEA.
 - Grant funds will not be upfront cash payments to Ormat but rather cost reimbursements through the AEA REFG mechanism. Judging from the process Ormat experienced with the previous \$2 million grant currently in the process of reimbursement through round III of the REFG, AEA's reimbursement mechanism is meticulous, with every line item in every receipt checked to the last cent and with AEA's ability to audit any part of the process, e.g. vendor selection. Therefore, the State has full control on how money is spent and reimbursed.
 - The \$20 million (with Ormat's match of at least \$5 million) will be spent only if results of the 2011 core exploration drilling are encouraging, and will be done wisely and gradually, with multiple scientific go/no-go decision points. Investment will be stopped should scientific evidence gathered throughout the 2012-2013 drilling season is not encouraging as to the potential existence of a commercially viable resource. This will be controlled and verified by AEA and DNR.
- 2. Because it is a win-win investment by the State.** If the 2012-2013 drilling season is successful and a geothermal power plant is eventually built, the State will enjoy clean, reliable and affordable baseload power for decades, with every State dollar invested passed-through to ratepayers through lower power prices. If drilling proves there's no commercial geothermal resource, the State wins by knowing that it used best available science to explore Mt Spurr's geothermal potential; State geological institutions (e.g. DNR's Division of Geological and Geophysical Survey and the Alaska Volcano Observatory) will benefit from the new geological data to be gathered, that will help the State estimate geothermal potential in other Greenfield areas throughout the State beyond Mt Spurr, e.g. other Aleutian Chain volcanoes (Mt. Iliamna, Mt. Augustine, etc.).
- 3. Because it is the only way to break the current energy development dead-lock.** While Alaska's policy makers realize the need to diversify its energy mix with at least 50% coming from renewable resources by 2025, Railbelt utilities refuse to offer private developers, like Ormat, power prices that are higher than their current low avoided costs, that are derived from a mix of unsustainably low gas prices from depleting Cook Inlet resources and the State subsidized Bradley Lake Hydro plant. By supporting further geothermal resource confirmation at Mt Spurr, the legislature can show forward-looking vision and kick-start this project that could have a significant impact on energy diversification. Without this State support, the project will not be able to move forward beyond the 2011 core exploration drilling (cost shared by AEA's round III REFG grant).
- 4. Because if built, the Mt Spurr geothermal power plant will relieve the demand pressure on Cook Inlet Natural Gas.** 100 MW of baseload geothermal generation at Mt Spurr will save approximately

Provided by: Ormat Technologies

6,000,000 MMBTUs of natural gas each year¹, enough to heat around 80,000² homes each year, roughly equivalent to the entire residential heating consumption of the city of Anchorage.

5. **Because the Mt Spurr geothermal power plant could be on line in the next 5-6 years, sooner than other energy alternatives, e.g. the bullet natural gas line or Suisitna/Watana hydro.**
6. **Because Mt Spurr can offer affordable power prices, competitive with Suisitna/Watana hydro and other future alternative/ renewable energy projects.** Absent any additional State support³, estimated power prices from Mt Spurr are in the 12-13 c/kWh range, which is competitive to Suisitna/Watana hydro and other potential alternative, on a non-subsidized "apples-to-apples" basis. From this reason, the AEA-sponsored 2010 Railbelt Integrated Resource Plan identified the Mt. Spurr geothermal project as a beneficial component in the Railbelt's generation portfolio.
7. **Because it will create substantial green jobs.** The Mt Spurr project could provide approximately 50 full-time jobs, over 100 construction jobs, and benefit over 200 mostly local vendors through spending over \$850 million in the next 30 years
8. **Because that is the most effective tool countries and States have been implementing in order to promote geothermal development.** Some examples:
 - In 2009 the US DOE, as part of the ARRA, awarded \$338 million to private geothermal developers in order to boost geothermal exploration and drilling in multiple projects throughout the country⁴. Unfortunately that program has ended and is therefore not a potential source of funding for the Mt Spurr project
 - ARRA Section 1603, Cash Grant in lieu of the Investment Tax Credits, provides a cash grant equaling almost 30% of total capital investment in renewable energy projects, where for geothermal development that's primarily full-size production and injection drilling. As an example, in 2010 Ormat received a \$108 million cash grant from this program, for its North Brawley geothermal plant recently placed in service in California⁵. A significant portion of that grant went to cover geothermal production and injection drilling. Unfortunately this program only supports geothermal power plants to be placed in service by the end of 2013 and is therefore not applicable to the Mt Spurr project, whose target in-service date is 2016.

¹ Assuming this 100 MW would have otherwise been generated via modern combined cycle natural gas plants, with an assumed heat rate of 7,000 BTU/kWh (California Energy Commission Report from August 2009, <http://www.energy.ca.gov/2009publications/CEC-200-2009-017/CEC-200-2009-017-SD.PDF>)

² Assuming average annual consumption of 72 MMBTU per home, as per the US Energy Information Agency (http://www.eia.gov/emeu/recs/byfuels/2001/byfuel_ng.pdf)

³ Other than building a transmission line to Beluga and an access road, estimated at \$70 million, to be addressed at a later stage

⁴ <http://www.energy.gov/8233.htm>

⁵ <http://www.ormat.com/news/latest-items/ormat-technologies-inc-received-108-million-cash-grant-under-1603-program>

- From 1975 to 1986 the US DOE invested \$827 million, equivalent to more than \$1.7 billion in today's dollars, in geothermal exploration across the continental US. Some of this investment was in the form of "industry coupled" drilling, where private developers enjoyed cost sharing by the DOE.
- Multiple countries around the world offer a variety of incentives (cash grants, feed-in tariffs, renewable portfolio standards that force utilities to pay a premium for renewable power, tax break, etc) to private developers, in order to attract private capital investments and boost geothermal development. Success stories of countries that incentivized and attracted private geothermal developers and ultimately benefit from utility-scale privately owned geothermal power plants include the Philippines, Indonesia, Germany, Turkey, Guatemala and Kenya. Though still to see its first geothermal power plant developed, Chile has recently succeeded in attracting multiple international geothermal developers, in part due to incentive policies, e.g. a cash grant program.

Chikuminuk Lake Hydropower

House Energy & Resources

Committee Hearing

May 7, 2011

Nuvista Light & Electric Cooperative

Christine Klein, Calista EVP/COO



I. Nuvista Electric Cooperative

Non-profit utility established '95:

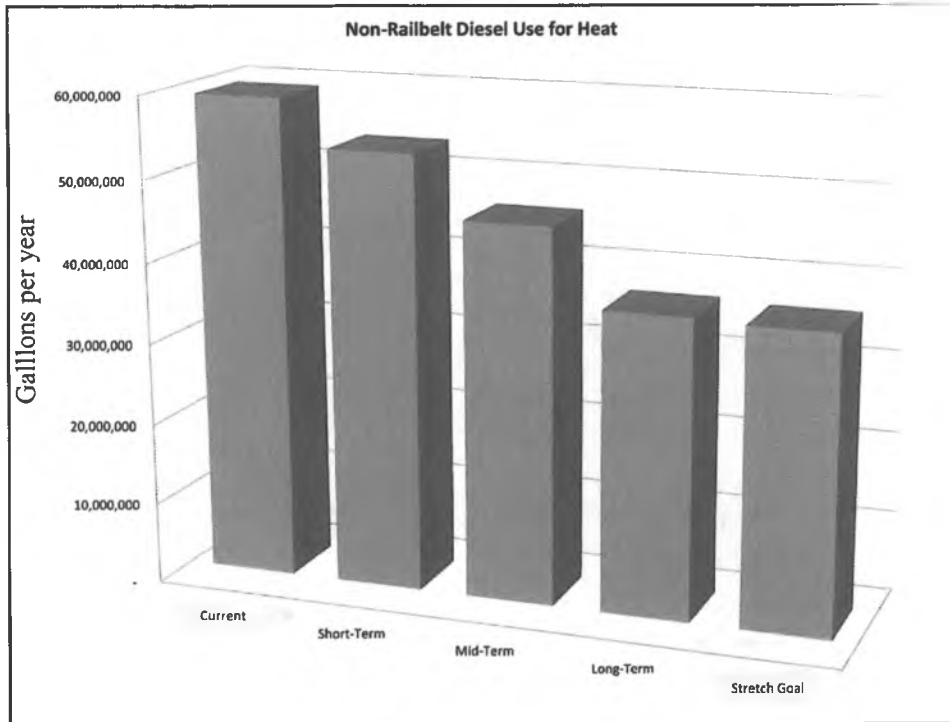
- An Electric Utility Cooperative
- Common Goal: deliver and reduce electrical costs to residents
- Assess high cost of power, demands and find stable alternatives
- Organized as a cooperative to function as a future region-wide Generation & Transmission utility
- Includes region major stakeholders

Board Members:

- Association Village Council Presidents
- Yukon Kuskokwim Health Corporation
- AVCP Regional Housing Authority
- Alaska Village Electric Cooperative
- Chaninik Wind Group
- Middle Kuskokwim Electric Coop.
- Lower Yukon Representative
- Calista Regional Corporation



I. Y-K Region Energy Situation



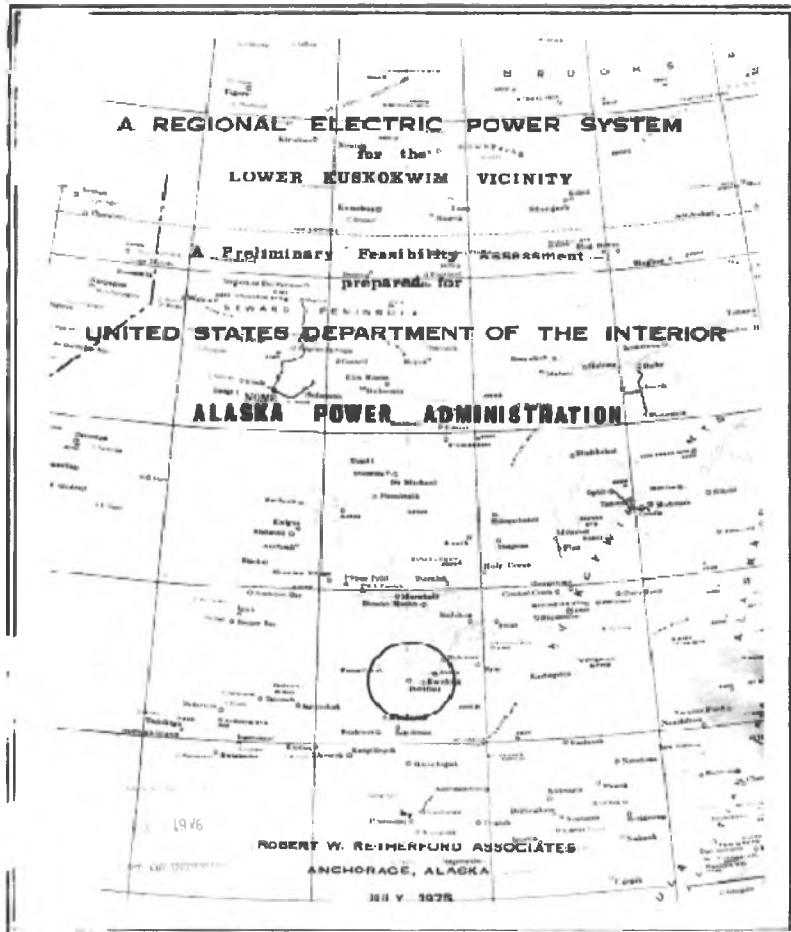
Diesel

- Primary home heating ranged \$6.14 to \$9.50/gallon in 2010 (barged in yearly)
- Expect \$7.34 to \$10.70 gallon this year
- 50% of family income goes to heating, now grown to 65 to 75% income
- Families choosing food vs. heating

Electricity

- Many small village diesel generators
- Home use is less than 50% Natl Average
- Cost = \$0.52 to \$1.00 kilowatt hour 2010
- Escalating cost of energy
- PCE cannot keep up

II. Where We've Been

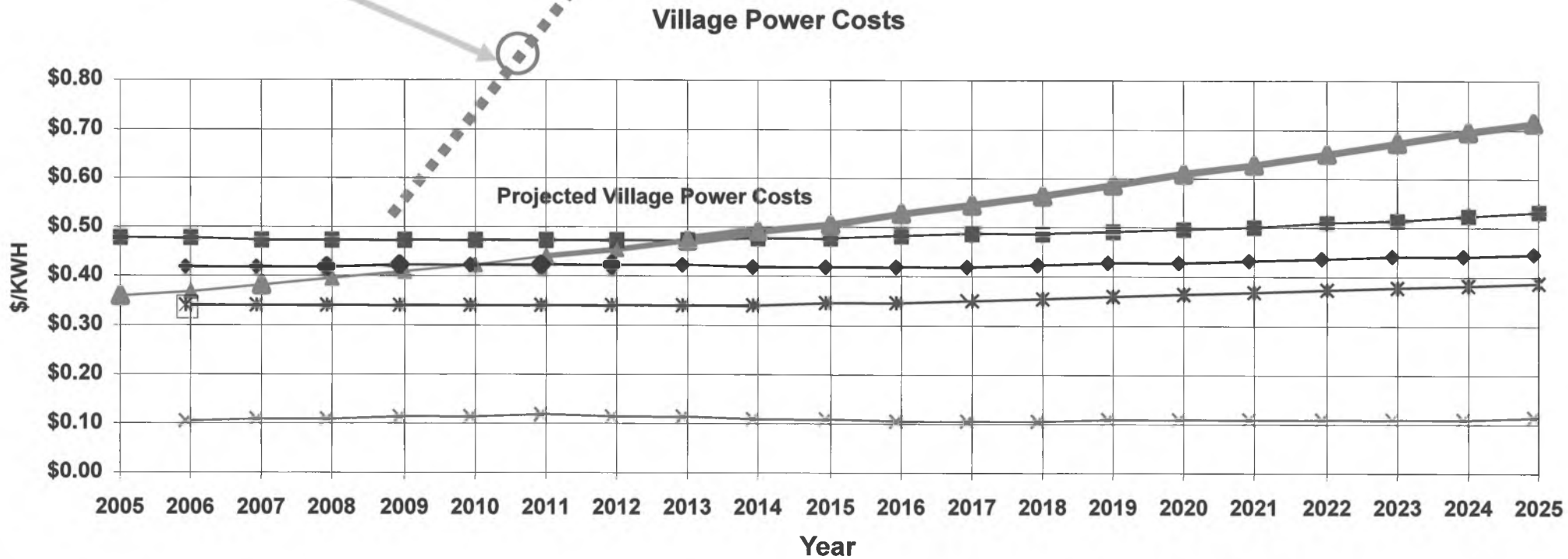


- **Over 21** Energy Studies, Data, and Reports since '75.
- > 41 largely independent aged diesel power generator plants
- Village generators use >20 million gallons of diesel year
- Transmission lines needed
- 65Mw electrical demand for Bethel +14 villages by 2020
- Coal and Hydropower listed repeatedly as feasible options
- Energy costs escalating



II. Electrical Cost Projections 2002

Actual Cost of past year is \$0.60 to \$1.05 per kwh (avg of \$0.825 per kwh) compared to projections



II. Found Energy Needs Varied

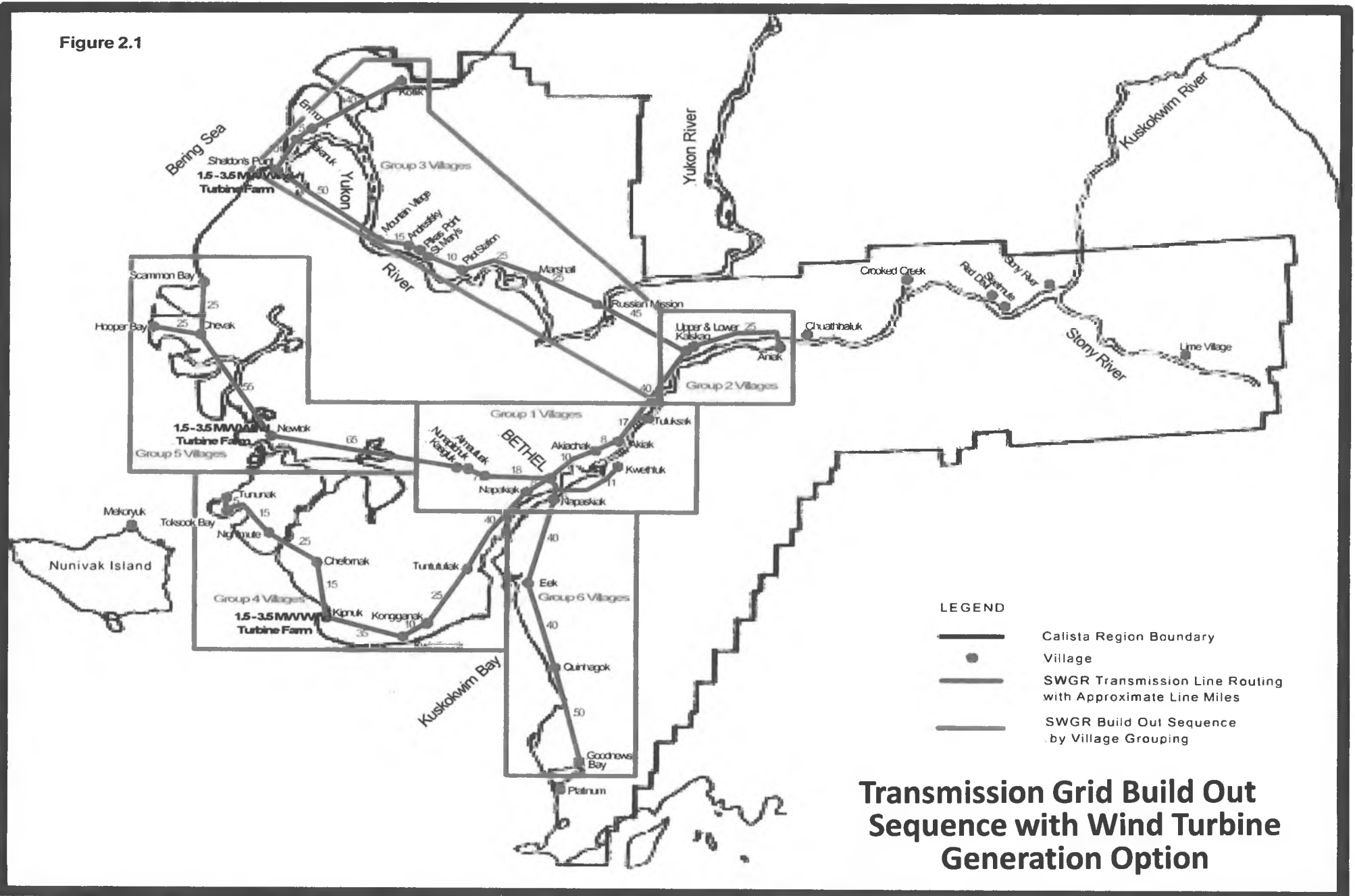
Region Villages Vary:

- Diverse Village options
- Conservation Underway but not the complete solutions
- Some Coastal Villages proceed w/wind generation but there's limited application in region
- Some villages have small needs
- ***One size doesn't fit all!***
- Sub-region Bethel +13 villages
65Mw electrical need by 2020



II. Transmission System Needed

Figure 2.1



II. Previous Alternatives Considered

<i>Alt. Energy Type</i>	<i>Cost to Construct</i>	<i>Cost to Operate</i>	<i>Use Cost per Kw</i>	<i>Capacity to Demand 65kw</i>	<i>Public Perception</i>	<i>Likelihood or Feasibility</i>
Diesel	Existing	High	High	Same	-	Existing
Geothermal	High	Low	-	None	Positive	Small
Wind Power	Medium	High	Low	Low	Positive	Limited
Hydropower	High	Low	Medium	High	Positive	High
Coal Power Plant	High	Medium	Low	High	Negative	Medium to Low
Nuclear Power	Low	Low	Low	High	Very Negative	Poor to None



III. Future - Remaining Candidates

- **Wind Turbines**

Variable – region precedent, low power production capacity, augments needs, does not work for all areas of region.

- **Coal Power Plant**

Bethel 15-60 Mw Plant - negative public perception, would provide the cheapest and greatest energy capacity.

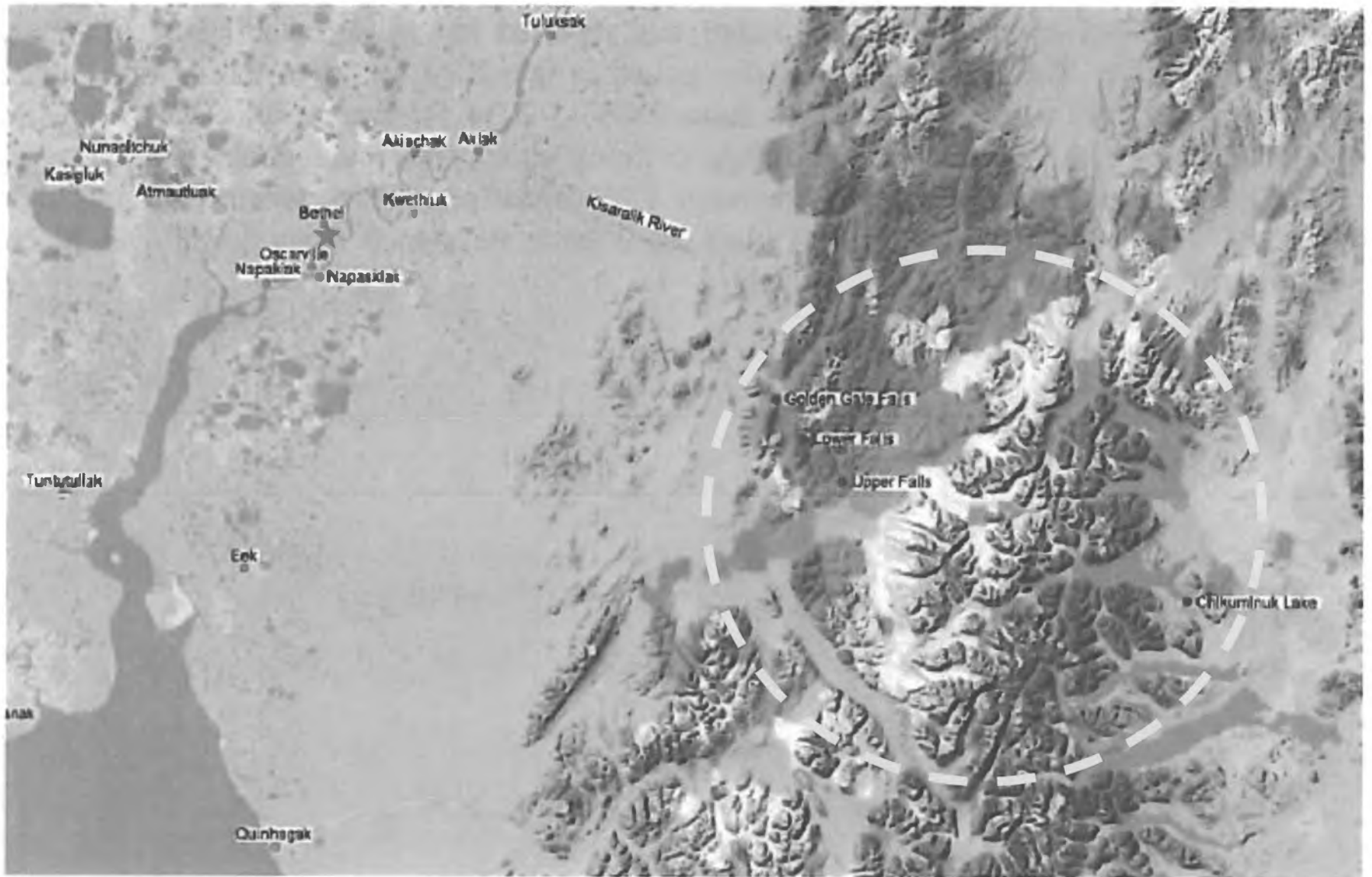
- **Hydroelectric Power**

Kisaralik River – 3 sites Yukon Delta National Wildlife Refuge

Chikuminuk Lake - in Wood Tikchik State Wilderness park, could provide clean, mid cost, proven alternative energy.



III. Remaining Hydroelectric Sites



III. Hydroelectric Feasibility Findings

<i>Site</i>	<i>Distance miles</i>	<i>Head ft</i>	<i>Generating Capacity (MW)</i>	<i>Year Around Seasonal</i>	<i>Average Annual Energy (GWh)</i>	<i>Projected 2022 Demand GWh</i>	<i>Useable Energy 2022 GWh</i>
Chikuminuk Lake Allen River Outfall	118	91	13.4	Y	89.3	64.9	65+
Kisaralik River Upper Falls	70	149	27.7	S	89.5		39.7
Kisaralik River Lower Falls	62	122	34.1	S	128.3		46.9
Kisaralik River Golden Gate	57	78	27.0	S	95.3		38.8



IV. Moving Forward & Ahead

Selection of Option(s):

- Nuvista Team & Stakeholders Reviewed latest Findings
- Public Meetings found Chikuminuk Site Positive and Preferred
- Board Unanimous Decision to move ahead with Hydropower Design Feasibility
- Chikuminuk Lake has year around capability to supply ½ region's population, 13+ villages, and displace 10M gallons diesel

A. Bethel Area Sub-Region

Complete plan and project(s) underway to stabilize and reduce energy costs, and integrate with Region-Wide plan

B. Region-Wide Alternative Energy Plan

Beginning a comprehensive region wide alternative energy plan that integrates work done and underway to guide future development



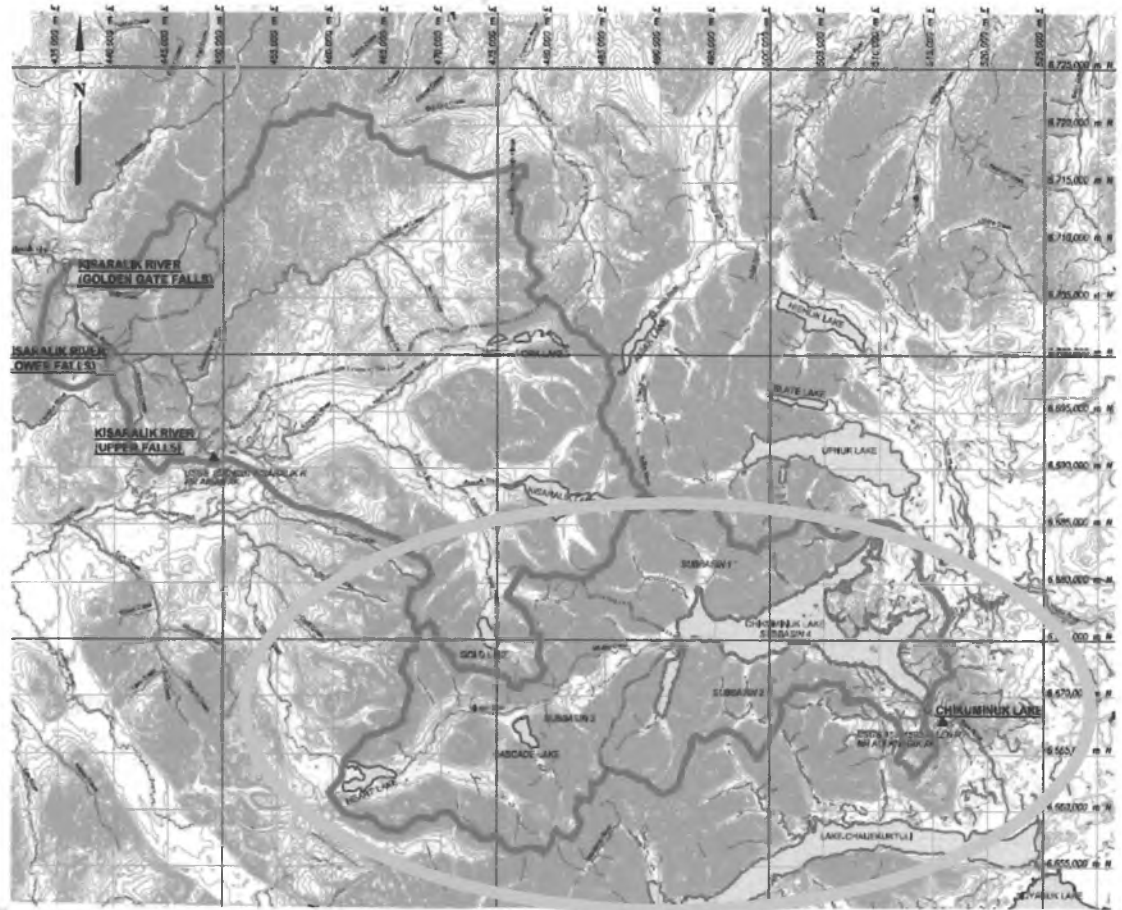
IV. Preferred Alternative

<i>Site</i>	<i>Construction Cost w Transmission in 2010 dollars</i>	<i>Design Cost</i>	<i>Total Project Cost</i>	<i>Estimated 20 year Cost/Kwh</i>	<i>Meets Bethel Sub-Region 2020+ Demand?</i>
Chikuminuk Lake Outfall	\$391.7 M	\$91.3 M	\$483 M	\$0.70-0.58	Yes
Kisaralik River Upper Falls	\$386.4 M	\$92.6 M	\$479 M	\$0.70-0.65	No
Kisaralik River Lower Falls	\$329.5 M	\$78.5 M	\$408 M	\$0.70-0.65	No
Kisaralik River Golden Gate	\$305.5 M	\$72.5 M	\$378 M	\$0.70-0.65	No



IV. Current and Next Tasks

- Completed Phase I- Hydro Reconnaissance & Feasibility Study - 1/2011
- Public and Nuvista Board Decision to Proceed Ahead
- Hiring Project Manager to develop scope, oversee work, lead process - 5/2011
- Initiate Federal FERC preliminary licensing and ROW Processes
- Begin standard AEA project Phase II process: Detailed Feasibility & Design



IV. Next Steps: Capital Request

Hydroelectric Energy Tasks	Lead Agency	Schedule	Funding	Cost (millions)
1a Detailed Feasibility, Geotech, FERC Licensing (PAD), Surveying, Engineering Plans...	Nuvista, FERC	2011 2014	State Private	\$5.88M
1b Preliminary Engineering Design, Site Field Investigations, Specs	Nuvista AEA	2011 2016	State	\$11.75M <u>\$17.6M</u>
2. Transmission rights-of-ways, and land easements	Nuvista DOI/BLM	2012- 2015	DOI	\$7.83M
3. Final Designs, Permitting, Modifications, and Bidding	Nuvista AEA	2016 2018+	AIDEA, BIA Bonds	\$35.25M
4. Hydropower and transmission system project Construction	TBD	2018 2022	Mix, DOE Bonds	\$391.7 M
(Range of -10 to +25%) Total Project Estimated Cost:	TBD	2012 2022	Mixture	\$460M to \$630M \$483M

IV. FY2012 Capital Request

Region: Calista/AVCP Southwest Alaska

Project: Chikuminuk Hydroelectric Alternative Energy

Scope: Complete Detailed Feasibility Report, Site Field Investigations, Hydrologic Monitoring, Surveys, Permitting, Engineering Plans, FERC Licensing, and 35% Design Specifications (Standard AEA Phasing)

Cost: \$17,630,000.



Chikuminuk Questions Answered

- How much local support do you have for your project?
 - Region wide support represents 56 villages, and numerous stakeholder letters to legislature.
- How much local matching funds/other do you have, expect, or may be available for project?
 - TBD with BIA, DOE, BLM, AIDEA, others. Nuvista invested >\$650,000. private funds since '02
- What are the total costs of your project?
 - \$483 Million is the engineering estimate, over the period of 2012 to 2022
- What is the funding plan over next five years? *See formal presentation*
- How many years work is funded in this appropriation and how many years remain?
 - Request is 2 years due to legislative approval timelines & seasonal work sequencing. Further fund requests in 3 parts noted in presentation (ROW acquisitions, final design, construction)
- What phase is project in now and what phase or phases addressed by this appropriation?
 - Phase II Feasibility and 35% Design
- Upon completion, what are expected costs to rate payers compared with current cost?
 - Anticipated conservative (high end) cost (without use for heat) = \$0.58-\$0.70 kwh;
 - Compared to current electrical costs = \$0.60-\$1.05 per kwh.
- Where is your project on the priority list of the area's regional energy plan?
 - Highest priority or #1 for region as a whole, documented option since 1975
- Has your project been vetted by AEA? If so, how?
 - AEA has funded approx. \$2.28 million since '96, and been a partner on conceptual design.



City of Gustavus
P.O. Box 1
Gustavus, AK 99826
Phone: (907) 697-2451

May 5, 2011

Representative Bill Thomas

Subject: City of Gustavus Support for Debt Relief for Gustavus
Electric Company

Reference: Capital Improvement Project Funding

By this letter the Gustavus City Council wishes to reiterate its policy of record in support of debt relief funding as proposed in the amount of \$1.3 million for Gustavus Electric Company for the Falls Creek Hydroelectric Project. The policy for the City of Gustavus was set in Resolution 2008-12, which remains the policy of record in this matter. As a new resolution would require Council action at a later meeting, we hope you will accept this confirmation of our continued support.

Sincerely,

A handwritten signature in black ink that reads "James Mackovjak". The signature is written in a cursive style with a large, looping initial "J".

James Mackovjak
Mayor, City of Gustavus

Agenda Item 7/10/2008 – Motion passed to postpone until August 14, 2008 General Meeting
Agenda Item 8/14/2008 – Motion passed to postpone until August 21, 2008 Work Session
Agenda Item 9/11/2008 -

CITY OF GUSTAVUS, ALASKA

RESOLUTION No. 2008-12

A RESOLUTION BY THE CITY OF GUSTAVUS SUPPORTING GUSTAVUS ELECTRIC COMPANY'S APPLICATION FOR AVAILABLE GRANTS TO COMPLETE CONSTRUCTION OF AND PROVIDE DEBT RELIEF FOR THE FALLS CREEK HYDROELECTRIC PROJECT

WHEREAS, The Gustavus Strategic Plan lists reduction of electrical rates as a number one priority, and

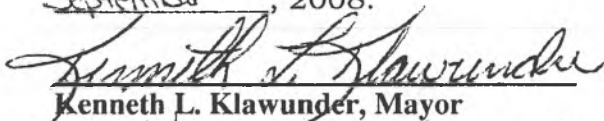
WHEREAS, the citizens of Gustavus have pursued renewable energy resource development since 1980, and

WHEREAS the Regulatory Commission of Alaska requires all such grant money be used for the purpose of reducing electrical rates produced by the Falls Creek hydroelectric project, and

WHEREAS, all grant funding for the Falls Creek Hydroelectric project will be used for final construction and debt relief to reduce the high cost of electricity for Gustavus Citizens,

AND NOW THEREFORE BE IT RESOLVED, the City of Gustavus supports the application for and the use of grants for funding final construction of the Falls Creek Hydroelectric project and for funding all debts accrued during project completion.

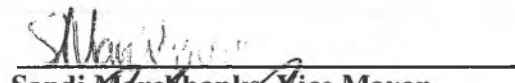
PASSED and APPROVED by the Gustavus City Council this 11th day of September, 2008.


Kenneth L. Klawunder, Mayor


Wayne Howell, Council Member



Mike Atkins, Council Member


Paul Berry, Council Member


Sandi Marchbanks, Vice Mayor


John Nixon, Council Member


William Unkel, Council Member


Attest:
Kapryce Manchester, City Clerk

SYNOPSIS OF THE FALLS HYDROELECTRIC PROJECT

GUSTAVUS ELECTRIC COMPANY GUSTAVUS, ALASKA

The Falls Creek Hydroelectric Project was completed and went online in July 2009. Since then, it has provided 96% of all electrical requirements for Gustavus. Since the project is complete, no additional funds are required to complete the project.

The project cost \$8,400,000 to construct. Funding for the project consisted of:

Denali Commission	\$2,800,000
USDA Rural Utility Service	1,500,000
State of Alaska Capitol Appropriations	1,450,000
Renewable Energy Fund Grant Program	750,000
Alaska Energy Authority Loans	1,000,000
Private Investor Loans	300,000
Equity	400,000

Previous to the completion of the Hydroelectric Project, Gustavus relied solely on diesel for electric generation. At the present cost of diesel fuel, the electric rate in Gustavus is now \$.30/ per kWhr less than they would be if still on diesel. This reduction in the electric rates is handled through the Cost of Power Adjustment section of the Tariff. This is filed quarterly with the Regulatory Commission of Alaska.

The debt relief being sought here will repay \$1,300,000 in outstanding loans for the project. The Alaska Energy Authority Loans have payments of \$80,000 per year. The \$300,000 in private loans are payments of \$20,000 a year. Gustavus Electric Company at present sells 1,650,000 kWhr per year. This equals just over \$.06 per kWhr to repay the debt. These loans are for 30 years and \$100,000 per year would be leaving Gustavus for 30 years. At present this debt service is not included in the electric rate. Should the debt relief not be forthcoming, a new revenue requirement will have to be filed with the Regulatory Commission of Alaska to raise the rates by \$.06 per kWhr to repay the loans.

This completed project has a Federal Energy Regulatory Commission License has received all permits and licenses required to be completed. This was a long arduous process. Gustavus is fortunate to reaping the benefits of its labor. The present cost of electricity in Gustavus is \$.26 a kWhr with hydro power. With the dept relief requested here, the price would remain stable and not have to go to \$.32 per kWhr.

This request for debt relief has the support of the Gustavus City Council per resolution #2008-12. This support is reiterated in a letter from the Mayor of Gustavus dated May 5, 2011.

House Energy Project Testimony – Whitman Lake Hydro

Mike Kline: Electric Division Manager for Ketchikan Public Utilities

My name is Mike Kline. I am the Electric Division Manager for Ketchikan Public Utilities and I am here to provide testimony regarding the Whitman Hydro Electric project.

Ketchikan Public Utilities (KPU) serves 7,600 electric residential, commercial and industrial accounts supporting a population of approximately 13,000 people. KPU generates approximately 40% of its own electrical energy and purchases 60% from the Southeast Alaska Power Agency (SEAPA). Both KPU and SEAPA generation is hydro electric with KPU diesel being used when hydro energy runs short.

Current and planned development in Ketchikan as well as heating conversions, driven by the rising cost of oil, results in a projection that Ketchikan may need as much as 30 million kilowatt-hours (kwh) of additional energy beyond the current consumption level in the next several years. This is an 18% increase over the 170,000 million kwh generated and purchased in 2010. Significant components of this increase are expansions and processing changes of fish processors, business expansion by Alaska Ship and Dry Dock, large heating conversions by the school district, a new community pool, and new AMHS admin and yard facility at Ward Cove as examples.

Efforts have begun to encourage other heating technologies to reduce this demand projection. Conservation and demand response mechanisms are being considered but additional generation is still needed.

The Whitman Hydro project will help address this supply need. Whitman is a 4.6 megawatt project that will supply an average 16 million kwh annually.

In 2011 to date, in spite of KPU and SEAPA starting with full hydro reservoirs ahead of the winter heating season, KPU and SEAPA were short of hydro energy by mid-April requiring 3.1 million kwh of diesel generation support to date. Ketchikan Public Utilities has just completed three weeks of diesel generation to meet local power consumption.

Whitman will displace over 1 million gallons of diesel annually. Just the fuel cost of producing this 16 million kwh with diesel would be 26 cents/kwh, to be passed to customers, at the current price of \$3.93/gallon.

If constructed with the funding as currently proposed, the cost of production from Whitman would be in the 6 to 7 cents/kwh range. This is similar to KPU's current purchased power rate and would be neutral in terms of pressure on customer rates.

Total project cost is \$19.4 million. Approximately \$2.7 million has been spent to date to permit, license and develop the project. Of this, approximately \$1 million has been local funds while \$1.7 million have been from AEA Renewable Energy Fund Grants.

Pending approval of Whitman within the Capital Budget under consideration, the City will bond for the balance needed to complete the project and satisfy the 50% maximum State investment criteria of SB 46, version T. This funding will complete the project by 2016 and no further funding requests are anticipated.

The amount of \$2.3 million has been granted to the project to date by the AEA Renewable Energy Grant Fund. Another \$700K is under consideration from this fund in this budget cycle. On this basis, this project has been vetted by AEA.

Efforts to build this project started prior to 1997. As is typical with almost all hydro projects, the licensing process took well beyond the five year process defined. The FERC license was finally issued in February 2009 starting the 2 year clock to begin construction. An extension was requested by Ketchikan and granted by the FERC in late 2010 such that construction must now start by February of 2013. Only one such extension is granted by the FERC. Failure to start construction will result in loss of the license. Should construction not start by February, 2013, the only potential remedy would be a stay of the license by the United States Congress.

The license now requires completion of the project in early 2016. Assuming construction starts in 2013, operation is anticipated in late 2015.

The Whitman hydro plant will be constructed using an existing dam.

The transmission corridor requirements are minimal due to the plant location being less than ½ mile to KPU's transmission which also provides interconnection to the other SEAPA interconnected communities.

The Whitman project is near shovel ready. Engineering is nearly complete. The FERC license is in place. The equipment specifications are ready. KPU will initiate contracting efforts when funding is finalized.

This project is supported by the Ketchikan City Council and Ketchikan Gateway Borough and is the number one priority project for the Community of Ketchikan as agreed upon by the Ketchikan Gateway Borough, the City of Ketchikan, and the City of Saxman. Letters of support have also been issued by the

Ketchikan School District and OceansAlaska, a marine science center under development in Ketchikan.

Whitman has been identified by the IRP Working Group as one of the projects that should move forward ahead of completion of the IRP and is identified in that Resolution.

City of Ketchikan, Alaska d/b/a Ketchikan Public Utilities

Whitman Lake Hydroelectric Project

(FERC Project No. 11841)

Owner: Ketchikan Public Utilities
334 Front Street
Ketchikan, Alaska 99901

Contact: Karl R. Amylon, General Manager
(907) 228-5603
karla@city.ketchikan.ak.us

Start of Construction: 2011
On-Line Date: 2013
Estimated Cost: \$19,050,000
Funding Request: \$15,680,000

Priority Ranking: 1



Whitman Lake Dam

Project Description

The Whitman Lake Hydroelectric Project will be located approximately four miles from the City of Ketchikan. Ketchikan Public Utilities (KPU) proposes to install 4.6 MW of hydropower generating capacity at an existing dam, producing an estimated 16,000,000 kWh annually. Pipelines will lead to a new powerhouse containing two hydro generating units: Unit 1 will generate power with water that would otherwise be spilled; Unit 2 will generate power from water delivered to a fish hatchery located adjacent to the hydroelectric project.

The project will operate in cooperation with the Whitman Lake Hatchery, which is owned and operated by the Southern Southeast Regional Aquaculture Association (SSRAA).

Project Benefits

Development of the Whitman Lake Hydroelectric Project is critical to Ketchikan's continued economic sustainability as it provides the community with a source of reliable and reasonably priced hydroelectric power. The project will:

- Displace an estimated average of 1,100,000 gallons of diesel fuel annually, which equates to over \$3,000,000 per year at today's price of \$2.81 per gallon.
- Replace and improve the water supply system for the SSRAA Whitman Lake Hatchery, helping SSRAA to fulfill its mission of enhancing salmon fisheries, supporting \$46 million in economic output and an estimated 420 jobs in Southeast Alaska. (McDowell Group, 2008)
- Provide increased capacity to support new construction and customer conversions from oil to electric heat.
- Provide a more reliable source of water for the Ketchikan Gateway Borough's Mountain Point Water Utility through improved water management in the watershed.
- Reduce reliance on diesel fuel to generate electric power, resulting in less greenhouse gas emissions
- Serve as an additional generating resource to the Ketchikan/Wrangell/Petersburg interconnected system (Southeast Alaska Power Agency, SEAPA)

The Need for Power

KPU is near-term capacity short and anticipates being energy short within four to seven years (excluding diesel generation). Assuming a five percent (5%) growth rate, it is anticipated that excess energy available from the Southeast Alaska Power Agency (SEAPA) will be fully subscribed in 2015. There are no other shovel-ready generation projects identified in the SEAPA region to supply additional energy and capacity to Ketchikan within this time frame. Any other new generation project is reasonably more than ten years away.

Ketchikan's load growth has increased over the last five years. In the last two years, KPU has experienced a three percent (3%) growth rate, normalized against temperature variation. Preliminary energy data from just two planned projects - the Ketchikan Gateway Borough Aquatic Center and the Alaska Ship and Drydock Assembly Building - indicate that these projects alone may require 2 million kWh annually, adding more than one percent (1%) to Ketchikan's current annual energy demand. Based on these and other identified projects, as well as routine construction and heating conversions, KPU anticipates a four to five percent (4%-5%) energy consumption growth rate through 2011.

Demand peaked at 30.5 megawatts in December 2009. KPU's available capacity at the time, less diesel, was 32 megawatts due to low hydro reservoir elevations. Whitman Lake's hydrology fits well with Ketchikan's winter peaking needs and the Whitman Lake Hydroelectric Project will add approximately four megawatts of capacity during these critical cold periods.

Construction of the Whitman Lake Hydroelectric Project will support the projected energy growth and peaking demand of Ketchikan, as well as being an added resource connected to SEAPA's Intertie with Wrangell and Petersburg.

Schedule and Cost Estimate

The Federal Energy Regulatory Commission (FERC) issued a license for the Whitman Lake Hydroelectric Project on March 17, 2009, and has granted KPU a two-year extension to commence construction. Project construction must begin no later than March 16, 2013 and be completed by March 16, 2016.

Phase	Description	Schedule	Cost Estimate
I	Reconnaissance studies	Completed	\$ 470,000
II	Licensing & feasibility studies	Completed	\$ 600,000
III	Final design and permitting	2008 – 2011	\$ 1,760,000
IV	Construction and project startup	2011 – 2013	\$16,220,000
Total			\$19,050,000

Approval has been granted by the Forest Service for construction of project facilities within an inventoried roadless area. Final design drawings are being prepared for FERC and agency approval. Construction is expected to begin in 2011, with the project coming on-line in 2013.

Funding Request

In 2009, the Alaska Energy Authority approved a \$1,300,000 grant for the project design. Although the Alaska Legislature approved a \$16,680,000 appropriation as part of the 2011 state capital budget, Governor Parnell vetoed all but \$1,000,000 of the construction funding. The City of Ketchikan d/b/a Ketchikan Public Utilities is again seeking an additional \$15,680,000 to fund the remainder of the project.

Whitman vs. Other Alternatives

There are no other projects that may be added to the SEAPA interconnected system that are licensed and as near to shovel-ready as the Whitman Lake Hydroelectric Project. The environmental studies, permitting and licensing process for Whitman took twelve years. Even after identification of the next FERC jurisdictional resource, it will be at least ten years before another project would be operational. Ketchikan's and SEAPA's available renewable energy resources will be exceeded before that time.

While KPU fully supports the creation of an Integrated Resource Plan (IRP) for Southeast Alaska, Ketchikan cannot wait for completion of the IRP before moving ahead with construction of the Whitman Lake Hydroelectric Project. If construction does not begin by March 2013, Ketchikan loses its FERC license, many years of planning and a valuable renewable energy resource for Southeast Alaska.

The alternative to construction of the Whitman Lake Hydroelectric Project is increased operation of KPU's diesel generators. Not only are the emissions harmful to the environment, but also the cost of diesel generation is likely to remain high in comparison with hydroelectric generation. In addition, new National Emissions Standards for Hazardous Air Pollutants issued by the EPA have the potential to greatly increase the cost of diesel generation.



OceansAlaska

MARINE SCIENCE CENTER

October 28, 2009

Mr. Karl Amylon
General Manager
Ketchikan Public Utilities
2930 Tongass Avenue
Ketchikan, AK 99901

Mr. Amylon,

Ketchikan Public Utilities (KPU) Whitman Lake Hydroelectric Project would benefit OceansAlaska in several aspects in the development of a Marine Science Center in Ketchikan. KPU shares OceansAlaska's vision for sustainable economic growth and the development of renewable energy resources, and the Whitman Project would support OceansAlaska's operations in marine research, education, exhibition, and shellfish development. OceansAlaska strongly supports and advocates the Whitman Lake Hydroelectric Project.

The Whitman Project would enable OceansAlaska to be powered by a clean, renewable energy source. While OceansAlaska envisions conducting research into alternative energy resources such as tidal and wave generation in the future, hydroelectric power is a proven, reliable, efficient, and renewable energy source. The additional capacity from the Whitman Project will help meet our energy demands and allow the Marine Science Center to be powered by clean, renewable energy sources- reducing our greenhouse emissions and assisting the Center in becoming a beacon of sustainable growth and resource stewardship.

The cost of energy is critical to the success of the Marine Science Center and the growth in the shellfish industry. Decreased electric costs will help attract private investment and new economic development in the shellfish industry, which has the potential to produce 400 jobs and \$50M annually. The Whitman Project and decreased reliance on expensive diesel will be a critical component in the success of that industry in Ketchikan.

Sincerely,

David Mitchel
General Manager

Mr. Butch White
November 3, 2009
Page Two

- Use existing infrastructure, resulting in a smaller environmental footprint vs. constructing infrastructure for another energy source.
- Provide local jobs during construction.
- Increase electrical system reliability.

The Project will operate in conjunction with the Whitman Lake Hatchery, and will improve the reliability and longevity of its water supply. The hatchery is owned and operated by the Southeast Regional Aquaculture Association (SSRAA). An economic impact study reports that, in 2007, SSRAA was responsible for producing \$47 million in economic output in Southern Southeast Alaska.

The Borough's Mountain Point water utility system, which draws its source water from Whitman Creek, will also benefit from construction of the hydroelectric project. Its operation includes year-round instream flow releases and a monitoring program that will enable KPU to observe and manage the water in the Whitman Creek watershed on a real-time basis. This will ensure a more steady and predictable flow to the Mountain Point water utility. The utility provides potable water for 286 homes, and is expected to increase to approximately 350 homes upon completion of an unrelated project now underway.

In light of the many benefits this project brings to the residents of the Ketchikan Gateway Borough, the Assembly has expressed its strong support for the efforts of Ketchikan Public Utilities to fund and construct a hydroelectric power facility at Whitman Creek.

Sincerely,

Michael J. Painter for Mayor Kiffer

Dave Kiffer
Mayor
Ketchikan Gateway Borough



KETCHIKAN GATEWAY BOROUGH

1900 First Ave Suite 115 • KETCHIKAN, ALASKA 99901

• 907/228-6605 • fax 907/228-6697

www.borough.ketchikan.ak.us

OFFICE OF THE BOROUGH MAYOR

November 3, 2009

Mr. Butch White
Grants Administrator
Alaska Energy Authority
813 West Northern Lights Blvd
Anchorage, Alaska 99503

Dear Mr. White:

In March 2009, the Federal Energy Regulatory Commission issued a license to Ketchikan Public Utilities (KPU) for development of a hydroelectric power facility at Whitman Lake. The proposed Whitman Lake Hydroelectric Project (Project) utilizes an existing dam and will generate power with water that would otherwise be spilled. It will have a capacity of 4.6 megawatts and produce an estimated 16,000,000 kilowatt-hours annually.

Development of the Project will provide a long-term source of clean renewable energy and will provide numerous other benefits to the Ketchikan Gateway Borough and its residents. It will:

- Provide additional capacity to meet peak energy demand as customers convert from oil to electric heat. For example, the Ketchikan Gateway Borough School District has notified KPU of plans to convert its existing oil heating systems to electric boilers. This conversion alone will add as much as 6 megawatts of load to KPU's system, a nearly 20% increase over the 2008 cold weather peak load of 30.4 megawatts. The added capacity provided by the Project will help support this significant increase and avoid the need for diesel generation to meet peak loads.
- Provide a clean, renewable source of energy and reduce greenhouse gas emissions. It is estimated that the Project will displace an estimated average of 1,080,000 gallons of diesel fuel annually, over the lifetime of the project.
- Reduce the cost of energy, attracting new economic development and supporting existing industry, improving quality of life for customers facing high energy costs from diesel generation.



Ketchikan Gateway Borough School District

Robert Boyle, Superintendent

333 Schoenbar Road

Ketchikan, AK 99901

phone 907-247-2109; fax 907-225-3870

boyle@kgbsd.org

October 27, 2009

To Whom It May Concern,

Operational costs for the Ketchikan Gateway Borough School District comprise a hefty part of our annual budget. In a typical winter we consume 260,000 gallons of diesel to heat 7 buildings in educating 2,130 students. The cost of fuel varies from \$520,000 to over \$1,016,000. That equates to approximately 4% of our total budget.

Cost estimates indicate that dual-burning electric/ diesel heaters could save the District as much as \$400,000 annually, saving a potential of 250,000 gallons of diesel. Funding patterns for schools suggest that as energy costs rise, failure to convert to the lower cost electric burners may cost the District five teaching positions.

Disregarding the cost of diesel, the possibility of exchanging a carbon-based fuel for a clean energy like hydro-produced electricity is a goal of the District. It is our wish to reduce our consumption of fuels that add to environmental concerns.

The Ketchikan Public Utilities is a very reliable provider of energy. They have a vision of the future that supports the school district and will provide us with a stable source of clean energy well into the future. We are strongly in support of the Whitman Hydroelectric Project. It may well be essential to our continued level of performance in providing the community an educational program of high quality.

Sincerely,

A handwritten signature in cursive script that reads "Robert Boyle".

Robert Boyle
Superintendent

Resolution No. 2011-01

Advisory Work Group for the Southeast Alaska Integrated Resource Plan

Whereas: The Alaska Energy Authority is conducting a Southeast Integrated Resource Plan as directed by the 26th Alaska State Legislature.

Whereas: The Southeast Integrated Resource Plan will not be completed until January 2012.

Whereas: Many citizens and businesses in the Southeast are suffering severe economic impact from the high cost of oil contributing to very high electricity and space heating costs.

Whereas: The following list of projects will help alleviate the impacts of the high cost of oil on citizens and businesses in the Southeast.

Whereas: The following list of projects have been under development for many years, have completed or nearly completed exhaustive FERC licensing or similar process, and have broad public support.

NOW THEREFORE BE IT RESOLVED THAT The Advisory Work Group for the Southeast Alaska Integrated Resource Plan unanimously requests that AEA accelerate consideration of the below listed projects and that they not be delayed as AEA conducts the SE Integrated Resource Plan project.

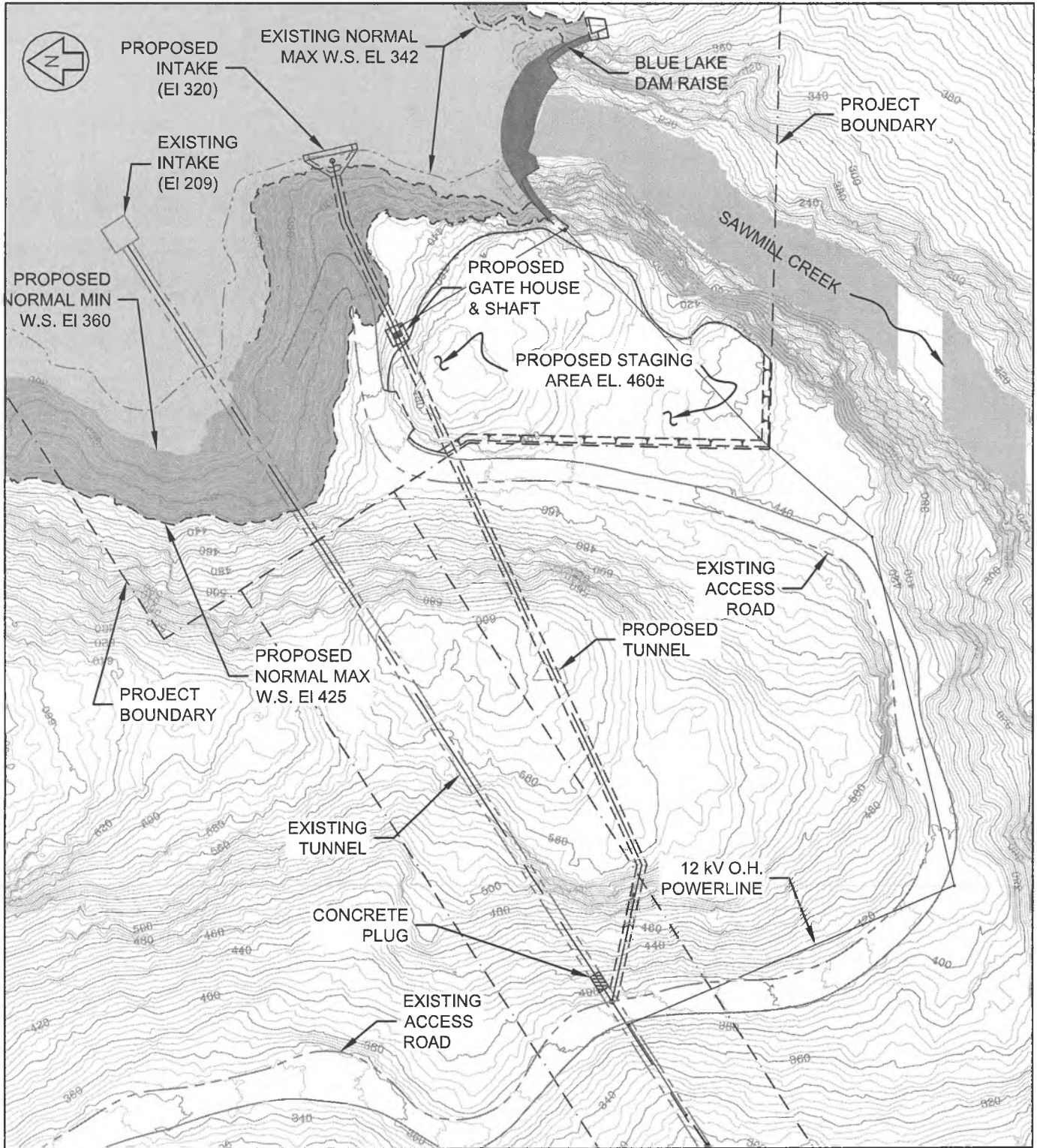
NOW THEREFORE BE IT FURTHER RESOLVED THAT The Advisory Work Group for the Southeast Alaska Integrated Resource Plan unanimously requests that the 27th Alaska State Legislature provide funding for the continued development of the following projects in alphabetical order to provide relief to the citizens and businesses in Southeast Alaska from the high cost of electricity and space heating.

- Blue Lake Hydro
- Kake to Petersburg Intertie
- Metlakatla to Ketchikan Intertie
 - Reynolds Creek Hydro
 - Thayer Creek Hydro
 - Whitman Lake Hydro

By: 

Date: March 21, 2011

Rick Harris, Executive Vice President, Sealaska Corporation
Chairman, Southeast Alaska Integrated Resource Plan Advisory Work Group



PLAN VIEW

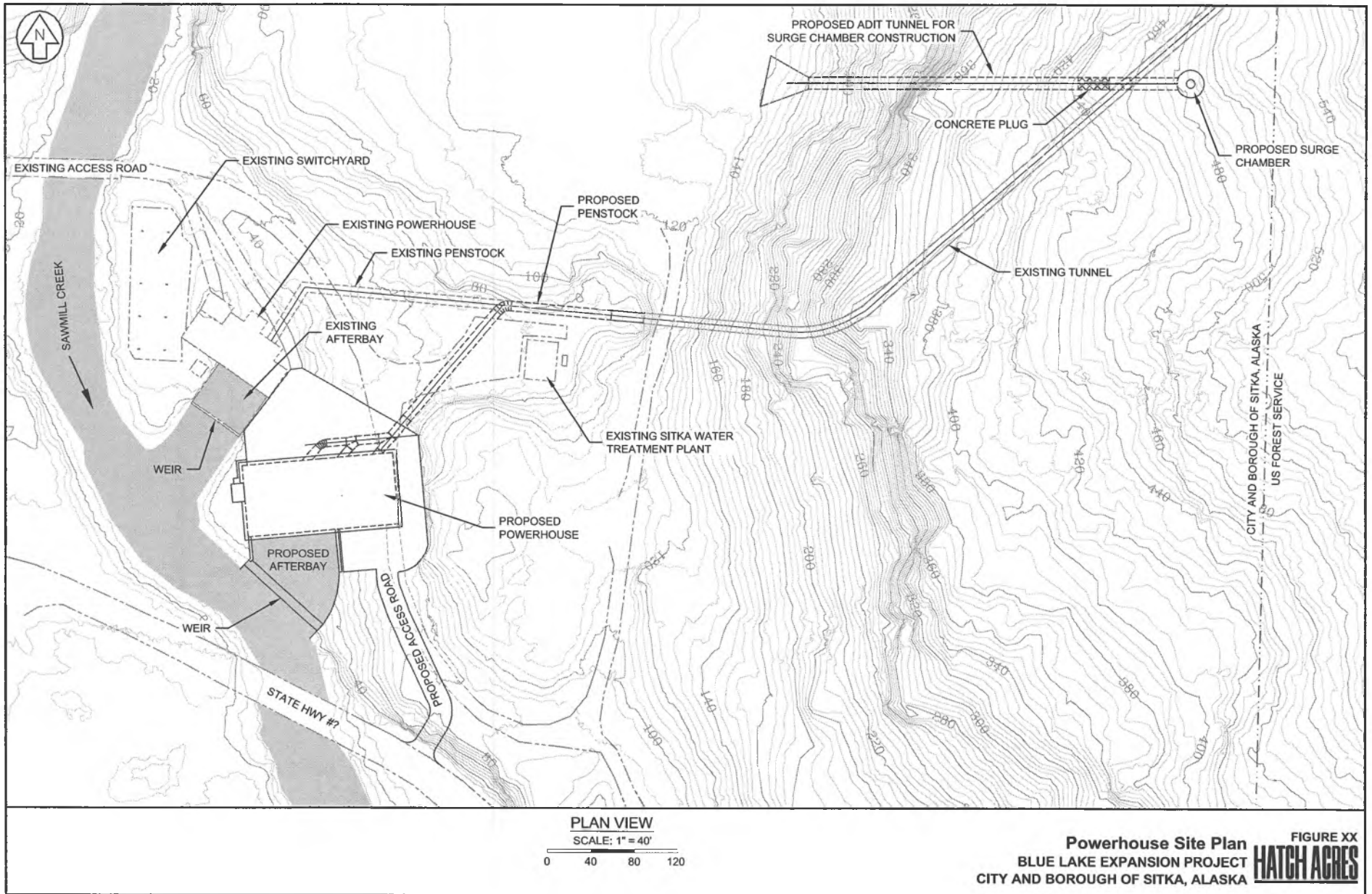
TO FVU

SCALE: 1" = 150'



Dam Intake Area Plan
BLUE LAKE EXPANSION PROJECT
CITY AND BOROUGH OF SITKA, ALASKA

FIGURE XX
HATCH ACRES



Kodiak Electric Association, Inc.

Terror Lake Unit 3 Hydroelectric Project – Facility Expansion

Kodiak Electric Association, Inc (KEA) Vision Statement: *Endeavor to produce 95% of energy sales with cost effective renewable power solutions by the year 2020.*

Project Description

The Terror Lake Unit 3 Hydroelectric Project – Facility Expansion consists of the installation of a third hydroelectric turbine and related infrastructure capable of producing and transmitting an additional 11.25 Megawatts (MW) in the existing Terror Lake Hydroelectric Facility. Terror Lake Hydroelectric Facility is KEA's existing hydroelectric power plant with two turbine units that supply about 80% of KEA's power. The original engineers of the Terror Lake facility had the foresight to design the facility for the expansion to three turbines. The original design assumed the day would arrive when additional capacity would be required. That day has arrived. Kodiak's growing electric demand has surpassed the current capacity of Terror Lake Hydroelectric Facility. Expanding the capacity by adding another 11.25 MW turbine generator will enhance the stability of KEA's isolated grid system, allowing additional forms of renewable energy to be integrated and Kodiak's dependence on diesel fuel to be minimized. The third hydroelectric turbine at Terror Lake is the cornerstone necessary for KEA to achieve its renewable energy vision.

Project Benefit

As KEA strives to implement more renewable resources, the future must include a generation source that increases our capacity and system stability. Hydroelectric power is a unique form of renewable energy in that it is a dispatchable base load that can respond quickly to system demand. It is this key attribute of hydropower that would allow KEA to integrate more variable sources of renewable energy, like wind, onto its isolated grid.

The Terror Lake reservoir acts like a battery for KEA's Pillar Mountain Wind Project Phase I, as well as for future renewable energy projects like Pillar Mountain Wind Project Phase II. An energy storage system is necessary for the variability of wind energy. The reliability of wind energy on a minute-to-minute basis is uncertain because winds could be gusting one minute and then suddenly calm. This unpredictability requires KEA to have sufficient capacity available to meet load requirements. Currently, diesel generation is utilized to meet KEA's increased load demand, which is neither economical nor environmentally friendly.

Due to grid stability under KEA's current configuration, the contribution of renewable energy resources has reached its maximum. An additional 11.25 MW of power provided by a third hydroelectric turbine would supply the necessary capacity and enhanced frequency stability to assist in supporting additional sources of variable renewable power, like Pillar Mountain Phase II, which is the addition of three more

1.5 MW wind turbines. Thus, Terror Lake Hydroelectric Facility is the cornerstone for additional renewable energy. Without the expanded hydro capacity, the addition of future variable renewable energy on KEA's system will not be feasible.

The third hydroelectric turbine has many other straight forward benefits which are as follows:

- Peak Load Capability – Currently, KEA's peak load is over 26 MW, which cannot be met with the two Terror Lake hydroelectric units. An additional unit will allow KEA to cover peak loads without utilizing diesel fuel.
- System Redundancy – The current Terror Lake hydroelectric units are over 27 years old. They require more maintenance time to keep them reliable. The third hydroelectric turbine would bring redundancy to allow KEA time to properly maintain the units during low electric load seasons and not operate with diesel power.
- Greater Efficiency – Operating with a brand new hydroelectric turbine, along with operational efficiencies, will allow Terror Lake to produce an estimated additional 2.9 million kWh per year.
- Grid Stability – Three Terror Lake hydroelectric turbines enhances KEA's grid stability, saves future distribution costs, and allows KEA to add more variable wind power to the system, thereby providing better quality electricity.

Alaska Energy Authority (AEA) Review

This project is part of the Alaska Renewable Energy Fund Round IV. It was ranked #6 by AEA and had a very positive benefit to cost ratio of 2.21.

Economic Analysis

The Terror Lake Unit 3 Hydroelectric Project has a great economic benefit to the community of Kodiak, and that benefit continues to grow as the price of diesel rises. As stated above, the benefit to cost ratio is 2.21. The benefit to cost ratio is calculated on only the direct benefits of the project. The greatest benefits are what it brings in the future to our community. As stated earlier, this project will allow for the expansion of wind power on KEA's generation system. Once Pillar Mountain Phase II is added, the combined savings at today's fuel price of the third hydroelectric turbine at Terror Lake with the additional wind power would be almost 17 cents per kilo-watt hour (kWh) for 16.7 million kWh per year. At the current fuel price of \$3.51 per gallon, the net savings to Kodiak would be approximately \$2.8 million in the first year.

Community Support

After KEA's great success with Pillar Mountain Phase I, the community is very excited about the installation of Pillar Mountain Phase II. To accomplish this, the third hydroelectric turbine is integral. AEA gave the maximum score to KEA for community support during their evaluation. KEA has general community support as well as resolutions of support from the Kodiak Island Borough, the City of Kodiak, the U.S. Coast Guard Base, and the Kodiak Chamber of Commerce.

Current Status and Schedule

The project is currently underway. The system substation upgrade necessary for this project is in the construction phase. The design engineering for the turbine generator is underway with a purchase scheduled for this year in early fall. Due to long lead times for these types of units (16 months), the actual installation will be completed during the summer of 2013. KEA has received waivers from the U.S. Fish and Wildlife Service (USFWS), specifically their Endangered Species Act (ESA) Branch, National Marine Fisheries Service (NMFS), US Army Corps of Engineers (USACE), Alaska Department of Fish and Game (ADF&G), State Historic Preservation Officer (SHPO), and the Alaska Department of Natural Resources (DNR) Water Resources Division stating that there are no environmental concerns for the project. This allows KEA to move forward with the application for the FERC permit. FERC has seen no issues with the project and estimates a permit should be finalized by early 2012.

Funding Source and Cost

The funding for this project will be a combination of grants from the Alaska Renewable Energy Fund, General State Appropriation Grant, and KEA. KEA has secured low interest financing through a federal clean renewable energy bond program for the remainder of the funding. From the current cost estimates, KEA costs and state funding are at approximately 50/50. The total cost of the project is estimated at \$15,274,550.

Conclusion

KEA is excited about this project and all the benefits that it will bring our community. The third hydroelectric turbine at Terror Lake will bring efficiency, redundancy, peak load capability, and a platform to build off of for expanding wind generation on Pillar Mountain. The benefits to the community will be lower costs, renewable power, and a stable cost platform for the future. Terror Lake Hydroelectric Facility was built with this project in mind, and the time is now to add it to the system to achieve KEA's vision: "Endeavor to produce 95% of energy sales with cost effective renewable power solutions by the year 2020."

FY2012 CBS LEGISLATIVE CAPITAL PROJECT REQUEST

Project Title: EXPANSION TO MAXIMUM CAPACITY OF THE BLUE LAKE HYDROELECTRIC PROJECT

Total Project Cost:	\$100,000,000 (100%)
Funding already secured:	\$20,500,000 State FY2009/2010 (20.5%)
FY2012 State funding request:	\$28,500,000 (28.5%)
FY2012 Federal funding request:	\$12,500,000 (12.5%)
Additional Funding Required/Outstanding:	\$38,500,000 municipal (38.5%)
City and Borough of Sitka Federal Tax ID Number:	92-0041163

The Sitka Blue Lake Hydroelectric Project is the Number One Highest Priority of the City and Borough of Sitka and the Sitka community. It has been studied by AEA, Southeast Conference and the local CBS utility since the 1980's and is recommended for full City and Borough of Sitka funding by AEA's Southeast Integrated Resources Plan Advisory Committee. The City and Borough of Sitka requests **\$28,500,000 further assistance from the State of Alaska to fully fund the State's interest in the \$100 million Blue Lake Hydroelectric Project Expansion**, which has increased due to an increase in project costs. Sitka will match each dollar of State assistance with the goal of ultimately financing the project 50 percent with State funds and 50 percent municipal funds if Federal funding is not forthcoming.

The scope of the Blue Lake Hydroelectric Project is to raise the height of the existing dam by 83 feet to elevation 425 feet, construct a new intake structure and a new section of penstock to supply a new powerhouse to be constructed adjacent to the existing powerhouse. The new powerhouse will replace the existing two 3MW generators with three 5.3MW generators. This will increase installed capacity from 7.5MW to 17MW, with an increase in Sitka's average total annual hydroelectric energy production by about 32,000 MWh or 29 percent of system capacity. Sitka is aggressively engaged in the preliminary engineering and licensing phase of this expansion of its hydroelectric capability at Blue Lake. The goal is to complete the construction and bring this new hydroelectric capacity on line in 2015.

Sitka has exhausted its hydroelectric resources. Load studies predict up to 5 million gallons of fuel oil for the use of supplemental diesel generators will be required prior to completion of the Blue Lake Expansion Project. Sitka homes and businesses are moving from the high cost of heating oil to clean, renewable hydroelectric energy. The total energy requirements of Sitka are currently met by about 80 percent oil and 20 percent hydroelectric energy resources. Although system load growth declined for FY'10 due to milder weather and stable fuel oil costs, annual KWh sold in FY'09 increased by 3.36 percent over FY'08, which follows load increases of 4.5 percent in FY'08, and 8 percent in FY'06. Base-case load studies have predicted annual load growth at approximately 1.2 percent, yet the electric system has seen unprecedented growth, averaging 3.8 percent annually since 1973. The existing hydroelectric generation is now operating at over 96 percent capacity. It is expected that volatile oil prices will continue the trend of significant system load growth and that any new hydroelectric capacity will be fully utilized to displace oil for space and water heating.

Despite CBS actively promoting energy conservation, hydroelectric energy usage is escalating at a rate that will shortly exceed system capacity. Therefore, Sitka is actively working to complete the project as quickly as possible and is pledging up to 50 percent of the total project costs.



Welcome Legislators!

Thank you all for your continued leadership and hard work on behalf of our region. Southeast has made great strides in many areas – but especially on the energy front. The establishment of the renewable energy grant fund and subsequent funding has seen unprecedented investment in many projects and the creation of HB 306 and SB 220 (with the southeast energy fund) will help the region achieve its quest toward energy security and diesel-independence.

This year's main task will be the development of the Southeast Integrated Resource Plan (IRP). This IRP will be one of the most important documents produced for the region since our 1997 Intertie System Plan (and subsequent updates in 2003/2005) and will provide guidance to communities, utilities – and the State of Alaska as energy infrastructure gets planned for and constructed in our region.

But while we wait for the conclusions of the IRP, there are a number of projects that have been recognized throughout the region that need funding now. The following list of energy projects are offered for your consideration (listed in alphabetical order):

- Blue Lake Hydro - The scope of this project is to raise the height of the existing dam by 83 feet construct a new intake gate and a new section of power tunnel to supply a new powerhouse to be constructed adjacent to the existing powerhouse.
- Kake to Petersburg Intertie – This project has entered the NEPA phase and is funded through the environmental process. The community of Kake is seeking funding so that the project can begin construction as soon as the intertie is designed and permitted (estimated spring 2012).
- Metlakatla to Ketchikan Intertie – The combined hydros at Chester Lake and Purple Lake generate surplus power that could be dispatched to Ketchikan or to Kake via the Southeast Alaska Power Agency (SEAPA) intertie system if extended to Metlakatla. This project is under construction but needs funding for the segment between Annette Island and Ketchikan.
- Reynolds Creek Hydro – This project is officially in the construction phase. Good progress has been made in the creation of a project management team that is now updating costs and performing “value-engineering” tasks. It is anticipated that gap funding will be sought to cover construction-inflation costs that have increased since the project began.
- Thayer Creek Hydro – This hydro is the known solution to Angoon’s need for renewable energy development. The Forest Service signed the EIS Record of Decision for the Thayer Creek Hydroelectric Project in May 2009. Kootznoowoo has the rights to develop the project, and IPEC is the certificated and regulated electric provider for Angoon.
- Whitman Lake Hydro - Development of the Whitman Lake Hydroelectric Project is critical to Ketchikan’s continued economic sustainability as it provides the community with a source of reliable and reasonably priced hydroelectric power. The project will operate in cooperation with the Whitman Lake Hatchery (owned by Southern Southeast Regional Aquaculture Association).

For more information, contact the communities directly or Southeast Conference Energy Coordinator Robert Venables at energy@seconference.org.

Resolution No. 2011-01

Advisory Work Group for the Southeast Alaska Integrated Resource Plan

Whereas: The Alaska Energy Authority is conducting a Southeast Integrated Resource Plan as directed by the 26th Alaska State Legislature.

Whereas: The Southeast Integrated Resource Plan will not be completed until January 2012.

Whereas: Many citizens and businesses in the Southeast are suffering severe economic impact from the high cost of oil contributing to very high electricity and space heating costs.

Whereas: The following list of projects will help alleviate the impacts of the high cost of oil on citizens and businesses in the Southeast.

Whereas: The following list of projects have been under development for many years, have completed or nearly completed exhaustive FERC licensing or similar process, and have broad public support.

NOW THEREFORE BE IT RESOLVED THAT The Advisory Work Group for the Southeast Alaska Integrated Resource Plan unanimously requests that AEA accelerate consideration of the below listed projects and that they not be delayed as AEA conducts the SE Integrated Resource Plan project.

NOW THEREFORE BE IT FURTHER RESOLVED THAT The Advisory Work Group for the Southeast Alaska Integrated Resource Plan unanimously requests that the 27th Alaska State Legislature provide funding for the continued development of the following projects in alphabetical order to provide relief to the citizens and businesses in Southeast Alaska from the high cost of electricity and space heating.

- Blue Lake Hydro
- Kake to Petersburg Intertie
- Metlakatla to Ketchikan Intertie
 - Reynolds Creek Hydro
 - Thayer Creek Hydro
 - Whitman Lake Hydro

By: 

Date: March 21, 2011

Rick Harris, Executive Vice President, Sealaska Corporation
Chairman, Southeast Alaska Integrated Resource Plan Advisory Work Group



Chugach Electric Association
City of Seward Electric
Golden Valley Electric Association
Homer Electric Association
Matanuska Electric Association

c/o Matanuska Electric Association, Inc.
Post Office Box 2929, Palmer, AK 99645

May 5, 2011

Representative Eric Feige, Co-Chair
Representative Paul Seaton, Co-Chair
House Resources Committee
House of Representatives
State Capitol
Juneau, Ak 99801-1182

Representative Neal Foster, Co-Chair
Representative Lance Pruitt, Co-Chair
House Energy Committee
House of Representatives
State Capitol
Juneau, Ak 99801-1182

Dear Co-Chair Feige, Co-Chair Seaton, Co-Chair Foster and Co-Chair Pruitt:

I am writing to you on behalf of the Alaska Railbelt Cooperative Transmission and Electric Company (ARCTEC). ARCTEC was formed by five Railbelt electric utilities to collectively address Railbelt energy needs and challenges.

The five utilities include Chugach Electric Association, Matanuska Electric Association, Homer Electric Association, Golden Valley Electric Association and the Seward Electric System. While declining initial membership in ARCTEC, Anchorage Municipal Light & Power has committed to participate and provide ongoing support.

The idea of forming a regional electric organization for the Railbelt began several years ago with the Railbelt Electric Grid Authority (REGA) study initiated by the Alaska Energy Authority. Early in this process it was recognized that there were several significant benefits to a regional organization. These include coordinated operation of the Railbelt transmission system, economic dispatch of regional generation, regional resource and transmission planning and achieving economies of scale by jointly developing new generation and transmission projects.

After the REGA study was completed in September 2008, a joint utility task force was formed to investigate the formation of a regional entity. The work culminated in the incorporation of ARCTEC on January 7, 2011.

An early task for ARCTEC was to identify and prioritize energy projects that would strengthen the Railbelt transmission grid, increase the supply of energy and enhance fuel supply and deliverability. The prioritized projects were the core of ARCTEC's legislative agenda and includes requests for State financial assistance for these capital projects.

The projects which ARCTEC is requesting funding assistance for are listed on the attached sheet. The projects can be grouped into three categories:

- Generation projects that increase the supply and reliability of energy.
- Transmission projects that strengthen the transmission grid to improve reliability, and the ability to transfer energy, by adding new facilities or upgrading existing facilities, some of which have been in service for over 50 years.
- A gas pipeline project to ensure gas can be reliably delivered to power plants when needed to meet peak demands.

These projects will increase the ability of the Railbelt electric utilities to reliably and economically meet the energy needs of the approximate 500,000 citizens that populate the Railbelt.

Your assistance in helping to secure the passage of a capital budget that includes these energy projects is needed and greatly appreciated.

Sincerely,

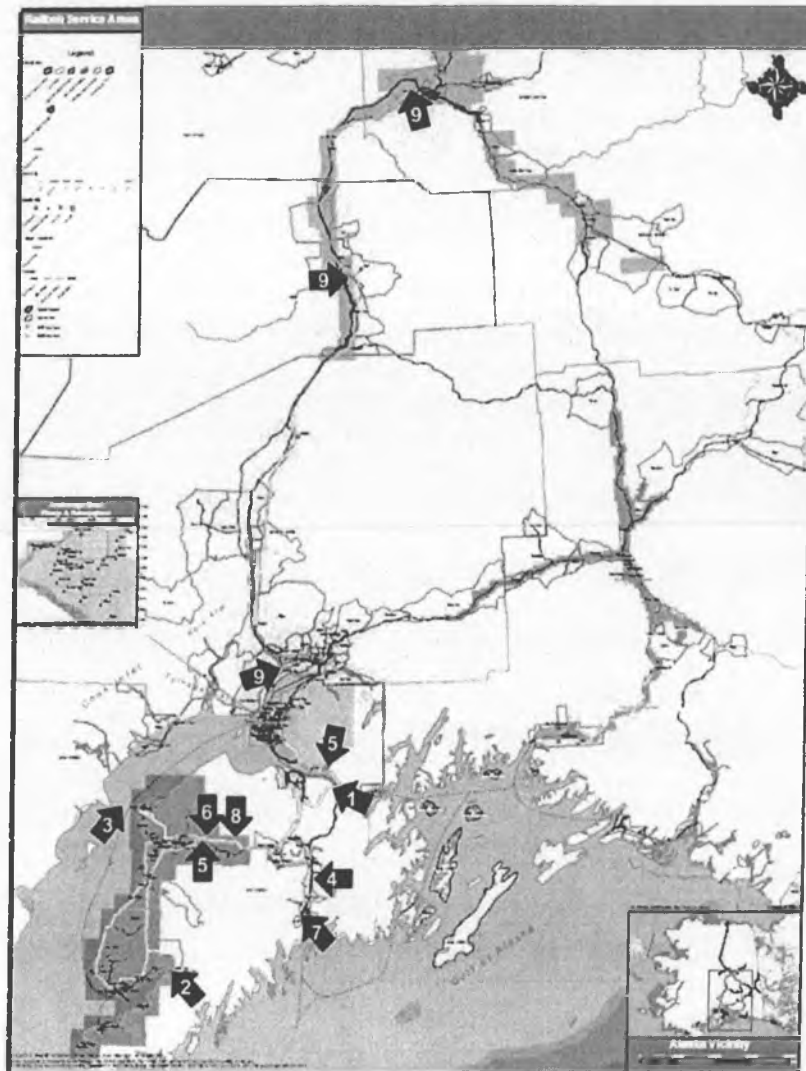
A handwritten signature in black ink, appearing to read 'Rick Schikora', with a long horizontal flourish extending to the right.

Rick Schikora
Chairman

**ARCTEC (Alaska Railbelt Cooperative Transmission and Electric Company)
Energy Projects in CSSB 46 Version T, Section 4 - Projects**

Project List

1. Anchorage to Quartz Creek Transmission Maintenance and Repair (\$25,000,000)
2. Battle Creek Diversion Project (\$15,000,000)
3. Cook Inlet Gas Gathering System Remodel (\$2,000,000)
4. Dave's Creek to Seward Transmission Line Completion (\$1,500,000)
5. Girdwood and Sterling Substation Improvements (\$4,000,000)
6. Quartz Creek to Soldotna Transmission Maintenance and Repair (\$10,000,000)
7. Seward Power Plant Integration (\$4,000,000)
8. Soldotna to Quartz Creek Transmission Study Design and Permitting (\$5,000,000)
9. Teeland to Healy Substation Improvements and Repair (\$5,000,000)



**ARCTEC (Alaska Railbelt Cooperative Transmission and Electric Company)
Energy Projects in CSSB 46 Version T, Section 4 - Projects**

Project Descriptions

1. Anchorage to Quartz Creek Transmission Maintenance and Repair (\$25,000,000)

The Anchorage to Quartz Creek transmission line is a segment of the transmission line that connects Anchorage to the Kenai Peninsula. The Anchorage to Quartz Creek segment was constructed in 1959 and is 76 miles long.

The project is to repair portions of the transmission line that are most at risk of failure. The segments are the first 11 miles of the line from the Anchorage end (Anchorage to Powerline Pass) and the 12 miles between Ingram Creek and Johnson Pass trailhead. The wood pole line is more than 50 years old, and based on field inspection, needs to be repaired to mitigate possible structure failure.

This line is a critical piece of electrical infrastructure because it provides access to the hydroelectric resources on the Kenai Peninsula (Bradley Lake and Cooper Lake) and provides reserve sharing for the entire Railbelt.

The AEA Railbelt IRP identifies this project “for priority attention because of their immediate impact on the reliability of the existing system”.

2. Battle Creek Diversion Project (\$15,000,000)

The Battle Creek Diversion project is to increase the amount of energy produced by the Bradley Lake hydroelectric project by diverting a portion of the Battle Creek water flow to Bradley Lake. Battle Creek is located two miles to the west of the Bradley Lake hydroelectric project on the Kenai Peninsula.

Diverting a portion of Battle Creek into Bradley Lake is expected to increase the annual energy output of Bradley Lake by about 10%. This increase in renewable energy output will be produced by the Bradley Lake project without any additional investment in generation or transmission facilities.

The six utilities that participate in the State-owned Bradley Lake project are members of the Bradley Lake Project Management Committee and all signed a resolution in support of this project. Thus, the governance of the project and participation by utilities is well established.

3. Cook Inlet Gas Gathering System Remodel (\$2,000,000)

The Cook Inlet Gas Gathering System (CIGGS) is an existing pipeline that provides transportation of natural gas from the west side of the Cook Inlet to the Kenai Peninsula

**ARCTEC (Alaska Railbelt Cooperative Transmission and Electric Company)
Energy Projects in CSSB 46 Version T, Section 4 - Projects**

side, but not vice versa. The project is to make equipment changes to the pipeline system to allow gas flow from the Kenai side of Cook Inlet to the west side of Cook Inlet.

Changes in the Cook Inlet gas supply and deliverability, consumer demand and commercial arrangements have driven the need to make the CIGGS pipeline bi-directional.

4. Dave's Creek to Seward Transmission Line Completion (\$1,500,000)

This project is to rebuild 1.5 miles of 50-year old wood-pole power lines. This will improve the reliability of electric service to the City of Seward and the Railbelt electric utilities' access to Seward's generation in the event of an emergency.

5. Girdwood and Sterling Substation Improvements (\$4,000,000)

The Girdwood and Sterling Substation project is to improve the reliability of electric service to the communities of Girdwood and Sterling. The project is to install new transmission switching at both substations. The upgraded switching equipment will reduce the likelihood of an outage at Girdwood or Sterling when the Anchorage to Kenai line has an outage. For example, the Anchorage to Girdwood section of the Anchorage to Kenai line has an outage, Girdwood can receive power from Kenai.

6. Quartz Creek to Soldotna Transmission Maintenance and Repair (\$10,000,000)

The Quartz Creek to Soldotna transmission line is a segment of the transmission line that connects Anchorage to the Kenai Peninsula. This segment was constructed in 1959 and is 54 miles long. Based on field inspection the line needs to be repaired to mitigate possible structure failure.

This line is a critical piece of electrical infrastructure because it provides access to the hydroelectric resources on the Kenai Peninsula (Bradley Lake and Cooper Lake) and provides reserve sharing for the entire Railbelt.

The AEA Railbelt IRP identifies this project "for priority attention because of their immediate impact on the reliability of the existing system".

7. Seward Power Plant Integration (\$4,000,000)

The purpose of the Seward Power Plant Integration Project is to enable Seward's diesel generation plant to seamlessly contribute generation to the Railbelt in the event of an emergency. The project is to upgrade switching components, SCADA, metering and other equipment and adding an on-site building suitable for monitoring the facility, immediate response, maintenance and emergency operations.

**ARCTEC (Alaska Railbelt Cooperative Transmission and Electric Company)
Energy Projects in CSSB 46 Version T, Section 4 - Projects**

**8. Soldotna to Quartz Creek Transmission Study Design and Permitting
(\$5,000,000)**

This project is for a conversion study, preliminary design and initial permitting to convert a transmission line between Soldotna and Quartz Creek substations to 115 kV from 69 kV. The upgrade of the 69 kV Soldotna to Quartz Creek line would increase the overall reliability of the system because it would add a second 115 kV line from Soldotna to Quartz Creek.

9. Teeland to Healy Substation Improvements and Repair (\$5,000,000)

The Teeland to Healy Substation Improvements and Repair project is to allow continued reliable service of the transmission line connecting the Anchorage - Mat-Su Valley area to Fairbanks.

The operation of the Alaska Intertie depends on electrical equipment to manage the power transfer. One component of the equipment that is critical to the operation of the Alaska Intertie is no longer manufactured. If one of three of these components fails before replacement, the Alaska Intertie operation will be limited and will be inoperable if more than one fails. The project is to replace components before failure.

The AEA Railbelt IRP identifies this project “for priority attention because of their immediate impact on the reliability of the existing system”.