HOUSE COMMITTEE REPORT

(9)
Date Referred to Committee: January 22, 2008 **FURTHER REFERRALS: Finance**

Date of Committee Action: 2/08/08

The RESOURCES Committee considered: **HB 336**

HOUSE BILL NO. 336 **SUSITNA HYDROELECTRIC PROJECT**

"An Act directing the Alaska Energy Authority to conduct a study of and to prepare a proposal for an appropriately sized Susitna River hydroelectric power project; and providing for an effective date."

Recommends it be replaced with [ ] HCS *or* [X] CS *for* HB 336 (RES)
For Senate Bills with new title: [ ] Technical Title [ ] New Title: HCR_____ **[X] Same Title [ ] New Title**

[ ] attach amendments
[ ] add new referral to _____Committee
[ ] Letter of Intent_____Committee

List of Abbrev for Depts.:
ADM
CED
COR
CRT
EED
DEC
DFG
GOV
HSS
LWF
LAW
LEG
MVA
DNR
DPS
REV
DOT
UA

NEW **FISCAL NOTES** *Assigned by Chief Clerk's Office				
List by Dept(s):	*FN#	Fiscal	Indet.	Zero
CED		✓		

PREVIOUS **FISCAL NOTES**				
List by Dept(s):	FN#	Fiscal	Indet.	Zero

Signing with recommendations	**Printed Last Name**	**DP**	**DNP**	**NR**	**AM**
	SEATON	✓			
	GUTTENBERG				X
	Edgmon				X
	Reinbold	✓			
	FAIRCLOUGH				X
	Wilson				X
	KAWASAKI				X
Chair:	Gatto		✓		
Chair:	Johnson	✓			

FISCAL NOTE

STATE OF ALASKA
2008 LEGISLATIVE SESSION

Fiscal Note Number:
Bill Version: HB 336
() Publish Date:

Identifier (file name): HB336-CED-AEA-01-25-08
Title: Susitna Hydroelectric Project
Sponsor: Johnson et al
Requester: Resources

Dept. Affected: DCCED
RDU: Alaska Energy Authority (453)
Component: Statewide Project Development
Component Number: 2888

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2009**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**	**FY 2014**
Personal Services							
Travel							
Contractual							
Supplies							
Equipment							
Land & Structures							
Grants & Claims							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES	**1,000.0**						
CHANGE IN REVENUES ( )							

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts							
1003 GF Match							
1004 GF							
1005 GF/Program Receipts							
1037 GF/Mental Health							
Other Interagency Receipts							
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2008) cost:

POSITIONS

Full-time							
Part-time							
Temporary							

ANALYSIS: *(Attach a separate page if necessary)*

This legislation requires the Alaska Energy Authority (AEA) to conduct a study and prepare a proposal for a hydroelectric power project on the Susitna River appropriately sized for the Railbelt Area.

The project would be significant in scope and would likely extend beyond one year; therefore, we suggest a capital appropriation. It is likely additional funds would be required, but these amounts are indeterminate at this time.
We assume that AEA would develop a best fit scenario, and develop a preliminary design to provide enough detail that a valid project concept cost estimate and schedule could be developed and reported to the Legislature no later than June 30, 2010.

Prepared by: Sara Fisher-Goad, Deputy Director - Operations — Phone 907-771-3012
Division: Alaska Energy Authority — Date/Time 1/25/08 9:00 AM
Approved by: Emil R. Notti, Commissioner — Date 1/25/2008
Commerce, Community, and Economic Development

(Revised 11/19/2007 OMB)

ALASKA STATE LEGISLATURE

Interim:
716 West 4th Avenue, Suite 640
Anchorage, Alaska 99501
Phone (907) 269-0200
Fax (907) 269-0204
Rep_Craig_Johnson@legis.state.ak.us

Session:
State Capitol, Room 126
Juneau, Alaska
99801-1182
Phone (907) 465-4993
Fax (907) 465-3872

REPRESENTATIVE CRAIG JOHNSON
HOUSE DISTRICT 28

Sponsor Statement
Susitna River Hydroelectric Power Project
HB 336

This legislation will direct the Alaska Energy Authority to conduct a review of the past studies and analyses of the Susitna River hydroelectric power project. Submittal of its report to the legislature would be no later than June 30, 2010.

Additionally, under this legislation, Alaska Energy Authority a will conduct a collaborative study with Railbelt utilities to propose an appropriately-sized hydroelectric power project on the Susitna River.

Low price of oil helped to end the Susitna hydropower plan in the mid 1980's. The high price of oil could open the window of opportunity for development today. This proposal would respond to the assessed needs for power expansion to Kodiak, Southwest, and Northern Alaska.

The Act is scheduled for termination June 30, 2010.

LEGISLATIVE RESEARCH REPORT

APRIL 13, 2005

REPORT NUMBER 05.206

A HISTORY OF MAJOR ENERGY APPROPRIATIONS, INCLUDING THE RAILBELT ENERGY FUND

PREPARED BY KATHLEEN L. WAKFIELD, LEGISLATIVE ANALYST

You asked about the history of the Railbelt Energy Fund (REF). Specifically, you asked us to review and up-date a list of appropriations to and from the fund, and for other major energy-related projects. In this report, we provide a brief history of Alaska's energy expenditures and a history of the REF, as well as brief discussions of other major projects. We also include several tables that show a chronological history of major energy appropriations, appropriations to and from the REF, and expenditures for the Power Cost Equalization program.

SUMMARY

Any discussion of Alaska's energy program over the last thirty years must begin with the understanding that the program has a complicated history, and that information is not available from any one source. We compiled information for this report from a variety of sources. We carefully reviewed data from the Office of Management and Budget and Legislative Finance, old

reports from the now defunct Division of Energy, information from the Alaska Energy Authority, fund data from the Department of Administration, and appropriations in Legislative Finance operating budget books and the *Session Laws of Alaska*. We tried to ensure that the information contained in this report is as complete and accurate as possible.

Major funding for energy projects began in **1976**, with an appropriation of $2.5 million to the water resources revolving loan fund. Out of that came the initial appropriations for loans for **major dam projects**: Green Lake, Swan Lake, Terror Lake, and Tyee Lake. In 1982, lawmakers changed the loans to grants, made additional appropriations for the projects, and also appropriated funds to purchase the hydroelectric project at Solomon Gulch.[1] The Swan, Terror, and Tyee Lake projects, along with Solomon Gulch, became known as the "Four Dam Pool." The Four Dam Pool was sold to private utility companies in 2002.[2]

In 1979, lawmakers appropriated the first funds for the **Susitna Hydroelectric Project**. Between 1979 and 1985, about $423 million was appropriated for Susitna. During the same period of time, lawmakers appropriated funds for the **Bradley Lake Hydroelectric Project**—a total of $328 million ($163 million in grants and $165 million in general obligation bonds).[3]

Between 1980 and 1984, legislators appropriated $124 million for the **Alaska Intertie**, which runs from Willow to Healy (and which was formerly called the "Anchorage/Fairbanks intertie"). In this same time period, lawmakers created the **Power Cost Equalization** program in the Division of Energy. The program was to reduce electrical rates paid by rural consumers to a level comparable to the rates in Anchorage, Fairbanks, and Juneau. From 1981 to 2005, PCE expenditures totaled about $378 million.[4]

In 1986, lawmakers created the **Railbelt Energy Fund** (REF). The Susitna project was cancelled, and the monies appropriated for it were repealed and reappropriated to capitalize the REF. Between 1986 and 2005, a total of $468 million was appropriated to the REF, and appropriations of about $437 million were made from the REF to fund a variety of projects. Projects funded from the REF include the Healy Cogeneration Project ($55 million), the intertie reserve for the Northern and Southern interties ($100 million) and the capitalization for the Power Cost Equalization and Rural Capitalization Fund ($67 million).

In 2000, lawmakers created the **Power Cost Equalization Endowment Fund** to support the PCE program. The fund was capitalized with an appropriation of $100 million from the

---

[1] The major dam projects were to provide electrical power to the following communities: Ketchikan (Swan Lake), Kodiak (Terror Lake), Sitka (Green Lake), Valdez/Glennallen (Solomon Gulch), and Wrangell/Petersburg (Tyee Lake).

[2] The AEA still owns Bradley Lake. The AEA also owns a small hydroelectric project at Larsen Bay on Kodiak Island. This project was paid for through revenue bonds, and includes water system upgrades as well as hydropower generation. The AEA has tried to get the community of Larsen Bay to take over the project, with no success at this point. Sara Fisher-Goad and Valorie Walker, AEA.

[3] Many of the figures used in this report are final tallies, and may not equal the total of the original appropriations for a particular project. For example, the original total for Bradley Lake was about $340 million--$175 million in general funds and $165 million in general obligation bonds, with a lapse amount of about $11.5 million. The figure we quote here is the total minus the lapse. Please note that we are not able to identify original totals in many cases, due to amendments to the original appropriations and repeals and reappropriations for different projects.

[4] This figure includes actual expenditures for fiscal years 1981-2003, and authorized budget amounts for FY2004 and FY2005.

Constitutional Budget Reserve Fund, and in 2002 the proceeds from the sale of the Four Dam Pool were deposited to the fund. The balance is about $192 million.[5]

Since those first appropriations in the 1970s, Alaska has appropriated approximately $762 million for major energy projects for the railbelt, and about $878 million for the Four Dam Pool and PCE (this does not include the endowment fund). Railbelt projects include Susitna, Bradley Lake, the Alaska, Northern and Southern interties, and the Healy cogeneration project. These figures do not include the many small energy projects and grants across the state (for example, bulk fuel loans, generator upgrades, small hydropower projects, and weatherization projects).

The following information provides more detail on some of these major projects. In addition, Table 1 shows a brief chronological history of the major energy appropriations.

FOUR DAM POOL

The "Four Dam Pool," as its name suggests, consists of four individual hydroelectric projects: two in Southeast Alaska (Swan Lake [Ketchikan] and Tyee Lake [Petersburg/Wrangell]), one in Kodiak (Terror Lake), and one serving Valdez/Glennallen (Solomon Gulch). The projects include generation and transmission facilities. Funding for these projects began in 1976, with the initial loans for Swan, Terror, and Tyee Lakes (Chapter 237, SLA 1976). In 1981-82, lawmakers appropriated about $53 million for the purchase of the Solomon Gulch project, which was constructed by the Copper Valley Electric Association.[6] Electrical utilities purchased hydropower from these four projects through long-term power sales agreements.[7] The Four Dam Pool was owned and operated by the state through the Alaska Energy Authority (AEA).[8] According to the AEA, total funding for the Four Dam Pool was about $499 million, provided through state grants and loans (approximately $295 million in grants, $185 million in loans, and including about $19 million in interest accrued over the life of the project).[9]

In 2000, lawmakers approved the sale of the Four Dam Pool, and in 2002 the Four Dam Pool Power Agency (a consortium of the utilities that had purchased power from the dams) acquired the projects with the help of a loan from the Alaska Industrial Development and Export Authority

---

[5] Personal communication, Sara Fisher-Goad, financial analyst, and Valorie Walker, deputy director/finance, Alaska Industrial Development and Export Authority, April 11, 2005. Ms. Fisher-Goad can be reached at 907-269-4623; Ms. Walker can be reached at 907-269-3011.

[6] Solomon Gulch is the oldest of the Four Dam Pool projects, and the only one not built by the State of Alaska. "Alaska's Public Energy Resources," Rural Resource Agency Report 85.003207, July 1985, p. 75.

[7] The Four Dam Pool utilities are Copper Valley Electric Association, Ketchikan Public Utilities, Kodiak Electric Association, Petersburg Municipal Power and Light, and Wrangell Municipal Light and Power.

[8] Like Alaska's energy projects, the Alaska Energy Authority has a complicated history. Originally, the Alaska Power Authority (APA) was part of the Department of Commerce and Economic Development. The APA became the AEA in 1991. In 1992, the AEA was placed under the auspices of AIDEA, and in 1999 rural energy programs formerly administered by the Division of Energy, such as PCE, were transferred to the AEA. The AEA continues to act as a separate legal entity, although personnel are provided by AIDEA and the executive director serves both organizations.

[9] Sara Fisher-Goad and Valorie Walker, AEA.

(AIDEA).[10] AIDEA loaned the consortium $77.1 million for the "purchase, closing costs and initial funding of reserves related to the acquisition of the Four Dam Pool Project."[11]

BRADLEY LAKE

As we mentioned above, funding for Bradley Lake began in 1979. During the 1980s, the state appropriated about $175 million for the project. That amount was made up of a mix of general funds ($68 million) and funding from the Power Development Fund ($50 million) and the Railbelt Energy Fund ($57 million). In 1993, about $11.5 million lapsed back into the REF. The total cost for Bradley Lake was $328 million, including $165 million in general obligation bonds. Bradley Lake came online in 1991 and provides electrical power to a variety of railbelt utilities: Anchorage Municipal Light and Power, Chugach Electric Association, Golden Valley Electric Association, Homer Electric Association, Matanuska Electric Association, and Seward Electric Utility.[12]

POWER COST EQUALIZATION PROGRAM

As you know, the Power Cost Equalization program, or "PCE," was established in 1980 for the purpose of reducing electrical rates paid by rural consumers to a level comparable to the rates in Anchorage, Fairbanks, and Juneau. Precursors to the current program were the Power Production Cost Assistance and the Power Cost Assistance programs. The Power Cost Equalization program was established in 1984, with expanded program parameters. In 1994, lawmakers created the Power Cost Equalization and Rural Energy Capitalization Fund, and capitalized it with an appropriation of $67 million from the REF.[13] Further deposits to the fund are composed of annual appropriations for electrical subsidies and grants, appropriations from the National Petroleum Reserve-Alaska special reserve fund, appropriations from the power cost equalization endowment fund, interest, and any "gifts, bequests, contributions from other sources, and federal money."[14]

---

[10] "The Four Dam Pool Power Agency Loan," *AIDEA 2004 Annual Report*, p. 40, *http://www.aidea.org*. "Hydroelectric Facilities," *Alaska Electric Power Statistics 1960-2001*, Institute of Social and Economic Research, University of Alaska Anchorage, November 2003, Appendix C-1, *http://www.iser.uaa.alaska.edu/Publications/akelectricpowerfinal.pdf*.

[11] "Status of the Four Dam Pool Project and AIDEA Financing," Alaska Industrial Development and Export Authority/Alaska Energy Authority, February 8, 2005.

[12] *Alaska Electric Power Statistics, 1960-2001*, Institute of Social and Economic Research, University of Alaska, November 2003, p. C-1.

[13] The Rural Electric Capitalization provision allows the AEA to award grants to eligible utilities for up to 75 percent of the costs for small power projects designed to reduce the cost of providing electrical power. According to AS 42.45.180(b), total grants may not exceed three percent of the available balance in the fund in any one year.

[14] AS 42.45.100(b).

Table 2 shows the actual expenditures for PCE for fiscal years 1981 through 2003, the authorized budget for FY2004 and FY2005, and the Governor's Requested Budget for FY2006. The total amount for the PCE program from 1981-2005 is about $378 million.

MAJOR INTERTIES

Funding for the construction of the Alaska intertie (formerly known as the "Anchorage/Fairbanks intertie") began in 1981.[15] Between 1981 and 1985, lawmakers appropriated about $124 million in general funds for the project, which runs from Willow to Healy, and in 2002 they appropriated about $20 million from the REF for an upgrade to the Teeland substation.

Lawmakers also funded other intertie projects, the major ones being the Northern, Southern, and Southeast interties and the Sutton/Glennallen intertie. The Northern intertie, which runs from Healy to Fairbanks, cost about $65 million. The Southern intertie from Anchorage to Kenai was never built—lawmakers appropriated about $47 million for the project, but the participating utilities pulled out.[16] The funds remain with the Alaska Energy Authority until they are repealed or reappropriated. The AEA has returned about $28.5 million in interest on the Southern intertie appropriation back to the State of Alaska.[17]

Lawmakers appropriated $55 million from the REF for the Sutton/Glennallen ($35 million) and Southeast ($20 million) interties in 1993. In 2000, those funds lapsed back into the REF. The Sutton/Glennallen project was cancelled, and the Southeast intertie is being built by the utilities that purchased the Four Dam Pool as part of the purchase agreement.

RAILBELT ENERGY FUND

As you know, lawmakers created the Railbelt Energy Fund in 1986. Management of the fund was assigned to the Department of Revenue, and monies were to be appropriated by the legislature for projects "to assist in meeting Railbelt energy needs."[18] Later, in 1993, lawmakers amended the statute to include expenditures for "programs, projects, and other expenditures to assist in meeting Railbelt energy needs, including projects for retrofitting state-owned buildings and facilities for energy conservation."[19] As of March 31, 2005, the unexpended and unobligated

---

[15] In the 1980s, lawmakers also appropriated funds for several smaller intertie projects, or for feasibility studies for such interties. We do not include these projects in this report.

[16] Sara Fisher-Goad and Valorie Walker, AEA.

[17] The Attorney General determined that interest on these funds should be returned to the general fund. Sara Fisher-Goad and Valorie Walker, AEA, April 11, 2005.

[18] Sec. 1, Ch. 29, SLA 1986. The "railbelt" refers to Alaska communities on the road system.

[19] AS 37.05.520 (Chapter 18, SLA 1993).

balance of the Railbelt Energy Fund is $31,166,876 (this includes the FY2005 year-to-date interest earnings of $1,112,997).[20]

The initial funds for the REF came from monies left over from the Susitna Hydroelectric Project. About $424 million was appropriated for Susitna during the early 1980s, but only about $134 million was spent on the project. When plans for the dam were discontinued, lawmakers repealed the appropriations for the Susitna project and reappropriated the remaining amounts to the REF as the initial capitalization (roughly $289.5 million).[21]

Since 1986, a total of just over $468 million has been appropriated to the REF, including interest. About $437 million has been spent from the fund for a variety of projects, including the Bradley Lake Hydroelectric project ($57 million) and the Railbelt intertie reserve ($100 million for the Soldotna-Anchorage and the Healy-Fairbanks interties).[22] In addition, funds were appropriated to the Power Project Fund for loans for the Sutton to Glennallen and Swan Lake to Tyee Lake interties ($55 million total).[23] In 1993, $67 million was appropriated to capitalize the Power Cost Equalization and Rural Electric Capitalization Fund (these were general funds appropriated to the REF for this specific purpose).

Tables 3 and 4, attached, show the details of appropriations to and from the fund.[24]

Lawmakers have made no appropriations from the REF since 2002, when they appropriated $42.9 million for various transmission line and intertie projects.[25] The REF is normally not used for general government expenditures, and according to the Office of Management and Budget, projects selected for appropriations from the REF have traditionally been determined by the legislature outside the normal budget process. The Legislative Finance Division notes that the

---

[20] Personal communication from Brenda Swift, accountant, Division of Finance, Department of Administration, April 5, 2005. Ms. Swift can be reached at 907-465-5614.

[21] Chapter 41, SLA 1985, Sections 4, 10, 12, 13, 15, 16, 17, and 18.

[22] By Sec. 2, Ch. 96, SLA 1987, $50 million in GF was repealed and reappropriated to the REF for Bradley Lake. Ch. 172, SLA 1988 appropriated an additional $7 million from the REF to Bradley Lake. In 1993, $11.5 million from the Bradley Lake project lapsed back into the REF (Sec. 7[1]-[7], Ch. 19, SLA 1993). The appropriation for the intertie reserve is contained in Sec. 159, Ch. 208, SLA 1990.

[23] Sec. 4(a) and Sec. 5(a), Ch. 19, SLA 1993. In 2000, the funds for these two projects lapsed back into the REF. The utilities originally involved in the Sutton/Glennallen intertie project withdrew and the project was cancelled. The Swan Lake/Tyee Lake intertie is being constructed by the utilities that bought the Four Dam Pool as a part of the purchase agreement. Sara Fisher-Goad and Valorie Walker, AEA.

[24] Although the initial intent of the REF was to fund energy programs in the railbelt, during the early 1990s it was also used to fund a variety of capital projects across the state. As you will see in Table 2, lawmakers appropriated almost $85 million from the REF for various capital projects in 1990 and 1991, including funds for the University of Alaska ($39.5 million), the McLaughlin Youth Center ($2.5 million), and a congregate housing facility for the City of Kenai ($3.3 million).

[25] Sec. 78, Ch. 1, SSSLA 2002. We do not include the FY2004 "CBR sweep"—general fund subaccounts (one of which is the Railbelt Energy Fund) are automatically "swept" into the Constitutional Budget Reserve Fund (CBRF) to meet the requirements of Article IX, Sec. 17(d) of the Alaska Constitution, which requires that withdrawals from the CBRF be repaid. Section 61(d) of Chapter 159, SLA 2004, transferred the FY2004 sweep back to the subaccounts from which it came.

REF is generally treated as a "hands off" fund, one from which appropriations are made only with the endorsement of a finance committee chair or other high-ranking legislator.[26]

I hope you find this information to be useful. Please do not hesitate to contact us if you have questions or need additional information.

[26] "The Alaska Railbelt Energy Fund," Legislative Research Services Report 05.041, April 5, 2005, p. 3.

Table 1: Summary of Major Energy Appropriations, 1976-2005 (In thousands)		
Year	**Comments**	**Amount**
	Chronological History	
1976	The first major appropriations for energy projects began in 1976, with an appropriation to the water resources revolving loan fund for energy projects	$2,500.0
1976-1982	Initial appropriations for loans and grants for **major dam projects** (Green Lake, Swan Lake, Terror Lake, Tyee Lake), including the purchase of Solomon Gulch. (Loans were reappropriated as grants in 1982)	$185,260.0
1979-1985	Appropriations for **Susitna** Hydroelectric Project	$423,500.0
1980-1986	Appropriations for **Bradley Lake** Hydroelectric Project (includes $165 million in GO bonds). $57 million is from the REF ($50 million of this was a funding source change from GF to REF). This project came online in 1991.	$328,000.0
1980-1984	Grants for Alaska Intertie (formerly known as "Anchorage/Fairbanks Intertie)	$124,000.0
1986	**Railbelt Energy Fund** (REF) created **Capitalization of REF.** Susitna appropriation made in 1985 repealed and reappropriated to the General Fund and then to the REF. Reappropriated unexpended, unobligated, and unencumbered prior year appropriations for Susitna to the REF.	$289,500.0
1993	Ch. 18, SLA 1993 authorized AIDEA to issue GO bonds up to $185 million for selected energy projects ($60 million for Norther Intertie, $60 million for Southern Intertie, $40 million for Southeast Intertie, $25 million for Sutton/Glennallen Intertie). No bonds were issued.	$185,000.0
1995	Northern Intertie	$65,000.0
2002	Southern, and Southeast interties, and Alaska intertie upgrade (the Southern intertie was discontinued after participating utilities withdrew from the project).[1] Sale of the Four Dam Pool	$87,300.0

Table 1: Summary of Major Energy Appropriations, 1976-2005
(In thousands)

Year	Comments	Amount
	Major Railbelt Projects	
	Susitna	$134,000.0
	Bradley Lake ($163 million in grants, $165 million in GO bonds)	$328,000.0
	Alaska Intertie	$144,300.0
	Northern Intertie	$65,000.0
	Southern Intertie (project cancelled--funds remain with AEA until repealed or reappropriated)	$47,300.0
	Transmission line upgrades	$43,300.0
	Total	$761,900.0
	Southern Intertie interest returned to the General Fund	$28,500.0
	Major "Off-Railbelt" Projects	
	Four-dam Pool (Solomon Gulch [Valdez/Glennallen], Swan Lake [Ketchikan], Terror Lake [Kodiak], Tyee Lake [Wrangell/Petersburg])	$498,800.0
	Power Cost Equalization--FY1981-2005	$378,000.0
	Larsen Bay	
	Total	$876,800.0
	PCE Endowment Fund[3]	$192,200.0

Notes: 1. "Southern" intertie: Kenai to Anchorage (project cancelled, participating utilities withdrew). "Northern" intertie: Healy to Fairbanks (owned by the Golden Valley Electric Association). "Alaska" intertie: Willow to Healy. "Southeast" intertie: Swan Lake to Tyee Lake (being constructed by the Four Dam Pool Power Agency as a condition of the sale of the Four Dam Pool).
2. The fund is not included in the total of "off-railbelt" projects because the PCE Endowment funds the PCE & Rural Electric Capitalization fund, from which appropriations are made to the PCE program. Including it would duplicate the amounts.

Sources: Alaska Energy Authority, Alaska Railroad Corporation, Legislative Finance Division, Office of Management and Budget, operating budgets, *Session Laws of Alaska*.

Table 2: Power Cost Equalization Program Expenditures

Fiscal Year	Amount[1]	Fiscal Year	Amount
1981	$2,658.6	1994	$17,679.9
1982	$9,300.0	1995	$18,620.5
1983	$8,300.0	1996	$19,329.7
1984	$8,298.2	1997	$17,967.9
1985	$14,128.2	1998	$18,664.2
1986	$17,532.0	1999	$18,050.0
1987	$13,787.5	2000	$14,562.2
1988	$15,000.0	2001	$16,091.6
1989	$16,823.6	2002	$15,619.7
1990	$19,715.5	2003	$15,700.0
1991	$16,747.1	2004*	$15,700.0
1992	$15,029.6	2005*	$15,700.0
1993	$17,533.0	2006**	$20,730.0
	Total PCE 1981-2006		***$399,269.0***

Notes: 1. Amounts for FY1981-2003 are actual expenditures. Amounts for FY1981-1984 include administrative costs; FY1985-2006 are grants only.
* FY2004 and 2005 are authorized budget amounts.
** FY2006 is the Governor's Requested Budget.

Sources: Legislative Finance Division, Historical Budgets online and Operating Budget Books ("shortforms"); Office of Management and Budget, 2006 Governor's Request.

Table 3: APPROPRIATIONS TO THE RAILBELT ENERGY FUND

Ch.	SLA	Sec.	Comments	Amount
29	1986	1	Create the Railbelt Energy Fund (REF).	--
41	1986	4	From the General Fund[1]	$200,000,000
		10 12 13 15 16 17 18	Reappropriations of unexpended, unobligated, and unencumbered prior year appropriations for the Susitna Hydroelectric Project to capitalize the Railbelt Energy Fund	$89,481,023
117	1989	217(b)	Appropriation from GF to the REF for the Healy cogeneration project (contingent upon sec. 217(a) which appropriated $30 million from the REF to the GF).	$30,000,000
117	1989	219(b)	Appropriation from the GF to the REF for the Winter Sports Training Facilities reserve (contingent upon 219(a) which appropriated $5 million from the REF to the GF).	$5,000,000
19	1993	3	Balance of Railbelt intertie reserve.	$30,882,941
19	1993	4(b)	Authorization to receive repayments of principal & interest on loans from the Power Project Fund for the Sutton-Glennallen intertie project.[2]	--
19	1993	5(b)	Authorization to receive repayments of principal & interest on loans from the Power Project Fund for the Swan Lake-Tyee Lake intertie project.[2]	--
19	1993	7(1)-(7)	Various reappropriations from the Bradley Lake Hydroelectric project.	$11,500,000
19	1993	8(a)	From the General Fund.	$13,200,000
19	1993	8(b)	From the General Fund.	$66,900,000
60	2000	3	Authorization to receive interest earnings (as of 03/31/05)[3]	$21,293,354
			TOTAL APPROPRIATIONS INTO THE FUND	**$468,257,318**

Notes: 1. Sections 1 and 2 of Ch. 41 repealed prior appropriations for the Susitna Hydroelectric Project ($200 million) and the Bradley Lake Hydroelectric Project ($50 million) and returned them to the General Fund. Section 4 then reappropriated the $200 million from the Susitna project from the General Fund to the REF. Sections 10, 12, 13, and 15-18 all repealed prior Susitna appropriations and reappropriated them to the REF. 2. Sections 4(a) and 5(a) of Ch. 19, SLA 1993 appropriated $55 million from the REF to the Power Project Fund for loans for these projects. 3. Approximate earnings and interest income as of March 31, 2005. Includes total FY2005 year-to-date interest earned of $1,112,997, according to the Division of Finance.

Sources: Legislative Finance Division; Division of Finance, Department of Administration; *Session Laws and Resolves of Alaska*.

Table 4: APPROPRIATIONS FROM THE RAILBELT ENERGY FUND

Fiscal Year	Session Law	Comments	Appropriated To[1]	Amount
1987	Sec. 1, Ch. 42, SLA 1986	Preparing a review and evaluation of Railbelt electric power alternatives.	APA	$2,500,000
1988	Sec. 2, Ch. 96, SLA 1987	Amending the funding source for the Bradley Lake Hydroelectric Project from General Fund (GF) to Railbelt Energy Fund (REF).	APA	$50,000,000
1989	Sec. 6, Ch. 172, SLA 1988	Bradley Lake Hydroelectric Project	APA	$7,000,000
1989	Sec. 293, Ch. 173, SLA 1988	Authorization to use REF monies for any GF shortfall in FY89, only in the amount needed to pay outstanding obligations and not to exceed $50 million. Such a transfer was not necessary.		$0
1990	Sec. 217(a), Ch. 117, SLA 1989	Appropriation to the General Fund (contingent upon 217(b), which appropriated GF to the REF for the Healy cogeneration project).		$30,000,000
1990	Sec. 219(a), Ch. 117, SLA 1989	Appropriation to the General Fund (contingent upon 219(b), which appropriated of GF to REF for the Winter Sports Training Facilities reserve).		$5,000,000
1991	Sec. 139, Ch. 208, SLA 1990	Various capital appropriations as Grants to Municipalities (AS 37.05.315), Grants to Unincorporated Communities (AS 37.05.317), and to state agencies		$18,732,942
1991	Sec. 139, Ch. 208, SLA 1990	Various capital projects		$6,085,500
1991	Sec. 141, Ch. 208, SLA 1990	McLaughlin Youth Center Cottage/School Replacement	H&SS	$2,500,000
1991	Sec. 143, Ch. 208, SLA 1990	Healy cogeneration project	AIDEA	$25,000,000
1991	Sec. 144, Ch. 208, SLA 1990	City of Seward for transmission line from Lawing to Fort Raymond substation	DOA	$9,500,000
1991	Sec. 145, Ch. 208, SLA 1990	Purchase of locomotives, rolling stock, and associated equipment costs (for development of Wishbone Hill coal project)	ARC	$9,000,000
1991	Sec. 146, Ch. 208, SLA 1990	Grant to the Municipality of Anchorage for the Ship Creek development project	DOA	$2,500,000

Table 4: APPROPRIATIONS FROM THE RAILBELT ENERGY FUND--Continued (2)

Fiscal Year	Session Law	Comments	Appropriated To[1]	Amount
1991	Sec. 147(a), Ch. 208, SLA 1990	Weatherization, energy conservation, and energy efficient residential housing incentive program	DCRA	$1,600,000
1991	Sec. 147(b), Ch. 208, SLA 1990	Weatherization and energy conservation federal match	DCRA	$600,000
1991	Sec. 148, Ch. 208, SLA 1990	Alaska home craftsman program	DCRA	$600,000
1991	Sec. 149, Ch. 208, SLA 1990	Alaska energy efficiency and retrofit program	DCRA	$2,200,000
1991	Sec. 150, Ch. 208, SLA 1990	Grant to the Mat-Su Borough for job corps facility construction	DOA	$1,700,000
1991	Sec. 151, Ch. 208, SLA 1990	Phase I design and construction of UAF natural sciences facility	UAF	$23,000,000
1991	Sec. 152, Ch. 208, SLA 1990	Phase I design and construction of UAA classroom building and land purchase	UAA	$16,500,000
1991	Sec. 153, Ch. 208, SLA 1990	Grant to the Municipality of Anchorage to reconstruct and upgrade the Alyeska Utilities water and sewer system	DOA	$2,300,000
1991	Sec. 154, Ch. 208, SLA 1990	Anchorage Economic Development Corporation	DCED	$3,800,000
1991	Sec. 155, Ch. 208, SLA 1990	Kenai Peninsula Borough solid waste disposal facility	DOA	$1,100,000
1991	Sec. 156, Ch. 208, SLA 1990	Fire training facility on the Kenai Peninsula	UAA	$1,000,000
1991	Sec. 157, Ch. 208, SLA 1990	City of Kenai for construction of a congregate housing facility	DOA	$3,300,000
1991	Sec. 158, Ch. 208, SLA 1990	Anchorage Neighborhood Housing Services for neighborhood revitalization	DOA	$1,700,000
1991	Sec. 159, Ch. 208, SLA 1990	To the General Fund, Railbelt intertie reserve, for the Soldotna-Anchorage and Healy-Fairbanks interties		$100,000,000
1994	Sec. 4(a), Ch. 19, SLA 1993	To the Power Project Fund for a loan for the Sutton to Glennallen power transmission intertie.	PPF[2]	$35,000,000

Table 4: APPROPRIATIONS F. ^M THE RAILBELT ENERGY FUND--Continued (3)				
Fiscal Year	**Session Law**	**Comments**	**Appropriated To[1]**	**Amount**
1994	Sec. 5(a), Ch. 19, SLA 1993	To the Power Project Fund for a loan for the Swan Lake to Tyee Lake powe. transmission intertie.	PPF[2]	$20,000,000
1994	Sec. 8(c), Ch. 19, SLA 1993	To Power Cost Equalization and Rural Electric Capitalization Fund to capitalize the fund.	PCE/RECF	$66,900,000
2001	Sec. 1(a), Ch. 75, SLA 2000	Appropriations made in secs. 4 and 5, Ch. 19, SLA 1993, lapse into the Railbelt Energy Fund.		($55,000,000)
2001	Sec. 24(a), Ch. 135, SLA 2000	Reappropriates unspent balance of Sec. 145(a), Ch. 208, SLA 1990, as amended by sec. 55, Ch. 100, SLA 1997 (Alaska Railroad Corporation--$9,000,000), as follows: (1) one-half for a grant to the Mat-Su Borough for the Point MacKenzie port development and associated rail line improvements within the borough; (2) one-half to the Alaska Railroad Corporation for the purchase of locomotives, rolling stock, and associated equipment, and rail line improvements to facilitate the development of coal deposits in the Matanuska-Susitna Borough.		
2001	Sec. 24(b), Ch. 135, SLA 2000	Reappropriates unspent balance of Sec. 145(b), Ch. 208, SLA 1990, added by Sec. 56, Ch. 100, SLA 1997 as amended by Sec. 40(b), Ch. 2, FSSLA 1999 (Alaska Railroad Corporation), as follows: (1) one-half for a grant to the Mat-Su Borough for the Point MacKenzie port development and associated rail line improvements within the borough; (2) one-half to the Alaska Railroad Corporation for the purchase of locomotives, rolling stock, and associated equipment, and rail line improvements to facilitate the development of coal deposits in the Matanuska-Susitna Borough.		
2001	Sec. 24(c), Ch. 135, SLA 2000	Appropriates the interest earned on 24(a)(2) and 24(b)(2) to the General Fund on July 1 of each fiscal year.		$0

Table 4: APPROPRIATIONS FROM THE RAILBELT ENERGY FUND--Continued (4)

Fiscal Year	Session Law	Comments	Appropriated To[1]	Amount
2003	Sec. 78(a), Ch. 1, SSSLA 2002	Grants to Homer Electric Association (replacement power supply for Seldovia--$2 million), Golden Valley Electric Association (Parks Highway line extension--$872.0), and Matanuska Electric Association (Lucas substation and Pioneer line extensions--$500.0)	DCED	$3,372,000
2003	Sec. 78(b), Ch. 1, SSSLA 2002	Grant to the Municipality of Anchorage for the Eklutna project transmission line	DCED	$19,300,000
2003	Sec. 78(c), Ch. 1, SSSLA 2002	Upgrade and extend the Anchorage-Fairbanks power transmission intertie to the Teeland substation.	DCED/AEA	$20,300,000
		Total Appropriations from the Fund[3]		**$437,090,442**
		Fund Balance		***$31,166,876***

Notes: 1 The legend for these abbreviations is as follows: AEA, Alaska Energy Authority; AIDEA, Alaska Industrial Development Authority; APA, Alaska Power Authority; ARC, Alaska Railroad Corporation; DCED, Department of Commerce & Economic Development; DCRA, Department of Community & Regional Affairs; DOA, Department of Administration; PCE/RECF, Power Cost Equalization and Rural Electric Capitalization Fund; PPF, Power Project Fund; UAA, University of Alaska Anchorage; UAF, University of Alaska Fairbanks.
2 These appropriations were made to the Power Project Fund, from which loans were made for the intertie projects (Section 4, Chapter 1, SLA 1993).
3 This amount does not include the "CBR sweep"--general fund subaccounts (one of which is the Railbelt Energy Fund) are automatically "swept" into the Constitutional Budget Reserve Fund (CBRF) to meet the requirements of Article IX, Sec. 17(d) of the Alaska Constitution, which requires that withdrawals from the CBRF be repaid. The FY2004 sweep was transferred back to the subaccounts from which it came by Section 61(d) of Chapter 159, SLA 2004.

Sources: Legislative Finance Division, Division of Finance, Department of Administration, *Session Laws and Resolves of Alaska*.

Estimate for Susitna Hydro-electric Feasibility Study

In response to House Bill No. 336 "directing the Alaska Energy Authority to conduct a study of and to prepare a proposal for an appropriately sized Susitna River hydroelectric power plant" this estimate and scope of work has been prepared.

The Susitna Hydro project has been subject to over 60 years of study and analysis, culminating in a $135 million dollar engineering study and application to the Federal Energy Regulatory Commission (FERC) for a license to construct in 1984. At that time the project was estimated to cost $5.3 billion for 1,620 MW of generation capacity. Concerns about the ability to finance this project in conjunction with the collapse of crude oil pricing resulted in the termination of this project.

Higher fuel costs, potentially dwindling natural gas resources, more stringent environmental restrictions including mercury and carbon emissions, and an energy infrastructure that is reaching the end of service life require a review of potential energy projects of which the Susitna Hydro project is one important candidate.

One key concern of the existing Susitna design is that the generation capacity of 1,620 MW far exceeds the current size of the Railbelt grid (approximately 1,000 MW) which results in significant concerns on load balancing and reliability.

Objectives

The objective of this study is update previous study estimates to determine if the Susitna Hydro project is a feasible alternate generation source for the Railbelt Electrical Grid. To support this objective estimates will have to be made on potential sizing options (and costs) as well as reviewing environmental and socio-economic impacts. To aid in decision making cost of power for generic alternative generation sources (coal, gas, wind, geothermal) will be developed, and finance options will considered.

Assumptions

The cost estimates for this work and the scope of work to evaluate the Susitna project are based on the following three assumptions.

First, the estimates and information that will be generated are for the purpose of understanding the feasibility of this potential energy generation source, they will answer the question – is the cost of power from this source competitive with other energy sources and should we proceed to more detailed analysis. The accuracy of the study estimates should not be considered to be better than (+/-) 30%.

Secondly, it is important to understand that this is only one potential option in an Alaskan Energy Portfolio. A separate strategic energy plan for the State is necessary to be able to put these options into perspective. For example, for a project of this magnitude it is important that an appropriate industrial energy load anchor the demand. While examples of potential demands will be used in this

study, no significant analysis of those demands will be done. In a similar fashion the cost of upgrading the Railbelt Interties is not included in this study as those upgrades will be required for any significant change in Railbelt generation.

Third, to minimize a long lead time that an RFP would require, AEA will be using a qualified engineering design contractor and environmental consultant from the qualified list of term contracts. Requests will be made of three contractors to provide assurance that scope of work and estimates are appropriate.

Work Tasks and Estimates

The following work tasks and goals are envisioned to complete the study objectives. They are organized in order of priority and in doing so allow a phased approach to be taken on this study. If at any point in the work process it would appear that the project is non-viable, work will be halted and a summary completed.

Work Task 1: Feasibility study and estimate of plant and of generated power costs

The 1984 estimates for construction of the Susitna Hydro project will be updated for current costs as well as current construction and design technology. Constructability and logistics will be key components of this update. Additionally a review of engineering and technical risks including seismic design will be identified. The design of this power is such that there are minimal size reductions that can be done. While there may be a need for 700 MW of generating capacity the constraints of the Susitna site may allow for options of 300 MW, and a 1000 MW. The study therefore will examine the possible size options that are inherent in the 1984 estimate and provide capital costs and costs of power over the lifetime of the facility for those options.

Estimated Cost: $1,000,000

Work Task 2: Environmental/Socio-economic Impact Study

Environmental permitting and the socio-economic impact on the affected area is a key component of this study and will have the most impact on the feasibility of this study. A review of necessary permits and an analysis of potential impacts to the area will be done.

Estimated Cost: $500,000

Work Task 3: Cost of Power for Selected Alternatives

An estimate of approximate costs of alternative power generation that would be accessible to the Railbelt will be made. Options will consider the appropriate use of coal, natural gas, wind, geothermal, tidal and an alternate source of hydro. These estimates will be used to compare the reasonability of power generation from Susitna.

Estimated Cost: $800,000

Work Task 4: Financing Options

The size of this single generation will be in excess of $5 billion and while it may provide appropriately cost of power, the ability to finance the costs may be the limiting factor. An analysis of potential financing options will be developed.

Estimated Cost: $200,000

Field Work

Limited field work is envisioned; however there may be need for helicopter access to the location of the proposed dam sites as well as limited amount of field work including terrain, river conditions and potential construction camp sites and lay down areas.

Estimated Cost: $250,000

Total Estimated Study Cost: $2,750,000

Schedule

It is anticipated that this work will take approximately two years. Over the course of the project interim reports and decisions on whether to proceed will be issued.

July 2008: Start of Project

December 2009: Completion of Estimates and Hydro generation options:

February 2010: Draft Final Report:

GVEA
Golden Valley Electric Association
PO Box 71249, Fairbanks, AK 99707-1249 • (907) 452-1151 • www.gvea.com

RESOLUTION NO. 102-08

A RESOLUTION OF THE BOARD OF DIRECTORS TO SUPPORT THE STUDY OF A SUSITNA HYDRO ELECTRIC PROJECT

WHEREAS, the Golden Valley Electric Association, Inc. ("Golden Valley") Board recognizes that renewable energy plays an important role in Alaska's energy supply; and

WHEREAS, the Railbelt relies heavily on fossil fuel, which is subject to high and volatile pricing; and

WHEREAS, the electric production from hydro electric projects emit no CO2; and

WHEREAS, the Susitna Hydro Electric Project was studied extensively in the 1970s and substantial progress was made on the project; and

WHEREAS, the size and financing of the project need to be determined;

BE IT RESOLVED that the Board of Directors of Golden Valley hereby supports efforts to further advance the Susitna Hydro Electric Project.

CERTIFICATION

I, William D. Digan, do hereby certify that I am the Secretary of Golden Valley Electric Association, Inc., an electric non-profit cooperative membership corporation organized and existing under the laws of the State of Alaska; that the foregoing is a complete and correct copy of a resolution adopted at a regular meeting of the Board of Directors of this corporation, duly and properly called and held on the 28th day of January, 2008; that a quorum was present at the meeting; that the resolution is set forth in the minutes of the meeting and has not been rescinded or modified.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed the seal of the corporation this 28th day of January, 2008.

(SEAL)

GOLDEN VALLEY ELECTRIC ASSN INC CORPORATE SEAL ALASKA

William D. Digan

William D. Digan, Secretary

Attachments: 01-28-08 Resolution 102-08 (2).pdf

From: Corinne A. Bradish [mailto:CABradish@gvea.com]
Sent: Wednesday, January 30, 2008 11:37 AM
To: Rep. David Guttenberg; Rep. Jay Ramras; Rep. John Coghill; Rep. John Harris; Rep. Mike Kelly; Rep. Scott Kawasaki; Sen. Gary Wilken; Sen. Gene Therriault; Sen. Joe Thomas
Cc: Rep. Craig Johnson
Subject: GVEA Board Resolution - Susitna

At this week's GVEA Board of Director's meeting, the attached resolution was passed in support of studying a Susitna Hydro Electric Project.

Best regards, Corinne

Corinne A. Bradish
Public Relations Officer
Golden Valley Electric Assn.
758 Illinois St.
Fairbanks AK 99701
Phone: 907-451-5676
Fax: 907-458-6368

1/24/08

TESTIMONY OF ELIZABETH VAZQUEZ ON HB 336

HOUSE RESOURCES COMMITTEE HEARING

JANUARY 28, 2008

GOOD AFTERNOON.

MY NAME IS ELIZABETH VAZQUEZ. I AM CHAIR OF THE CHUGACH ELECTRIC ASSOCIATION BOARD OF DIRECTORS. I AM HERE TO SPEAK IN SUPPORT OF HB 336.

CHUGACH IS A MEMBER-OWNED ELECTRIC COOPERATIVE HEADQUARTERED IN ANCHORAGE. IT IS THE LARGEST ELECTRIC UTILITY IN ALASKA. WE PROVIDE RETAIL ELECTRIC SERVICE TO APPROXIMATELY 80,000 METERED LOCATIONS. CHUGACH ALSO PROVIDES POWER FOR ALASKANS FROM HOMER TO FAIRBANKS THROUGH WHOLESALE AND ECONOMY ENERGY SALES TO OTHER UTILITIES.

TODAY ABOUT 90 PERCENT OF THE KILOWATT-HOURS CHUGACH SELLS ANNUALLY ARE PRODUCED BY NATURAL GAS-FIRED UNITS. THE OTHER 10 PERCENT COMES FROM HYDROELECTRIC PROJECTS. CURRENTLY ALL OF OUR NATURAL GAS COMES FROM THE COOK INLET BASIN.

CHUGACH BELIEVES FUEL DIVERSITY IS IMPORTANT FOR CUSTOMERS. AS YOU CAN SEE, WE ARE HEAVILY DEPENDENT UPON COOK INLET GAS AS A GENERATION FUEL. NATURAL GAS PRICES HAVE RISEN DRAMATICALLY IN RECENT YEARS – DOUBLING BETWEEN 2003 AND 2006. AS GAS PRICES HAVE RISEN, SO TOO HAVE THE BILLS PAID BY ELECTRIC UTILITY CUSTOMERS.

WE VERY MUCH VALUE THE THREE HYDROELECTRIC PROJECTS WE CURRENTLY HAVE IN THE RAILBELT. THEY PROVIDE CLEAN, RENEWABLE, RELATIVELY FLAT-PRICED POWER. THESE THREE PROJECTS – EKLUTNA, COOPER LAKE AND BRADLEY LAKE – GENERALLY PROVIDE THE LOWEST COST GENERATION FOR THE CHUGACH SYSTEM.

THE ONLY REAL PROBLEM WE HAVE WITH THEM IS THEIR LIMITED CAPACITY. WE ARE EXTRACTING ALL THE POWER WE CAN FROM THESE PROJECTS TODAY.

WE BELIEVE THE TIME IS RIGHT FOR THE STATE TO STUDY GENERATION ALTERNATIVES, INCLUDING THE IDEA OF A MAJOR REGIONAL HYDROELECTRIC PROJECT ON THE SUSITNA RIVER. MUCH WORK WAS DONE STUDYING THE CONCEPT OF A VERY LARGE SUSITNA PROJECT BACK IN THE 1980S. WE ARE NOT SUGGESTING A REBIRTH OF THAT PROJECT PER SE, BUT RATHER A FRESH LOOK AT THE RESOURCE, AND A REALISTIC APPRAISAL OF A PROJECT THAT IS THE RIGHT SIZE FOR THE RAILBELT REGION.

IT WOULD TAKE YEARS TO BRING A MAJOR NEW HYDROELECTRIC PROJECT ONLINE. THEREFORE, THE RIGHT TIME TO BEGIN A PROCESS LIKE THIS IS NOW. CHUGACH IS PLANNING FOR A NEW, EFFICIENT GAS-FIRED POWER PLANT THAT WILL PROVIDE A BRIDGE TO THE FUTURE. HOWEVER, AROUND 2020 WE FORESEE THE NEED

FOR THE NEXT MAJOR GENERATION PROJECT. THIS IS A GOOD TIME TO STUDY THE POTENTIAL OF A SUSITNA PROJECT AND THE BENEFITS IT COULD PROVIDE FOR ALASKANS THROUGHOUT THE INTERCONNECTED RAILBELT REGION.

CHUGACH BELIEVES HB 336 MAKES SEVERAL GOOD POINTS.

WE BELIEVE THIS STUDY SHOULD BE LED BY THE ALASKA ENERGY AUTHORITY.

WE VERY MUCH AGREE THE EFFORT SHOULD BE COLLABORATIVE AMONG THE ENERGY AUTHORITY AND THE RAILBELT ELECTRIC UTILITIES.

WE BELIEVE THE EMPHASIS SHOULD BE ON CONSIDERING A PROJECT APPROPRIATELY SIZED FOR THE RAILBELT.

AT THIS POINT, IT IS PRUDENT TO REVIEW AND BUILD ON THE WORK THAT HAS ALREADY BEEN DONE IN PRIOR STUDIES.

IN CONCLUSION, WE'D LIKE TO THANK REPRESENTATIVE JOHNSON FOR SPONSORING THIS BILL – AND CO-SPONSORS SPEAKER HARRIS AND REPRESENTATIVES RAMRAS AND KELLY FOR THEIR SUPPORT OF THIS IMPORTANT ISSUE.

I APPRECIATE THE OPPORTUNITY TODAY TO SHARE THESE COMMENTS WITH THE COMMITTEE.

1/28/08

Chugach Consumers

201 Barrow #11 • Anchorage, Alaska 99501-2429
e-mail: execdir@chugachconsumers.org • *website:* www.chugachconsumers.org

Susitna River Hydroelectric Power Project — HB 336
Testimony of Chugach Consumers
January 28, 2008 – Anchorage Alaska
House Resources Committee Hearing

Good afternoon. My name is Ray Kreig and I am testifying here as Chairman of Chugach Consumers, an advocacy group for electric utility customers. I have also served for 6½ years on the Chugach Electric board of directors and was board president for two years in the mid 1990's. I am also a professional civil engineer.

Chugach Consumers was formed in 1996 to advocate for the general public interest of Chugach Electric ratepayers, to educate consumers, and to diversify our economy. It is a group of fiscally-concerned ratepayers and others that support safe, reliable power at the lowest possible cost for all electric utility customers in South Central Alaska.

Chugach Consumers strongly supports HB 336 and we commend Rep. Johnson and Chugach Electric's new board for their leadership in stepping up and initiating this overdue review of one of the major alternatives to the present hydrocarbon based cost rollercoaster that ratepayers are on with gas fired generation.

The steadily rising cost of energy in the past few years has everyone (especially utility boards) talking about alternatives — wind, coal, small and large hydro and even nuclear. The utilities have to make decisions on new generation. It will be extremely useful to narrow the alternatives down if possible so the most promising can be focused on sooner rather than later.

The blast from the Anchorage Daily News this morning against reviewing Susitna is, in our opinion, misplaced. The state has over $100 million invested in studies of the Susitna Hydro project and more and more people are thinking about large hydro as a solution. It is irresponsible not to look at this project again and update the numbers, at least in a general way.

If the numbers point to a likely cost of 30¢ per kilowatt hour then it can be put back on the shelf and attention will move to other alternatives.

We would like to suggest that the $1 million in this appropriation not be put out in one large consultant RFP. This is not likely to get best value for this appropriation. A staged approach will get better information for the state's money.

Safe, Reliable, Low Cost Power for South Central Alaska!

We suggest that an engineering conference be first held by the Alaska Energy Authority. There are many engineers, environmental scientists and former regulators that worked on Susitna still around that should be hired to participate along with new leaders in the hydroelectric engineering profession.

$100,000 should be sufficient for this first task and at the end of that process all will be better informed of the issues and players. Better decisions can then be made by AEA and the utilities as they go forward with this review and update of the original Susitna Project or a reconfigured and appropriately adjusted project for current needs.

Thank you.

Testimony Regarding House Bill 336
To the Alaska House Resources Committee
By
Jim Sykes

February 8, 2008

Good afternoon Mr. Chairman and Members of the Committee

My name is Jim Sykes. In the interest of disclosure, I am a member of the Working Advisory Group to the legislatively-funded Alaska Energy Authority study on Railbelt Energy Grid Assessment, which is in it's beginning stages. Today, I am representing only myself in my testimony.

Thank you for considering options for our energy future, and thank you for the opportunity to testify.

I opposed the Susitna Dam proposal in the 1980's, and I remain skeptical today.

Back in 1983, oil had climbed to over $30 per barrel at roughly the same time the State of Alaska became flush with oil money from record levels of production. By Spring of 1986 oil slid to about $10 per barrel. The project was simply too large to be financed.

Today we find ourselves with high oil prices, and flush with oil money, with roughly the same questions about our energy future that were being asked some 25 years ago. Besides the cost factor many other issues raised in the 1980's still remain.

Serious questions were raised about changes in ice patterns, water flows and water temperatures that could affect salmon runs. Su Hydro studies revealed that King salmon did indeed get above Devil's canyon. They also found some salmon spawned in upwellings in main Susitna River channels in addition to spawning in tributaries.

The fisheries issue is perhaps more critical today with much lower fish runs that are adversely affecting commercial fishing, sport fishing and tourism.

Questions were raised about the integrity of large dam structures in an active earthquake zone. Idaho's poorly designed Teton Dam had failed

in 1976 wiping out two towns and killing 14 people. In 2002 the nearby Denali Fault shifted significantly in a 7.9 magnitude earthquake. People around Talkeetna can relate to the possibility of disaster.

There were concerns about the lowered life of the dam since most large dams are not built on extremely silty glacial rivers. The joke at the time was that the upper dam would catch the silt and the lower dam would generate power.

The issue that most effectively killed the Susitna dam was economics. Oil prices declined and good possibilities for bonding the project evaporated.

All of the same resource, geologic, biologic and expense concerns, remain with us today. Most of the same arguments will most likely rise again in an equally contentious debate.

It is my personal view that the alternatives to Susitna studied alongside Susitna were given short shrift and were not adequate even for that time.

Technology has advanced considerably over the past two decades and now holds greater importance for renewable energy potential and other energy alternatives than it did in the 1980's. I think there is also a new realization that the "inexhaustible supplies" (from 1963 reports) of Cook Inlet gas are now almost gone. So there is perhaps a new opportunity to thoroughly examine lots of new options and gather consensus that was not previously possible.

Updated financial information from the old Susitna studies could be derived in fairly short order by asking the Department of Revenue to apply an inflation factor to the most critical numbers. While it won't give you as precise of information as doing an entire new study, it will provide a ball park figure that may be useful in your deliberations.

A comparison of Susitna Hydro and Lake Chakachamna is provided to Committee Members from preliminary investigations into Chakachamna. The up front capital costs and the ability to bond will once again be serious financial questions as they are compared with other options.

There has been recent suggestion for a scaled-down version of Susitna lower on the River. While I have not personally seen any plans, the

economic feasibility might actually decline on a cost per megawatt hour. There are also potentially greater consequences for inundation of larger land areas caused by a lower river location.

Economic impacts of a Susitna Dam on the desired gasline to South Central Alaska need to be examined. The Alaska Natural Gasline Development Authority just completed one energy study, but I don't recall that the prospect of a Susitna Dam was considered.

There are consequences and downsides to every technology that we may consider, but we have to decide what we're willing to live with.

One most cost-effective, long-lasting and practical thing we could do is assist people with businesses and homes to retrofit buildings for energy efficiency. Utilities call it Demand Side Management, or lowering the load demand.

Building retrofits will provide jobs, a better skilled work force and all the money stays in Alaska—in addition to the lowering energy demand and creating a wider variety of energy options from Alaska's vast renewable energy potential. Demand Side Mangagement needs to be part of all cost analyses. All options, in addition to Susitna, need to be on the table for cost comparisons and I encourage you to expand the scope of HB 336. We need a matrix on how each project affects the gasline and potential new energy technologies to more fully understand our best options.

I commend the Palin administration in their efforts to develop a statewide energy policy that will help organize and prioritize both public and private projects that are currently under consideration. . I believe there is an opportunity to seek a true consensus among all stakeholders to achieve reliable, clean and low-cost energy.

There's a lot to talk about and I'll be happy to answer any of your questions to the best of my ability.

Thank you.

Jan Sykes

Side-by-Side Comparison
Susitna and Chakachamna Hydropower Projects

Susitna	Chakachamna
$159 million spent on investigations over 10 year period – 1975 thru 1985	$300 Thousand spent over 3 year period – 1980 thru 1983
6.5 billion KWH energy output from two world class dams	1.6 billion KWH energy from one small diversion dam
$5.4 billion construction cost (1985$) Source: Susitna FERC License	$0.9 billion construction cost (1985$) Source: Susitna FERC License
Precise cost estimate	Conservative cost estimate
880 foot dam at Watana (62 million cu yd earth dam) and 664 foot dam at Devil Canyon (1 million cu yd concrete arch dam)	49 foot high rock fill dam at lake outlet and 10 mile power tunnel to underground powerhouse on McArthur river
$1.0 billion needed for new transmission lines to bring power to load centers	Only 42 miles of new transmission lines required to bring power to load centers
Reservoirs inundates 45,500 acres of land and 90 miles of existing stream channel	Existing lake – no additional land inundated
Significant native land directly impacted by project footprint	No native land directly impacted by project footprint
Project built on main stem of a major river that flows into Cook Inlet	Project diverts water from existing lake that flows into Cook Inlet
Project built on river system that is major contributor to five species of Cook Inlet salmon runs	Project built on much smaller river system that is contributor to five species of Cook Inlet salmon runs
No existing roads to the project sites	No existing roads to the project sites
Project killed by governor in 1985 when price of oil fell to $10/barrel	Project shelved by Ak Power Authority in 1983 because it competed for Susitna market
Wo age require major state investment and to develop the project – dormant	Within the capability of private sector to develop – under active investigation by TDX Power

Source: Preliminary Info from current TDX Chakachamna studies

TDX power We Generate Power Solutions

Chakachamna Hydroelectric Project
(CHP)

TDX Power has been granted a preliminary permit by the FERC to evaluate the Chakachamna Hydroelectric Project (CHP). This proposed 330 MW hydro facility has been investigated for more than 60 years, and TDX Power believes it has tremendous potential to provide up to 1/3 of the rail belt grid's electric needs. The proposed CHP will have minimal environmental impact and offers the potential for long term, predictably priced power from a renewable energy resource.

Some specific details about the project include:

- The CHP would include 330MW of hydroelectric generating capacity and would produce 1.6 billion kwh per year. Currently, the rail belt grid consumes roughly 5 billion kwh per year.

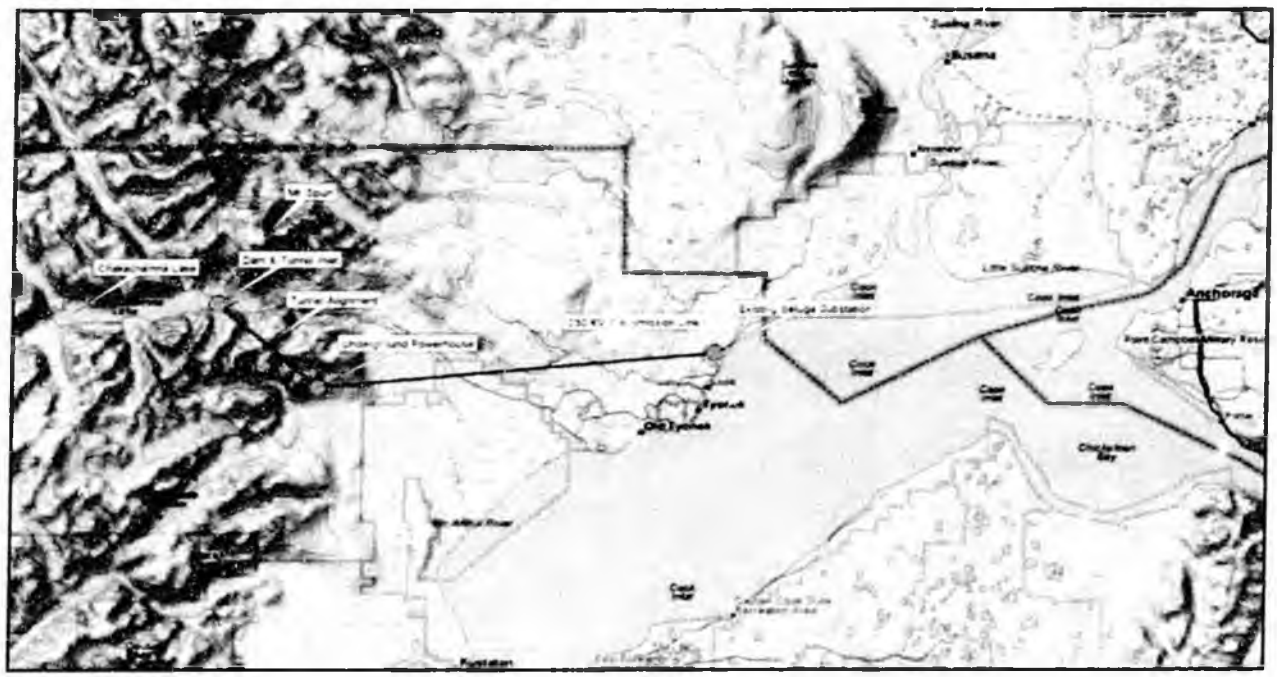
- The CHP would harness the energy through the inter basin transfer of water from Chakachamna Lake by way of a 10-mile hard-rock tunnel to an underground powerhouse that would discharge to the McArthur River, in the neighboring valley. A small diversion dam, inlet structure, and fish passage facility would be located at the outlet of Lake Chakachamna. (see attached map)

- The total head would be approximately 1,100 feet, and the powerhouse elevation would be near sea level.

- Most of the utilities are looking to bring on new generation in the next eight years, which coincides with the approximate horizon in which Chakachamna could come on line.

- Power from the CHP would be clean and renewable, and would provide a firm, fixed and predictable cost for energy to the rail belt grid. Current generation costs are heavily weighted towards the cost of natural gas.

TDX Power is conducting meetings with state and federal agencies as well as NGO's as part of the preliminary licensing process to develop a project work scope. An initial engineering design and cost analysis will be complete in the early spring of 2008, at which time TDX Power will make a decision on whether or not to continue development efforts in support of the CHP.



The proposed CHP is located approximately 85 miles west of Anchorage and only 42 miles from the Chugach Electric Association (CEA) Beluga substation that feeds power to the "railbelt" grid system.

For questions or further information on the CHP, please contact:

Eric Yould – Project Director
(907) 278-2312 - Telephone
eyould@tdxpower.com - Email