

HB

50

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FISCAL NOTE

No. 1

Bill Version: CSHB 50 (L&C)

(H) Publish Date: 4/14/93

STATE OF ALASKA
1993 LEGISLATIVE SESSION

Revision Date: _____

Title: Authorization of Anchorage-Kenai and
Healy-Fairbanks Interities

Sponsor: Navarre et al.

Requestor: _____

Department Affected: Commerce and Economic Development

BRU: Alaska Energy Authority

Component: AEA Agency Operations

COMPONENT SERIAL NO. 7304010100

EXPENDITURES/REVENUES:

OPERATING	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99
PERSONAL SERVICES	0	0	0	0	0	0
TRAVEL	0	0	0	0	0	0
CONTRACTUAL	0	0	0	0	0	0
SUPPLIES	0	0	0	0	0	0
EQUIPMENT	0	0	0	0	0	0
LAND & STRUCTURES	0	0	0	0	0	0
GRANTS, CLAIMS	0	0	0	0	0	0
MISCELLANEOUS	0	0	0	0	0	0
TOTAL OPERATING	0	0	0	0	0	0

CAPITAL	0	0	0	0	0	0
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REVENUE FUND SOURCE:	0	0	0	0	0	0
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FUNDING:

1002 Federal Receipts	0	0	0	0	0	0
1003 GF Match	0	0	0	0	0	0
1004 GF	0	0	0	0	0	0
1005 GF/Program Receipts	0	0	0	0	0	0
1006 GF/MHTIA	0	0	0	0	0	0
OTHER	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

Estimate of current year (FY 93) impact: 0

ANALYSIS: (Attach a separate page if necessary.)

Project authorization by itself has no fiscal impact. See cost analysis for HB 51 for projection of fiscal impact due to construction and operation of Anchorage-Kenai and Healy-Fairbanks interities.

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Division: Alaska Energy Authority

Date: 2/8/93

Approved by Commissioner: Paul Fuhs

Agency: Commerce and Economic Development

Date: 2-10-93

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HB 51: Special appropriation for construction of Anchorage-Kenai and Healy-Fairbanks Interties.

This bill would appropriate \$90 million from the Railbelt Intertie Reserve for design and construction of Anchorage-Kenai and Healy-Fairbanks 138 kV interties.

The Alaska Energy Authority (AEA) supports the use of the Railbelt Intertie Reserve for design and construction of these Railbelt intertie projects. We are concerned, however, that past efforts to appropriate amounts of this magnitude as grant contributions for these projects, without concurrent attention to long-term energy needs in other areas of the state, have not been successful. This has led us to the view that Railbelt intertie funding is more likely to be achieved if:

1. it is provided in the form of a low-interest loan with long-term payback to the State; and
2. it is combined with energy proposals that would provide long-term benefits in other major regions of the state.

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HB 51 Fiscal Note -- Analysis (prepared February 8, 1993)

HB 51 appropriates \$90 million as a State contribution for Railbelt intertie design and construction. Its companion bill, HB 50, provides that the State will pay 50 percent of the design and construction costs and the participating utilities will pay the other 50 percent. Therefore, if the total cost of the two interties is less than \$180 million, the State contribution will be less than \$90 million. Conversely, it should be recognized that the State contribution according to the provisions of HB 50 will exceed \$90 million if the total intertie cost exceeds \$180 million.

This fiscal note assumes that the actual cost will be \$180 million, and that State funds will be drawn upon for the first \$90 million expenditure according to the expected cash flow for the two projects. It is anticipated that the Energy Authority would issue bonds for the remaining \$90 million to be expended during the latter part of FY 97 and during FY 98. The first year of operation is assumed to be FY 99.

The Energy Authority expects to contract with the utilities for operations and maintenance (O&M) of the projects. Expected O&M costs for the first year are estimated at \$165,000 (in 1991 dollars) in the project feasibility study, and have been escalated to \$225,000 in the fiscal note to account for future inflation.

One additional position is provided within the Energy Authority during both the construction phase and operations phase. The Energy Authority anticipates contracting with the utilities for construction of the projects as well as operations and maintenance. The additional position would provide contract management and oversight. It is assumed that an experienced project manager would be appropriate for oversight of projects of this magnitude, with salary estimated at range 24C. In addition to salary and benefits for this position, overhead support including clerical, accounting, and other indirect costs is estimated at \$75,000 increasing with inflation. Travel is also included at \$25,000 increasing with inflation. Funding would come initially from the General Fund appropriation, then bond proceeds, and finally from program receipts (utility payments) during the operations phase.

It is assumed that financing costs associated with the bond issue would be recovered from bond proceeds. Such financing costs, including legal fees, financial advisor fees, Energy Authority staff time, and other costs of bond issuance are not shown in the fiscal note.

Back up



Reliable Railbelt Energy Through Intertie Upgrades

Intertie proposal

The railbelt electrical utilities, representing some 300,000 residential, commercial and industrial consumers, proposes that the state of Alaska provide substantial financing assistance for the construction of two new sections of 138 kilovolt (kV) transmission Intertie line - one between the Kenai Peninsula and Anchorage and a section between Healy and Fairbanks.

The Alaska Energy Authority estimates both sections will cost \$152 million or \$160.7 million (depending on Kenai-Anchorage line routing) in 1991 dollars. An AEA feasibility study, released in early 1991, concludes that benefits would exceed costs for the two interties.

The 138 kV Kenai-Anchorage southern intertie would bring Bradley Lake hydroelectric power into the Railbelt grid system. The Healy-Fairbanks northern intertie would allow more low-cost power to flow throughout the Railbelt. Together, the new lines would add reliability to the whole grid.

Making it work

Last session, the Legislature put unappropriated funds from the Railbelt Energy Fund into an "Interties Reserve Account" within the General Fund. It contains \$100 million plus interest.

Utilities serving the Railbelt region are asking the Legislature to appropriate this account to the Alaska Energy Authority (AEA) for construction of the proposed Intertie sections. Additional state funding or financing of \$25 million is also sought.

Railbelt utilities will sign an agreement with the Energy Authority to pay full debt service. The utilities will continue to make payments to the state after capital costs are paid during the useful life of the lines.

Also, the utilities will cover costs of maintenance

and operation over the life of the new interties under a separate agreement with AEA.

These agreements show the utilities' willingness to share intertie costs so this vital upgrade of the Railbelt energy system can be built in a timely manner - and without putting a cost burden on consumers or the state.

Interties make sense

Interties are solid energy projects that bear economic analysis while yielding measurable benefits for some three-fourths of Alaska's population.

Alaska is looking at a window of opportunity to make the best use of its hydro generation capacity and lock in energy security and reliability for the railbelt population center. The 90-megawatt Bradley Lake project will be on line in a matter of months.

The state has a major investment in this \$330 million hydro project. Upgrading the Railbelt intertie grid will allow Bradley Lake to reach its fullest potential.

The Legislature has specifically set aside a \$100 million account to make sure Bradley Lake achieves its highest and best use and that Alaskans have access to reliable, economical power.

The next step is to upgrade the intertie system so consumers from Homer to Fairbanks can be assured of a strong, stable power transmission system plus access to more low-cost generation. Also, commercial and industrial growth hinges on reliable, affordable energy.

Upgrading the interties through a state-utilities partnership makes economic sense. The state will pay not one penny of operations and maintenance costs for this energy infrastructure. Some 300,000 Railbelt consumers experience no rate shock from this project and reap long-term energy savings.

Now is the time to secure reliable energy delivery for the whole Railbelt region with state funding assistance for the interties.



Advantages of an Upgraded Railbelt Intertie System

- ✓ **Reliability** - Power outages can cost millions of dollars in repair expenses, loss of business and loss of product and perishable goods. Upgrading the Railbelt power grid with two new sections of 138 kilovolt line will ease the strain on the system and help decrease the number and severity of transmission and generation related outages.
- ✓ **Economy Energy Transfer** - An improved transmission system will allow energy produced at low cost in one area to displace higher-cost energy in another area. This "economy energy" interchange between Anchorage and Fairbanks, for example, is now limited by the capacity of the existing fully loaded intertie line.
- ✓ **Hydro-thermal Coordination** - Thermal power plants operate most efficiently at or near full loading but load demands don't always allow this. Bradley Lake hydro generation can be used to increase the efficiency of gas-fired plants in the Railbelt by adding to or subtracting from the natural Railbelt electricity demand. This is called reshaping demand. A new Kenai-Anchorage intertie will increase this hydro-thermal coordination capability, thus creating greater savings through efficient power generation.
- ✓ **Less Line Loss** - The upgraded intertie system can yield savings through more efficient transmission of electricity. This is because the normal loss of energy in the lines due to resistance is decreased.
- ✓ **Capacity Sharing** - Power generation plants serving Anchorage, Fairbanks and the Kenai Peninsula are designed to produce more power than is normally needed so as to meet peak loads and emergency situations. With the two new intertie sections in service, power producers could share each other's reserve generating capacity. This ability to share excess capacity defers or avoids the need to add new units or build expensive new power plants as energy needs increase. An associated benefit comes in savings on standby generation unit maintenance. Capacity sharing allows utilities to use standby units less often to meet peak loads so money is saved as units require less scheduled maintenance, last longer, and use less fuel.

Associated Benefits

- ✓ **Utility Coordination** - With a stronger, more efficient transmission grid in place, Railbelt utilities can better coordinate operations and planning functions. Power providers working in harmony can lower costs for consumers.
- ✓ **Fuel Supply Competition** - An upgraded transmission system that handles loads better will allow electric utilities to access a variety of energy sources, thus boosting competition among fuels and suppliers.

Summary

Building the two new intertie sections in a timely manner will create a stable, reliable and more economical power delivery system to serve Alaska's major population and support economic growth within the region for decades to come.

Railbelt Energy Chronology

- Mid 1970s** Alaska State Legislature develops energy agenda, focusing attention in the Railbelt section of the state on the Susitna hydro project. Alaska Power Authority created to manage energy projects.
- 1979-1984** Legislature appropriates more than one billion dollars to proposed hydro projects, including \$300 million toward construction of Susitna. Most of the other funds appropriated paid for power generation projects at Ketchikan, Sitka, Petersburg-Wrangell, Valdez and Kodiak.
- 1985** Oil prices drop. Susitna determined to be too costly. Licensing application withdrawn. Project closed out.
- 1986** Legislature creates Railbelt Energy Fund for left over Susitna appropriations. Fund earmarked for energy projects in the Railbelt. Amount: \$285 million. Governor empowers Railbelt Energy Council to develop region-wide energy plans.
- 1987** Council recommends construction of intertie between Kenai Peninsula and Anchorage and capacity upgrade of transmission intertie between Anchorage and Fairbanks.
- 1987** Intertie construction bill introduced, passes Senate, dies in House Resources Committee. Fund balance cut to \$235 million through change of funding source and \$50 million set aside for Bradley Lake hydro project.
- 1989** Railbelt Intertie Feasibility Study commissioned by Alaska Energy Authority (formerly APA) showing low benefit-to-cost ratios at proposed line rating of 230 kilovolts.
- Late 1989** Railbelt utilities release new analysis of state's feasibility study. Analysis done by same research firm using same data and assumptions but this time based on 138 kV ratings. Benefit-cost ratios show as positive for both intertie sections with this lower kilovolt line rating.
- 1990** ARECA and Railbelt members begin concerted effort to win legislative support for construction of 138 kV interties.
- May 1990** Interties construction legislation passes Senate, stalled in House. Railbelt Energy Fund tapped for capital projects. Legislature votes in compromise measure to put \$100 million in unappropriated Railbelt Energy fund monies into Interties Reserve Account within general fund. Money earmarked for interties construction.
- Oct. 1990** Energy Authority begins research and regulatory work on proposed interties as required by law on all energy project developments.
- Dec. 1990** ARECA and member co-ops renew efforts to win legislative support for state funding assistance and authorization to build 138 kV interties.
- Jan. 1991** Energy Authority study estimates interties cost at between \$152 million and \$160.7 million in 1991 dollars. House bills are introduced to authorize interties construction and state funding at \$125 million.





Alaska Energy Authority

A Public Corporation

FINANCIAL RESTRUCTURING OF THE ALASKA ENERGY AUTHORITY

On October 12, 1992 the Board of Directors of the Alaska Energy Authority voted unanimously in favor of financially restructuring the Authority. That vote of support came after months of work by utilities around the state and the Authority to develop a plan to position Alaska to meet future energy needs during a time of declining state revenue.

The following day, Governor Walter J. Hickel gave the effort his strong support and said he would propose legislation in January to implement the financial restructuring. The legislative package is designed to serve two major goals: promote economic diversification by expanding the availability of reliable and affordable power, and provide continuing support for rural village economies by extending the Power Cost Equalization (PCE) program.

The financial restructuring would establish the Alaska Energy Authority Revolving Fund. The Fund and its earnings would provide the financial structure needed to construct four proposed intertie projects: one between the Kenai Peninsula and Anchorage, a second between Healy and Fairbanks, a third between the Copper River Valley and the Railbelt, and a fourth in Southeast Alaska to tap the underutilized power of the Tyee hydroelectric project. In addition, it would provide an annuity of \$17 million annually for 20 years to assure reasonable power costs in rural areas through Power Cost Equalization (PCE) or more efficient energy projects. It would also support a continuing budget of about \$3.5 million per year for rural technical assistance, small capital projects and conservation efforts.

The new Fund's beginning balance would be \$154.8 million. It would be composed of \$2.8 million currently in the Railbelt Energy Fund, \$100 million in the Railbelt Intertie Reserve Fund, \$21 million in interest on the Railbelt Intertie Reserve Fund, a Bradley Lake construction surplus of \$11 million and an additional State contribution of \$20 million. Annual revenues, such as repayment of the State loan for construction of the Four Dam Pool, would be deposited in the Fund as received.

With the exception of an annual General Fund appropriation (which would decline to zero over a seven-year period) to help support the PCE program, and any additional appropriations the Legislature may choose to make for specific purposes, the Authority would become self-supporting.

The restructuring would have a beneficial impact on the Authority's overall operations because it would make the structural changes necessary to establish accounts and prepare financial forecasts on a multi-year basis based on its kilowatt hour sales and investment income in keeping with normal practice in the utility industry. The legislation would propose specific language to authorize the establishment of reserve accounts for renewals and replacements, self-insurance, and capitalization to support and preserve operating projects. This would allow for long-range commitment of funds which, in turn, would allow long-range planning to occur. Currently, the Authority is limited in its ability to engage in long-

range planning due to the uncertainty of an annual budgeting process that requires an infusion of General Fund dollars.

According to utility estimates, the existing Anchorage-Fairbanks Intertie presently saves Railbelt consumers roughly \$7 million per year by allowing less expensive power from Southcentral Alaska to supply a significant portion of Fairbanks power requirements. However, the capacity of the Railbelt transmission system is inadequate for present day demands, and the existing single line connections do not satisfy prevailing industry reliability standards.

The single line between Anchorage and the Kenai Peninsula was built 30 years ago, but regional power demand is now 10 times higher than it was when the line was new. The single line from Healy to Fairbanks was built 25 years ago to carry 25 megawatts from a Healy power plant. Now that line carries 95 megawatts, including 70 megawatts from Anchorage. Both of the lines were built for a smaller system scale in an earlier era, and are now pushed to their operational limits.

Construction of the two interties would allow full use of the Bradley Lake hydroelectric project's capacity throughout the Railbelt and would accommodate additional power should a third turbine be added to the project.

The estimated construction cost of the Healy-Fairbanks and the Anchorage-Kenai Peninsula interties is \$180 million. The AEA Fund would provide one-half of the cost with a zero interest loan. The remaining half of the construction cost would be financed with revenue bonds.

The Copper Valley region and Southeast Alaska also would benefit from an expanded transmission network.

Copper Valley electricity consumers are burdened with retail power rates that, with the exception of rural Alaska, are among the highest in the United States -- close to 20 cents per kilowatt hour. Power demand in the region is growing beyond the energy capability of the Solomon Gulch hydroelectric project that presently serves the area. With the additional power requirements from the new Petro Star oil refinery in Valdez, roughly half of Copper Valley's electricity will be supplied with diesel generation. An intertie between the Copper Valley system and the Railbelt would provide lower cost power and eliminate the need for diesel fuel to generate electricity.

The preliminary cost estimate for the Copper Valley intertie is about \$60 million, with \$40 million coming from the AEA Fund in the form of a zero interest loan. The remaining monies would come from revenue bonds. A full feasibility study on the project is planned for 1993.

In Southeast, the Tyee hydroelectric project provides power to Wrangell and Petersburg. However, due to low demand only one-third of the project's generating capability is now being used. Ketchikan, south of the Tyee project, receives much of its electricity from the Swan Lake hydroelectric project. However, local demand is now outstripping Swan Lake's generating capability. The city will soon have to generate additional electricity using diesel fuel. Ketchikan is an obvious candidate for an intertie with the Tyee hydroelectric project.

Similarly, Juneau receives most of its electricity from the Snettisham hydroelectric project. Economic growth coupled with potential power sales to area mining developments could quickly lead to renewed fossil fuel-based power generation in the near future. As a result, Juneau is also a candidate for an intertie with the Tyee Lake hydroelectric project.

The cost estimate for a Southeast intertie segment to market Tyee Lake surplus power is also in the range of \$60 million, \$40 million of which could be financed with a zero interest AEA loan and the balance financed with revenue bonds.

The Energy Authority has administered what is now known as the Power Cost Equalization (PCE) program since its creation by the Alaska Legislature in 1981. Its purpose is to reduce the consumer cost of electricity in rural Alaska. In fiscal year 1992, about \$15.2 million was spent on PCE. In its 12-year history, the PCE program has disbursed nearly \$160 million to rural Alaska consumers in the form of rate relief. Although the bulk of power provided by utilities to commercial and industrial customers is not eligible for PCE, eliminating the program would double or even triple residential electric bills in many areas in rural Alaska.

The Alaska Village Electric Cooperative (AVEC), one of 97 utilities receiving PCE, is a good example of the program's impact. AVEC serves a population of 17,400 people in 49 rural villages. Only about one-third of the kilowatt hours sold by AVEC are eligible for PCE. The average AVEC residential rate without PCE is 41.7 cents per kilowatt hour. However, the utility's customers receive 21.8 cents per eligible kilowatt hour from PCE, resulting in an average residential rate of 19.9 cents for the first 750 kilowatt hours used per month. This is still roughly twice the average cost of power in Anchorage, Fairbanks and Juneau, as well as Petersburg, Wrangell, Ketchikan and Sitka.

The AEA Revolving Fund balance would be drawn down over a period of 20 years. During that time, the PCE Program would continue to be funded at roughly \$17 million per year, regardless of the phase-out of State General Fund support. As annual PCE General Fund appropriations by the legislature were being decreased, contributions from the Revolving Fund would be increased to make up the difference. This would provide a transition period for rural utilities to adopt cost-savings measures such as utility consolidation or use of more efficient technologies, and for communities to adapt to higher real energy costs in the long run.

Constructing the intertie projects will create a much stronger transmission system with greater capacity and far greater reliability, and eliminate the need to add additional diesel-fired generation capacity in many areas. All of these transmission projects will contribute to lower costs, greater reliability and greater system flexibility over the long term, all of which is critical to economic development and diversification. Further, the positive economic impact created by \$300 million in construction projects over the next several years will be significant.

Funding the Power Cost Equalization Program with an annuity not only benefits rural power consumers, but also will cut State General Fund spending by \$17 million per year.

Financially restructuring the Alaska Energy Authority will not reduce legislative oversight. The Authority will remain a state agency that must be responsive to the public's elected representatives.

In conclusion, almost \$135 million is available in reserve funds for the intended purpose of constructing energy projects. The premise of this proposal is that these revenues should be used for energy projects rather than lost to annual operating budgets. The proposal is further based on a deep concern that overnight reductions in the PCE Program would be catastrophic for rural Alaska. Financially restructuring the Alaska Energy Authority and creating the Revolving Fund can go a long way in meeting energy demand, promoting economic diversification and helping rural Alaska cope with today's high energy costs. We believe that providing reliable and affordable power is one of the best investments we can make with our non-renewable wealth.

ALASKA ENERGY AUTHORITY
(All Dollars in Thousands)

AEA Revolving Fund Balance

	6/30/93	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
AEA Revolving Fund Balance	\$154,800	\$172,401	\$180,992	\$180,920	\$122,445	\$61,600	\$62,444	\$61,520	\$58,298	\$55,383	\$52,725
Revenue											
Revolving Fund Investment Income		11,610	12,930	13,574	13,569	9,183	4,620	4,683	4,614	4,372	4,154
Collections on Existing Loans		2,413	2,413	2,271	2,244	2,234	2,181	2,130	1,956	1,937	1,931
Intertie State Loan Repayments											
Railbelt Interties		0	0	0	0	0	360	720	1,080	1,440	1,800
Southeast Intertie		0	0	0	0	0	0	160	320	480	640
Copper Valley Intertie		0	0	0	0	0	0	160	320	480	640
Debt Service from 4-Dam Pool		10,398	10,667	10,909	11,155	11,405	11,584	11,766	11,932	12,064	12,121
Appropriation - PCE		17,000	14,571	12,143	9,714	7,286	4,857	2,429	0	0	0
Appropriation - PCE Admin.		182	180	199	27	217	227	237	0	0	0
Total		41,801	40,772	39,096	36,890	30,325	23,829	22,285	20,222	18,773	17,286
Expenditure											
Railbelt Intertie Construction		1,000	9,000	14,400	65,600	0	0	0	0	0	0
Southeast Intertie Construction		500	500	1,200	3,600	34,200	0	0	0	0	0
Copper Valley Intertie Construction		500	500	1,200	3,600	34,200	0	0	0	0	0
Conservation		1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Other Capital Projects/ Programs		1,000	1,045	1,092	1,141	1,193	1,246	1,302	1,361	1,422	1,486
AEA Administration		1,500	1,568	1,638	1,712	1,789	1,869	1,953	2,041	2,133	2,229
PCE Outlay		\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000
Rural Technical Assistance		1,500	1,568	1,638	1,712	1,789	1,869	1,953	2,041	2,133	2,229
Total		24,000	32,180	39,168	95,365	91,170	22,985	23,209	23,443	23,688	23,944
Surplus (Shortage)		\$ 17,801	\$ 8,592	(\$72)	(\$58,475)	(\$60,845)	\$ 844	(\$924)	(\$3,221)	(\$2,915)	(\$2,659)

Revolving Fund Beginning Balance		Assumptions	
Railbelt Energy Fund	\$2,800	Annual Inflation Rate	4.5 %
Railbelt Intertie Reserve Fund	100,000	Return on AEA Fund	7.5 % of fund balance
Interest on Rblt Intertie Reserve	21,000	PCE State Appropriation	7 year ramp
Bradley State Fund Surplus	11,000	Interest Rate: State Intertie Loans	0.0 %
Additional State Contribution	20,000	Term: State Intertie Loans	50 years
Total	\$154,800	Railbelt Intertie Est. Total Cost	\$180,000
		Railbelt Intertie State Loan	\$90,000
		SE Intertie Est. Total Cost	\$60,000
		SE Intertie State Loan	\$40,000
		Copper Valley Est. Total Cost	\$60,000
		Copper Valley State Loan	\$40,000

Projections exclude restricted revenues and associated expenditures.
(Example: revenues dedicated to project operations and maintenance.)

ALASKA ENERGY AUTHORITY
(All Dollars in Thousands)

page 2 of 2
29 Jan 93

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
AEA Revolving Fund Balance	\$50,880	\$48,442	\$45,396	\$41,795	\$37,650	\$32,920	\$27,544	\$21,457	\$14,591	\$6,871	
Revenue											
Revolving Fund Investment Income	3,954	3,816	3,633	3,405	3,135	2,824	2,469	2,066	1,609	1,094	\$111,315
Collections on Existing Loans	1,831	1,609	1,425	1,347	1,333	1,333	1,333	1,333	1,333	1,333	35,920
Intertie State Loan Repayments											
Railbelt Interties	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	23,400
Southeast Intertie	800	800	800	800	800	800	800	800	800	800	9,600
Copper Valley Intertie	800	800	800	800	800	800	800	800	800	800	9,600
Debt Service from 4-Dam Pool	12,182	12,228	12,280	12,336	12,395	12,454	12,512	12,568	12,625	12,684	238,263
Appropriation - PCE	0	0	0	0	0	0	0	0	0	0	68,000
Appropriation - PCE Admin.	0	0	0	0	0	0	0	0	0	0	1,458
Total	21,367	21,053	20,738	20,488	20,263	20,011	19,714	19,367	18,967	18,511	497,556
Expenditure											
Railbelt Intertie Construction	0	0	0	0	0	0	0	0	0	0	90,000
Southeast Intertie Construction	0	0	0	0	0	0	0	0	0	0	40,000
Copper Valley Intertie Construction	0	0	0	0	0	0	0	0	0	0	40,000
Conservation	0	0	0	0	0	0	0	0	0	0	10,000
Other Capital Projects/ Programs	1,553	1,623	1,606	1,772	1,852	1,935	2,022	2,113	2,208	2,308	31,371
AEA Administration	2,329	2,434	2,544	2,658	2,778	2,903	3,034	3,170	3,313	3,462	47,057
PCE Outlay	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	340,000
Rural Technical Assistance	2,329	2,434	2,544	2,658	2,778	2,903	3,034	3,170	3,313	3,462	47,057
Total	23,212	23,491	23,784	24,088	24,408	24,741	25,089	25,454	25,834	26,231	645,486
Surplus (Shortage)	(\$1,845)	(\$2,438)	(\$3,045)	(\$3,601)	(\$1,145)	(\$4,730)	(\$5,376)	(\$6,087)	(\$6,867)	(\$7,720)	(157,929)

REPORT OF THE
RAILBELT ENERGY COUNCIL
TO THE
FIFTHTEENTH ALASKA STATE LEGISLATURE
FIRST SESSION

January 24, 1987

TABLE OF CONTENTS

	Page
LISTING OF RAILBELT ENERGY COUNCIL MEMBERS	ii
EXECUTIVE SUMMARY	1
INTRODUCTION	4
FINDINGS & RECOMMENDATIONS	7

RAILBELT ENERGY COUNCIL MEMBERSHIP

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KENT WICK, General Manager,
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(Vice-Chairman, REC)

EXECUTIVE SUMMARY

In 1986, the Alaska Legislature created the Railbelt Energy Council (REC) and charged it with addressing five areas of concern dealing with the Railbelt energy needs (Ch 30, SLA 1986). The Council membership consists of two members appointed by the Governor; two senators appointed by the President of the Senate; two members of the House of Representatives appointed by the Speaker of the House; and one representative from each of the seven interconnected Railbelt utilities. The Council was to report its recommendations to the Legislature by February 15, 1987.

The Council addressed the organizational and financial aspects as well as reviewed various alternatives for meeting the future energy needs of the Railbelt. The Council was unable to conduct the review of the alternatives in as great a detail as originally anticipated because of a freeze placed on the \$2.5 million appropriation to the Alaska Power Authority (APA) for that specific purpose. Despite these difficulties further exacerbated by the declining oil prices and state revenues, the Council has addressed the major issues and unanimously approved its findings and recommendations. They are summarized below.

FINDINGS:

1. DECREASING OIL PRICES AND STATE REVENUES ARE CAUSING SIGNIFICANT CHANGES IN THE FORECASTED RAILBELT ENERGY REQUIREMENTS FOR THE NEXT SEVERAL YEARS. THE IMPACT OF THESE DEVELOPMENTS ON LONG-TERM GROWTH IS UNCLEAR.

2. DUE TO BUDGETARY LIMITATIONS, STATE PARTICIPATION IN FUTURE ENERGY PROJECTS WILL BECOME MORE CONSTRAINED.
3. INCREASING THE UTILIZATION AND EFFICIENCY OF THE EXISTING RAILBELT GENERATION AND TRANSMISSION RESOURCES REPRESENTS THE BEST SOLUTION IN THE NEAR TERM.
4. IMPROVING COOPERATION AND COORDINATION AMONG RAILBELT UTILITIES WILL INCREASE THE RELIABILITY AND COST EFFECTIVENESS OF THE REGION'S ELECTRIC SYSTEM.
5. THE LEGISLATURE ESTABLISHED THE RAILBELT ENERGY FUND FOR THE SOLE PURPOSE OF FINANCING ENERGY PROJECTS IN THE RAILBELT REGION.

MAJOR RECOMMENDATIONS:

1. CREATION OF A REGIONAL GENERATION AND TRANSMISSION TYPE UTILITY ORGANIZATION IS IN THE BEST INTEREST OF THE RAILBELT CONSUMERS AND SHOULD CONTINUE TO BE SUPPORTED BY ALL CONCERNED.
2. THE ALASKA POWER AUTHORITY SHOULD CONTINUE TO PERFORM ITS RAILBELT FUNCTIONS UNTIL THE LEGISLATURE AND ADMINISTRATION COMPLETE THEIR REVIEW AND DETERMINE THE APA'S FUTURE ROLE AND STRUCTURE.
3. THE COUNCIL RECOMMENDS THAT THE UTILITIES SHOULD HAVE REPRESENTATION ON THE ALASKA POWER AUTHORITY BOARD OF DIRECTORS.
4. CONSTRUCTION OF THE BRADLEY LAKE HYDROELECTRIC PROJECT SHOULD CONTINUE IN ACCORDANCE WITH A PLAN OF FINANCE AND POWER SALE AGREEMENTS PREVIOUSLY APPROVED OR AS MAY BE MODIFIED BETWEEN APA AND THE RAILBELT UTILITIES. ALL RAILBELT UTILITIES SHOULD BE GIVEN AN OPPORTUNITY TO PARTICIPATE IN THE BRADLEY LAKE PROJECT.

5. A PORTION OF THE RAILBELT ENERGY FUND SHOULD BE APPROPRIATED FOR THE COMPLETION OF THE ANCHORAGE-KENAI PENINSULA AND ANCHORAGE-FAIRBANKS INTERTIES IN CONJUNCTION WITH THE COMPLETION OF THE BRADLEY LAKE PROJECT.
6. THE BURDEN OF PROOF FOR DEMONSTRATING A COMPELLING NEED FOR ANY ADDITIONAL ENERGY PROJECT BEYOND BRADLEY LAKE AND THE RAILBELT INTERTIES, FOR WHICH STATE FINANCIAL ASSISTANCE IS BEING SOUGHT, IS ON THE PROJECT SPONSOR(S) AND SHOULD INCLUDE A CREDIBLE PLAN OF FINANCE AS WELL AS PUBLIC POLICY CONSIDERATIONS JUSTIFYING THE STATE ASSISTANCE.
7. AN ENERGY PROJECT REVOLVING FUND SHOULD BE ESTABLISHED, UTILIZING ANY MONIES REMAINING IN THE RAILBELT ENERGY FUND. A METHOD TO REPLENISH THE FUND SHOULD BE DEVELOPED WITH AFFORDABILITY TO THE RATEPAYER AS THE KEY TO ANY SUCH REPAYMENT PLAN.

INTRODUCTION

The Railbelt Energy Council was created by the Alaska Legislature (Chapter 30, SLA 1986) during the 1986 Legislative session. The Council was created in response to requests from the Railbelt utilities and other interested parties concerned that with the demise of the Susitna River Hydroelectric Project (Watana and Devil Canyon dams) early in 1986, the Railbelt's energy needs would not be met. The terms of financing for the Susitna project were found to be unacceptable due to its large capital cost and decreasing State revenues, although the project still appears economically feasible over the long run.

The demise of the two-dam Susitna project left the Railbelt Energy Program in question and with the problem of how best to utilize some \$280 million designated as part of the state's equity in that project.

Another issue that had to be addressed dealt with the perception that the cooperation and coordination among the Alaska Power Authority and the seven interconnected Railbelt utilities was not as effective as deemed necessary for formulating the most efficient solutions to Railbelt energy needs.

In general then, the Council was created to address the organizational, generation, transmission and financial issues as they related to the Railbelt energy problems. The statutorily specified issues are addressed later in this report. Pending completion of the Council's

work, the Legislature placed all of the remaining Susitna Project funds into the Railbelt Energy Fund (REF) (Chapter 29 & 41, SLA 1986) while retaining the sole authority for making appropriations from it. Further, as a way of assisting the Council, the Legislature appropriated \$2.5 million from REF to the APA for conducting a review and evaluation of Railbelt electric power alternatives (Chapter 42, SLA 1986).

While the Council has addressed the five areas mandated by statute, the report is not as comprehensive as desired largely because of two unplanned events. First, the previous Administration froze most of the \$2.5 million appropriation to the APA that was to be used to review and evaluate Railbelt electric power alternatives. Second, the decline of economic growth has substantially delayed the need for future generation facilities in the Railbelt.

Despite these obstacles, the Council has been able to forge unified positions on a number of major issues dealing with the Railbelt energy problems. The Council feels that implementation of its recommendations will go a long way toward assuring Railbelt consumers--who represent three fourths of the State's population--of more reliable and low cost electrical energy. Further, utilization of the REF for energy projects in the Railbelt will restore some of the regional equity originally envisioned under the Energy Program for Alaska.

The Findings and Recommendations of this report are keyed to the five specific reporting requirements of the statute (Ch. 30, Sec 2, SLA 1986). Each of the five parts under Findings & Recommendations is headed with one of the statute requirements, which is underlined for easier identification.

FINDINGS & RECOMMENDATIONS

1. Recommend the best options for planning, financing, constructing, and managing electric power facilities in the Railbelt area.

- A. Planning. The Railbelt Energy Council finds that a well coordinated planning effort among those responsible for supplying the service is absolutely essential to assure that the Railbelt customers will have the most reliable, efficient and economic electric supply system. While there are many interested parties that have much valuable input to offer to the planning process, THE FACT REMAINS THAT THE RESPONSIBILITY FOR SUCH PLANNING REMAINS WITH THE RAILBELT UTILITIES AND THE ALASKA POWER AUTHORITY. The Council should not be expected to become a substitute for such a planning entity.

THE COUNCIL BELIEVES THERE MUST EXIST A FORMAL ORGANIZATION of all interconnected Railbelt utilities. The creation of such a regional utility organization should continue to be supported by the responsible agencies, the Legislature and the Administration as being in the best interest of the Railbelt consumers.

While the Council recognizes that in the long-term the optimal solution would be a regional generation and transmission (G&T) utility organization, it is also aware that technical and political considerations may preclude such a solution in the short-term. Therefore, as an interim solution the Council recommends that:

1. The Railbelt utilities and APA work diligently toward establishing a regional organization as soon as possible.
2. Pending any change in its role and/or structure, the APA should continue to administer and perform its existing programs and functions relative to the Bradley Lake and the Railbelt interties projects.
3. The APA Board of Directors be immediately reorganized to include direct utility representation.

The Council recommends that the role of APA be re-evaluated. Two issues that should be taken into consideration in this review are the pending formation of a regional G&T utility and a significantly smaller state budget. Such a review by the Legislature and the Administration should begin during the 1987 session and provide for the Railbelt utility input.

- B. Financing. The Council finds that it is not appropriate to recommend financing options without first having a specific project proposal. In general terms, the Council believes that each project will have some unique aspect and the optimal financing plan will have to be custom tailored after specific economic feasibility and all relevant financial factors have been identified and public policy aspects considered. The Council recognizes that new State capital project funds will most likely remain scarce in the immediate future.

Therefore, THE COUNCIL RECOMMENDS THAT THE LEGISLATURE CONSIDER THE FINANCING OPTIONS FOR EACH NEW PROJECT SEPARATELY AND ENSURE OPTIMAL USE OF THE STATE AND PRIVATE EQUITY FUNDS.

Specifically, THE COUNCIL RECOMMENDS THAT THE LEGISLATURE CONTINUE TO SUPPORT THE PREVIOUSLY APPROVED BRADLEY LAKE HYDROELECTRIC PROJECT NOW UNDER CONSTRUCTION.

The Bradley project has already been deemed economically and environmentally feasible and has received licensing approval from the Federal Energy Regulatory Commission. Construction was begun in the summer of 1986. The State of Alaska has appropriated approximately \$168 million for the project, \$50 million of which was frozen after the 1986 Legislative session.

The Railbelt Energy Council unanimously supports timely completion of the Bradley project and supports full additional funding of \$50 million for a total appropriation of \$218 million as previously approved by the Legislature and which was in effect at the time of the signing of conditional power sales agreements. Changes to the existing plan of finance should be contemplated only after a careful evaluation of the impact they would have on the existing power sale agreements, but with the recognition that all seven interconnected Railbelt utilities should have direct access to the Project through completion of the Anchorage-Fairbanks and Anchorage-Kenai Peninsula interties.

Further, THE COUNCIL RECOMMENDS THAT A PORTION OF THE RAILBELT ENERGY FUND BE USED TO COMPLETE THE ANCHORAGE TO FAIRBANKS AND ANCHORAGE TO KENAI PENINSULA INTERTIES. The Council finds that the completion of these interties will allow all of the Railbelt utilities to more equally share the benefits of the Bradley Lake project as well as provide more reliable and less costly electric service to all consumers in the region.

- C. Constructing. The Council finds that the owner or owners of a power project should retain the responsibility and authority to decide how best to construct it. Unless and until its role and/or structure are changed, the APA should

retain responsibility for the completion of the Bradley Lake Project and the Interties. The APA should closely coordinate its activities with the Railbelt utilities.

If at some future date there should come into being a regional utility organization, then any projects constructed by it should be accomplished totally under that organization's control.

D. Managing. The Council finds that in general the utilities are best qualified to operate and maintain the power supply facilities and recommends that the APA policy of contracting out such operations to local utilities be continued. The Council further recommends that management decisions, which are normally the prerogative of the owner and which could impact ratepayers, be closely coordinated among the owners, operators and users.

On the issue of divestiture, the Council finds that the transfer of the federal Eklutna Hydroelectric project to local utility or utilities makes sense only if the purchase price and terms are favorable to consumers and other interested parties. Accordingly, the Council recommends that the appropriate Railbelt utilities continue to pursue the divestiture process until the sale is consummated or it becomes clear that the process will not be successful due to political and other constraints.

2. Examine all alternatives and recommend the best method for meeting projected Railbelt energy demand.

As previously mentioned, the Council was unable to thoroughly examine a wide spectrum of energy alternatives because funds for energy alternative studies were frozen. In addition, the Council finds that the dramatic decline in oil prices since the end of the 1986 Legislative Session has had a profound effect on near-term Railbelt energy forecasts. For the near future, this seems to indicate that unless there is a significant upturn in the economy, there may not be a need for major new power plant additions after the completion of the Bradley Lake and Interties projects and excluding any existing plant replacements.

Given these circumstances, THE COUNCIL FINDS THAT THE PRUDENT STRATEGY TO FOLLOW AT THIS TIME IS TO INCREASE THE UTILIZATION AND OPERATIONAL EFFICIENCY OF THE EXISTING RAILBELT GENERATION AND TRANSMISSION FACILITIES AND THOSE UNDER CONSTRUCTION.

Specifically, this should include timely completion of the Bradley Project, constructing a new Anchorage-Kenai Peninsula intertie, upgrading the Anchorage-Fairbanks intertie, implementation of various conservation measures and extending the life of existing power plants.

There are many benefits of an improved transmission system. Some of these are not easily quantifiable into dollars. Examples of such benefits include improved reliability, decreased

standby generation requirements, flexibility of buying from lowest cost generation source, the increased competition due to greater access to alternative generation methods and facilitation of general economic development requirements. THEREFORE, THE COUNCIL RECOMMENDS THAT THESE PUBLIC POLICY ISSUES BE CONSIDERED AS AN IMPORTANT PART OF THE DECISION MAKING PROCESS IN ADDITION TO THE TRADITIONAL BENEFIT/COST ANALYSIS.

The Council finds that electricity has become a necessity and a prerequisite to improving the quality of life for the rural residents. While the Council recognizes that extending the electrical service to all rural residents is neither practical, nor desired by some of them, it finds that extension of such services along state routes and interties, on a priority basis, would be highly desirable. Accordingly, the Council believes that the Legislature and the Administration should adopt policies and appropriations designed to achieve that goal, thereby enhancing the economic development potential of the rural residents while concurrently improving their quality of life.

3. Recommend alternative financing plans for assisting the private sector and public utilities to meet the future energy needs of the Railbelt area.

The Council has in this report made specific recommendations covering methods of financing for Bradley Lake and the Interties. The Council recognizes that State revenues have severely declined and that no new generation, in addition to the Bradley Lake and

Interties projects may be needed in the near future. The Council generally supports construction of future power supply projects by the municipalities, utilities or the private sector.

The Council further recommends that the burden of proof for making a compelling case for State participation in any project rest with the project sponsor(s) to include demonstrating that private financing is not feasible or available and that public policy considerations warrant financial assistance by the State.

THE COUNCIL FINDS THAT THE LEGISLATURE ESTABLISHED THE RAILBELT ENERGY FUND FOR THE SOLE PURPOSE OF FINANCING ENERGY PROJECTS IN THE RAILBELT REGION. Accordingly, THE COUNCIL RECOMMENDS THAT A PLAN OF FINANCE BE DEVELOPED TO ASSURE THAT THESE FUNDS ARE USED SOLELY FOR THEIR INTENDED PURPOSE AND THAT REPLENISHMENT OF THE FUNDS BE CONSIDERED A KEY ELEMENT IN ANY SUCH PLAN.

4. Determine whether a regional generation and transmission utility organization can operate to the best interests of utility consumers.

As alluded to under Finding 1A, the Council is aware that previous studies have demonstrated that a regional power supply utility organization is in the best interest of consumers.

Currently, work is being pursued by the Railbelt utilities toward a regional generation and transmission utility organization. This includes a formal generation and transmission organization study and a possible modification of the existing Alaska Electric Generation & Transmission cooperative by-laws to accommodate further expansion.

The Council is convinced that a regional generation and transmission utility organization makes sense and that the goal is worthwhile pursuing despite potential implementation problems. Pending a successful resolution of the issue, the Council recommends that the APA become a formal member of any organization designated to deal with the Railbelt energy issues.

5. Cooperate with the Alaska Power Authority to examine the feasibility and desirability of energy projects.

The Council notes that APA and the utilities are already cost sharing in the study of the Anchorage-Kenai Peninsula Intertie feasibility. The Council finds that freezing of the \$2.5 million (except for the \$150,000 for the Anchorage-Kenai Peninsula Intertie feasibility study) designated for studying the Railbelt electric power alternatives limited the Council's ability to review and evaluate Railbelt electric power alternatives such as coal, gas, conservation, Devil Canyon, and other hydro generation options.

Should the Legislature desire additional analysis to determine whether any of the above options are desirable, the Council would recommend that a highly qualified team be assembled to prepare plans of finance to determine whether the projects are able to be financed before proceeding with a feasibility analysis. The Council believes that this sequence would preclude needless expenditure of funds on detailed feasibility studies for projects which are not able to be financed despite being economically feasible.

While the Council finds that restructuring the APA Board of Directors is the best solution to assuring improved cooperation and coordination between the Railbelt utilities and the APA, should the Legislature desire to extend the life of REC for any reason, then the APA should be made a full member.

**RAILBELT INTERTIE
FEASIBILITY STUDY**

DRAFT REPORT

**Prepared by
Alaska Energy Authority
January 1991**

1. INTRODUCTION

1.1 OBJECTIVE

The purpose of this document is to review the feasibility of two 138 kV intertie projects: one between Soldotna and Anchorage, the other between Healy and Fairbanks. These projects are identified in Ch. 208, Sec. 159, SLA 1990, which appropriated \$100 million plus interest earnings to a Railbelt intertie reserve. This is intended to comply with the project review requirements contained in AS 44.83.181.

1.2 BACKGROUND

The Railbelt Intertie Reconnaissance Study was completed by the Alaska Energy Authority (the "Authority") and approved by the Office of Management and Budget in 1989. Among the projects evaluated, three are of particular relevance to this feasibility study:

- 1) construction of a new 230 kV transmission line between Soldotna and Anchorage;
- 2) full upgrade of the Anchorage-Fairbanks intertie, including a new 345 kV line between Healy and Fairbanks plus a new 345 kV line south of Willow;
- 3) limited upgrade of the Anchorage-Fairbanks intertie consisting only of electrical equipment to allow a limited increase in transfer capacity over the existing line.

For each of these intertie projects, the reconnaissance study provides preliminary engineering and design, environmental impact analysis, and construction cost estimates. Also provided are fuel price forecasts, electricity demand forecasts, and economic evaluation of each project. Among the conclusions of the economic analysis were the following:

- 1) The proposed 230 kV intertie between Soldotna and Anchorage and the proposed full upgrade of the Anchorage-Fairbanks intertie to 345 kV are not economically feasible; i.e. project costs exceed estimated benefits for both projects.
- 2) The limited upgrade of the Anchorage-Fairbanks intertie is economically feasible.

As these findings emerged, the Railbelt electric utilities proposed two scaled-down intertie alternatives that had the potential to capture most of the benefits of the larger projects but at reduced cost. These scaled-down alternatives are the subject of this feasibility study and are described as follows:

- 1) A new intertie between Soldotna and Anchorage constructed at 138 kV (instead of 230 kV as initially proposed);
- 2) Upgrade of the Anchorage-Fairbanks intertie consisting of a new 138 kV line between Healy and Fairbanks, plus electrical equipment needed for increased transfer capability.

The Railbelt utilities then sponsored an economic analysis of the scaled-down alternatives, which concluded that both proposals are economically feasible. This analysis was adopted as an addendum to the Railbelt Intertie Reconnaissance Study by the Authority Board of Directors in February 1990. Appendix A contains a complete list of volumes included in the reconnaissance study.

1.3 FEASIBILITY STUDY OVERVIEW

Essentially all of the information required for a feasibility study is also needed to produce a reconnaissance study, specifically:

- preliminary engineering and design of proposed projects;
- capital and operating costs of proposed projects;
- environmental impact analysis;
- other parameters needed for economic assessment including fuel price forecasts, electricity demand forecasts, and discount rate;
- benefit/cost analysis.

The approach adopted here is to use information developed for the reconnaissance study as much as possible, supplementing where necessary within time and funding constraints. The main subjects of the feasibility study are covered as follows:

Engineering and Design

This category includes specification of physical design, route selection and right-of-way, and definition of project capability. In other words, the purpose of this section is to describe what the project is, where it is intended to go (including associated right-of-way issues), and what effect it is expected to have in the areas of power transfer capability and transmission losses.

For the southern line (i.e. between Soldotna and Anchorage), most of the information for this section is drawn from prior studies. For the northern line (i.e. the Anchorage-Fairbanks upgrade that includes a new Healy-Fairbanks line), additional work has been performed for this feasibility study to better define the

electrical equipment required for the upgrade and the impact of the upgrade on power transfer capability.

Capital and Operating Costs

Cost estimates were developed in the reconnaissance study for the southern 230 kV line and for the northern 345 kV upgrade, and were subsequently adjusted as the project definition evolved. A capital cost estimate for the scaled-down alternatives was most recently prepared by the Authority in February 1990. However, a cost estimate from an independent source must also be prepared according to the project review requirements in AS 44.83.185. This has now been completed and represents the most recent and thorough cost estimate available regarding the scaled-down alternatives. As a result, the independent estimate of construction cost is presented in this feasibility study and is recommended for project planning.

Projected operating and maintenance costs have been reviewed by Authority staff and re-estimated for this study.

Environmental Impact Analysis

All of this section is taken directly from the reconnaissance study.

Economic Parameters

Fuel price forecasts, electricity demand forecasts, and discount rate are also taken directly from the reconnaissance study.

Project Benefits

There was substantial investment during the reconnaissance study in the attempt to quantify the benefits of these transmission projects, and there was substantial debate about the results as well. Much of the benefit for these projects falls into categories where quantification is difficult: e.g. improved reliability, improved system coordination, removal of certain operating constraints, increased access to Bradley Lake spinning reserve. An attempt could be made to sharpen these benefit estimates if funds were committed for additional system modeling and analysis. However, funds for more economic studies have not been made available; and even with additional studies, a clear resolution of these issues might not be achieved.

The basic approach of this document is to present and discuss the benefit assessments included in the reconnaissance study, supplemented by comments subsequently made by outside observers regarding the overall adequacy of the Railbelt transmission system. This discussion provides the basis for the Authority's conclusions on project feasibility.

1.4 CONCLUSIONS

The estimated project costs are as follows:

ESTIMATED PROJECT COSTS (Millions of January 1991 Dollars)

	Construction Cost	Annual O&M Cost ^a	Present Value of Total Cost ^b
Soldotna-Anchorage 138 kV ("Enstar" route)	\$74.6	\$0.3	\$81.0
Soldotna-Anchorage 138 kV ("Tesoro" route)	\$83.2	\$0.4	\$90.6
Healy-Fairbanks 138 kV (incl. SVS additions)	\$77.5	\$0.1	\$79.8

^a Represents levelized annual cost. Annual O&M costs are expected to increase over time, as described in Chapter 3.

^b Includes present value of O&M costs for 40 years for the Soldotna-Anchorage line, and for 50 years for the Healy-Fairbanks line.

The expected value of benefits previously developed for the Soldotna-Anchorage line ranges from \$63.9 million to \$125.5 million in January 1991 dollars.¹ This implies a benefit-cost ratio for the "Enstar" route ranging from .8 to 1.5; and for the "Tesoro" route ranging from .7 to 1.4. The expected value of benefits previously developed for the Healy-Fairbanks line (including electrical equipment) is \$108.2 million in January 1991 dollars,¹ which implies a benefit-cost ratio of 1.4.²

As discussed in Chapter 6, the ranges of these estimates are due in large part to the nature of the benefits that the studies attempt to quantify. The Authority has not adopted or rejected any specific benefit estimate or numerical benefit-cost ratio. Overall, however, the Authority's conclusion is that the life-cycle benefits for each project will exceed project costs based on the following considerations:

¹ Based on 1990 dollar estimates presented in Chapter 6, escalated by 2.25% to convert to January 1991 dollars for consistency with project costs.

² If \$29.6 million in additional benefits due to reconstruction of the existing line were included, the benefit-cost ratio would increase to 1.7. These benefits are discussed on pages 6-17 and 6-18.

For the Soldotna-Anchorage line, benefit-cost ratios above and below 1.0 have been estimated in a context of uncertainty. These ratios are based on a corresponding range of benefit estimates. In view of the arguments presented, the assumption adopted here is that the value of quantified benefits will fall somewhere between the upper and lower estimates that have been developed.

In addition, however, an overall perspective on transmission system adequacy must also be factored in to the judgment on the merits of the proposed intertie. As reported in Chapter 6, the North American Electric Reliability Council (NERC) has stated the following:

"The existing single line transmission [interconnection] between the Kenai Peninsula and the Anchorage Bowl ... poses a significantly higher than traditional reliability risk for system-wide blackouts due to single contingency outages... In terms of traditional reliability criteria, the proposed Soldotna-[Anchorage] 138 kV transmission line ... is necessary to help improve the reliability of electric supply to the Kenai Peninsula, the Anchorage Bowl, and the Fairbanks area."

Also reported in Chapter 6 are remarks prepared by Power Technologies, Inc. (PTI), technical consultant to the Authority on transmission issues:

"At 75 MW export, the Kenai-Anchorage tie operation goes beyond the Railbelt practice of lean system design. Nowhere in the Railbelt is so much resource so critically dependent on stability aids and a single line... A new line from the Kenai area to Anchorage would provide Kenai-Anchorage interconnection reliability at least on a par with most of the remainder of the Railbelt system."

Beyond the quantified benefit estimates, then, these observations make it clear that a second line between the Kenai Peninsula and Anchorage is necessary to meet prevailing industry standards of transmission reliability. The economic studies summarized above combined with these observations are the basis for the Authority's conclusion that life-cycle benefits of the proposed Soldotna-Anchorage intertie will exceed project costs.

For the Healy-Fairbanks transmission proposal, the benefit estimate developed earlier suggests a substantial excess of benefits over costs. As discussed in Chapter 6, alternative assumptions are possible (such as treatment of the "North Pole operating constraint") that could reduce the benefit estimate. There are also compensating factors not considered in the analysis (such as continued Fairbanks access to power from the south during reconstruction of the existing line) that could increase the benefit estimate. After review of these competing arguments, the Authority's conclusion is that the overall benefit-cost ratio reported above is a reasonable indicator of project economics, and that any net downward adjustment that might result

from further analysis is unlikely to reverse the favorable outcome of the assessment.

An alternative framework for evaluating the project is to consider the electrical equipment as a separable first stage of the upgrade, and to then assess whether the incremental benefits of a new Healy-Fairbanks line exceed the incremental costs of the line. The analysis to date suggests that the incremental benefit-cost ratio for the line itself is close to 1.0. However, there are factors in addition to those considered in the prior analysis that would produce a more clearly favorable outcome:

- a. As noted above and in Chapter 6, there will be a program of reconstruction of the existing Healy-Fairbanks line that would be expected to cause extensive interruption of power flow to Fairbanks from the south. Construction of a second line as proposed would produce significant savings by allowing reconstruction of the existing line without power flow interruption.
- b. Again, an overall perspective on transmission system adequacy is provided by NERC and PTI. The NERC conclusion is as follows:

"The proposed Healy-[Fairbanks] 138 kV transmission line is needed for the reliability of electric supply to the Fairbanks area... [B]ased on traditional planning criteria, the tie is required to assure an adequate source-to-load path from Healy to the Fairbanks area. In fact, under traditional reliability criteria, a second transmission line between the Anchorage Bowl and the Fairbanks area would likely be required..."

PTI adds the following comment on Fairbanks reliability assuming a new 50 MW coal-fired power plant is constructed at Healy as presently planned:

"New generation at Healy combined with a new line between Healy and Fairbanks may raise reliability of electrical service in the Fairbanks area nearly to that presently available in the Anchorage area. With a second line between Healy and Fairbanks, and a system design that will withstand loss of a 50 MW unit at Healy or [loss of] a line from Healy to Fairbanks, blackouts in the Fairbanks area should be far less frequent than at present."

The quantified results of the prior benefit assessment combined with these important perspectives form the basis for the Authority's conclusion that life-cycle benefits will exceed project costs for the overall Healy-Fairbanks project (including electrical equipment) and for the Healy-Fairbanks line itself.



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February 9, 1993

Representative Bill Hudson
State Capitol
Juneau, AK 99801-1182

Dear Representative Hudson:

RE: Construction of the Proposed Railbelt Interties

Homer Electric Association serves approximately 19,000 consumers including several large industrial consumers on the Kenai Peninsula. Our service area is interconnected to the Railbelt grid via a single circuit 30-year-old transmission intertie. A second transmission intertie between Anchorage and Soldotna is needed to ensure reliability, to provide for future growth for the Kenai Peninsula area and to allow full utilization of the Bradley Lake Hydroelectric Project. We have been working closely with other Railbelt utilities and the Alaska Rural Electric Cooperative Association for some time to obtain state support for construction of these needed facilities using the Intertie Reserve Fund. Homer Electric supports construction of the Anchorage to Soldotna intertie because:

THERE IS ONLY ONE TRANSMISSION TIE BETWEEN ANCHORAGE AND THE KENAI PENINSULA.

The existing tie-line is over thirty years old and its condition is rapidly deteriorating. It is subject to numerous outages caused by equipment failure, high winds, avalanches, and poor soil conditions. When the line fails, the Kenai Peninsula often experiences power outages which have severe negative impact on public safety, health, and economic activities.

HEA'S INDUSTRIAL CUSTOMERS REQUIRE A HIGH DEGREE OF RELIABLE ELECTRIC SERVICE.

HEA has a number of industrial customers in the refining and petrochemical businesses. They have documented significant economic losses each time their power supplies are interrupted, even if only for a very short time. These economic losses are shared by the state through royalty and tax payments not collected on the lost production. Since they run 24 hours per day, it is never made up.

Interties
February 5, 1993
Page 2

If reliable electric service is not provided by HEA, the industrial customers have the option to shift to alternative energy sources, including cogeneration. This would result in all other HEA consumers making up for the lost revenues by paying higher rates. The proposed Anchorage-Soldotna Intertie is the only way to provide the degree of reliability needed by HEA's consumers, especially our industrial customers. In addition, with recent new discoveries in Cook Inlet there is potential for significant growth in the industrial sector in addition to residential and commercial activity. The Anchorage-Soldotna intertie would provide much needed capacity and reliability required for this growth.

ELECTRIC POWER PRODUCTION FROM THE BRADLEY LAKE HYDROELECTRIC PROJECT IS RESTRICTED.

Railbelt utilities at times cannot schedule generation of their Bradley Lake energy shares because of transmission system limitations. This causes them to produce power with expensive natural gas when they could have otherwise produced it with inexpensive Bradley Lake energy. This restriction also means the utilities cannot fully rely on the Bradley Lake Project to provide emergency power reserves for all consumers on the Railbelt.

ECONOMIC DEVELOPMENT DEPENDS ON ADEQUATE AND RELIABLE ELECTRIC POWER SUPPLIES.

Industry (and possibly large commercial enterprises) will not locate in areas which lack good, basic infrastructure such as adequate and reliable electric power supplies. The cost of providing reliable electric service is factored into decision-making concerning the timing and size of their operations. This is a critical issue to Southcentral Alaska in light of the new oil discoveries in Cook Inlet. If these discoveries prove viable (as they now appear), construction of the Anchorage-Soldotna Intertie would occur just in time to serve the associated new industrial, commercial, and residential electric loads. Accordingly, to a great extent new jobs are made possible by having adequate and reliable electric power supplies.

THE LIVES OF PEOPLE LIVING ON THE KENAI PENINSULA ARE ENHANCED BY A MORE RELIABLE ELECTRIC POWER SUPPLY.

A certain number of power outages (blackouts) are a fact of life for the people on the peninsula. This is unfortunate because blackouts adversely affect public health and safety, community services, personal convenience, and the financial well-being of business in HEA's service territory. A new Anchorage-Soldotna

Interties
February 5, 1993
Page 3

intertie has the potential to measurably reduce the number of blackouts on the Kenai Peninsula, improving the quality of life for all its residents.

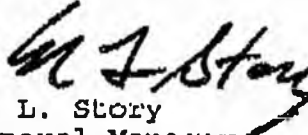
THE RAILBELT UTILITIES WILL PAY ALL COSTS ABOVE \$90 MILLION.

The Healy-Fairbanks and Anchorage-Soldotna Interties have a combined cost estimate of about \$180 million. The utilities have agreed to pay \$90 million in addition to the \$90 million matching State contribution. They will also pay all operation and maintenance costs throughout the life of the interties. The State is asked to contribute \$90 million from the estimated \$115 million Railbelt Intertie Reserve Fund (remaining from the original \$285 million Railbelt Energy Fund) to help the residents of the Railbelt region build the interties. This will keep the rate impacts of intertie construction to a bearable level which regional consumers can afford to pay.

At this time Representative Navarre has introduced HB50 and HB51 to partially fund intertie construction through a state contribution (grant) of \$90 million to the Railbelt utilities. Homer Electric Association requests that you support Representative Navarre's efforts in the House and later support Conference Committee efforts to arrive at a final and viable solution contingent upon an intertie funding bill being introduced by the Governor into the Senate.

Sincerely,

HOMER ELECTRIC ASSOCIATION, INC.


N. L. Story
General Manager

NLS/js



CHUGACH ELECTRIC

ASSOCIATION, INC.

DAVID L. HIGHERS
General Manager

February 8, 1993

Representative Mike Navarre
Alaska House of Representatives
Capitol, Room 521
Juneau, AK 99801-1182

Dear Representative Navarre:

HBs 50 and 51 authorize the construction and appropriate \$90 million from the Railbelt Intertie Reserve Fund to strengthen the railbelt's electric grid by constructing a transmission line between Anchorage and the Kenai Peninsula and a second line from Healy to Fairbanks. Collectively these lines are referred to as the "interties" and their construction has been a priority to the railbelt electric utilities since 1987 when the Railbelt Energy Council recommended this project to the legislature. Funding for the projects was set aside in 1986 when the legislature created the Railbelt Energy Fund from money left over from the Susitna project which was closed out in 1985.

Since 1987, a series of intertie bills have been before the legislature and have died in one committee or another. Of the \$285 million dollars that was placed into the original Railbelt Energy Fund, only about \$115 million remains in the Railbelt Intertie Reserve Fund today. The balance has been spent for a variety of projects—very few of which are energy related or in the railbelt.

The railbelt electric utilities have not asked for a free ride, but rather have opted to join the state in a cost-sharing for these tremendously beneficial projects. The proposed legislation requires the railbelt electric utilities to pay a minimum of 50% of the estimated cost to design and build the lines and further mandates the utilities to pay all operations and maintenance costs for the projects over their anticipated 50 year life.

These projects will provide significant benefits to nearly three-quarters of the state's population for several generations. The intertie feasibility studies which have been undertaken show a broad range of benefits for the projects. Although it is clear that the experts have varying opinions on the precise level of benefits the projects will provide, the Alaska Energy Authority has concluded that the benefits will exceed the cost of the projects. The expected benefits of the interties include:

Increased Reliability - The new interties will reduce the number and duration of transmission related power outages. The interties will also allow more energy to be

Representative Mike Navarre

-2-

February 8, 1993

delivered to areas experiencing generation or transmission related power outages from other unaffected areas.

Economy Energy Transfer - By allowing the transfer of the lowest-cost energy available, interties will reduce the cost of energy to the utilities and their consumers. With the new interties, low-cost energy generated in one part of the grid can be shipped to other areas and replace higher-cost energy. This "economy energy" transfer is currently utilized between Anchorage and Fairbanks, reducing costs for Fairbanks rate-payers. Transfers are now limited by the capacity of the fully loaded intertie.

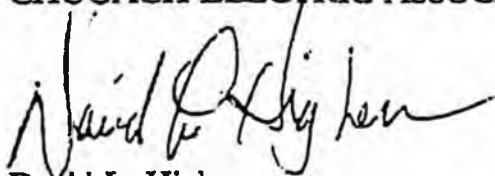
Capacity Sharing - New interties will allow two or more areas to share generation capacity and defer or eliminate the need to build costly generation facilities. The Railbelt utilities currently have an abundance of generation facilities, but are not always able to move energy to areas where it is needed. In addition to capacity sharing, the interties will allow the utilities to share reserve capacity. Reserve capacity is an extra amount of generation which is running above the level that is in demand at any particular time. These reserves are immediately available to meet additional electrical needs and to prevent power outages. Interties will allow the utilities to share their reserve capacity and again reduce operating costs.

Transmission Efficiency - New interties will reduce the amount of energy lost through transmission, thereby reducing costs. Like any electrical circuit that is heavily loaded, the existing interties experience a high level of energy loss caused by resistance.

In summary, Chugach believes that the interties are solid energy projects that have stood the test of economic analysis and will yield direct benefits for nearly three-quarters of the state's population. Upgrading the electrical infrastructure through a state-utility partnership makes good economic sense. The interties will create a stable, reliable and more economical power delivery system to serve the majority of Alaska's population and support economic growth within the region for years to come. I urge you to support HB 50 and 51 which uses a portion of the Railbelt Energy Fund for its originally intended purpose--to provide energy projects for the railbelt.

Sincerely,

CHUGACH ELECTRIC ASSOCIATION, INC.



David L. Highers
General Manager

Alaska State Legislature



Speaker of the House of Representatives

P.O. Box V
State Capitol
Juneau, Alaska 99811
(907) 465-3720

Official Business

MEMORANDUM

TO: Members of the House of Representative

FROM: Representative Ramona Barnes *Ramona*
Speaker of the House

DATE: February 10, 1993

RE: History of the Railbelt Energy Fund

Attached are copies of 2 documents from my files which will give you a history of the Railbelt Energy Fund and my position on the Northern and Southern Interties.

I hope this information is helpful to you. If you would like additional information, please give me a call and I will be happy to talk with you.

SPEECH

RURAL ALASKA POWER ASSOCIATION

OCTOBER 15, 1991

REP. RAMONA BARNES

It is a pleasure to be invited to speak to your organization. I know you've already been welcomed to Anchorage, but I'd feel neglectful if I didn't add my voice to the chorus, and tell you I hope you'll enjoy being here and come back often.

I want to congratulate the Rural Alaska Power Association on the two years of its existence, and commend its efforts and the success with which they have met. The role of your group is an especially important one, because a unified voice is so vital to you. Clearly, your combined efforts can be more effective than all your separate strivings, and take it from one who knows, a Legislature can hear better when many voices speak as one.

I consider it an honor to be invited to speak before you today, and I hope I may rightly take it as an acknowledgement of the work I have done in the legislature in recent years to support the interests of your association. I don't mean to suggest that I have worked exclusively for the members of RAPA, but neither have I worked only for Anchorage, or the Railbelt, or any other regional interest. For those of you who are not familiar with the creation of Power Cost Equalization and the Railbelt Energy Fund, I would like to provide a little history.

In 1981, Senate Bills 25 & 26 created the energy plan for Alaska. This plan included the 4 Dam Pool, Power Cost Equalization and a clause that was known as the blackmail clause. This clause in essence said that the grants that were given to the 4 Dam Pool would be paid back to the state, plus interest, if by the year 1991 there was less than \$1 billion to construct

Susitna/Watana Dam and an intertie system for the railbelt.

In 1984, the representatives of the 4 Dam Pool came back to Juneau seeking to have the blackmail clause removed from the statutes due to cost overruns that would require additional funds. Their claim was that unless the state gave them another outlay of cash they would not be able to bond at a favorable rate due to the existence of the blackmail clause in statute.

At that time, Senator Frank Ferguson, in my opinion one of the best senators to ever serve in the Alaska Legislature, and I were appointed by our respective bodies of the legislature to negotiate the removal of the blackmail clause from the statutes and come up with something more equitable for the railbelt.

What was finally agreed on by the legislature and the administration, was the removal of the blackmail clause in exchange for \$200 million per year to be appropriated in the same manner as the Senior Citizens Longevity Bonus, as an example. In addition to that appropriation, there was to be \$100 Million deposited into the Bradley Lake Dam account. At that time, we also increased the per kilowatt amount to be subsidized by Power Cost Equalization.

This then, became law. Although this continuing appropriation was no different from any other that is required annually, the environmental community took it to court and a ruling was made that one legislature could not bind another, even though it was no different than numerous other annual appropriations. That first \$200 Million plus the \$100 Million for Bradley Lake Dam

were the only funds ever deposited into the energy account.

In 1990, a deal was cut to raid the fund and approximately \$ 123 million was spent on various capital projects, very few of which had anything to do with energy. There is currently \$100 million in an intertie reserve account, but there are some legislators working very hard to spend this money on anything but interties. The southern intertie from Anchorage to the Kenai Peninsula needs very badly to be improved and upgraded for reliability. Everytime there is an avalanche or an ice storm in Turnagain Arm, parts of this intertie are lost, resulting in a loss of power to many small communities between Anchorage and Soldotna. The completion of the Bradley Lake Hydroelectric project will alleviate the power losses to Kenai and Homer to some extent, but a reliable source of power between Anchorage and the Peninsula is vital.

It is perceived by many citizens of Alaska that members of the legislature from Anchorage, Fairbanks and most of Southeast Alaska only have the interests of their areas in mind. It is supposed that the credo of urban legislators is "on my honor I will do my best, to take what I can and to heck with the rest". I suppose over the years I've known a few members who thought that way, but I submit to you that they were not paying very close attention. What is in the interests of Tanana and Egegik and Nome is in the interests of Anchorage; and what benefits Gustavus and Fort Yukon and Barrow benefits Fairbanks; and Southeast Alaska's interests are no further spearated from rural Alaska than any others. Economic activity in any part of the state is to the advantage of all parts of the state --- in

differing degrees, of course ---- but we function essentially as a single economic entity.

It is for that reason that I continue to support major power projects in the state including generation facilities and interties. It is for the very same reason that I support the many interties which are on the shelves at the Power Authority. These projects are ready to go as soon as money can be made available. There are also a number of small hydro projects around the state -- in rural Alaska -- waiting to go. In addition, there are waste heat recovery projects, coal generation sites and experimental projects.

Rural Alaska is not being ignored, as witness of course, the P.C.E. program, but do not forget the other efforts being made in your behalf to improve living conditions, business opportunities and health and safety.

Many people suppose that the state had paid entirely for or is paying for power sources elsewhere in Alaska. Not True! The federal government, of course, owns the Snettisham project in southeast, and the consumers are paying to retire the bonds which financed it. Presently the state is in the process of taking over Snettisham to guard against power cost increases in the future should the federal government revise its cost recovery policies. Consumers will continue to pay to retire the bonds which will finance that acquisition. The state will then own that very valuable asset. The request is presently under consideration by the congress, and action could come most any time.

Bradley Lake, near Homer, the most recent addition to the state's power pool, is a good example of the same sort of situation. There were legislative grants for

parts of that project, however, half of it was financed by bond issues, which consumers, through local utilities, will pay to retire. When the bonds are retired, the state will own the project.

On the subject of Bradley Lake, I would like to extend my sincere congratulations to Charlie Bussell and his entire organization. A great deal of credit is due the agency for Bradley's successful completions substantially under budget, but even more on the quality of the project. I was at the project site for the groundbreaking ceremony five years ago, and again last month for the dedication. It's a picturebook project, in a spectacular setting which remains magnificent to see. The agency's and the contractor's meticulous attention to caring for the environment established records and actually enhanced the environment in certain cases. The overall project was such a success that it won the Civil Engineering Achievement of the Year award from the Northwest Section of the American Society of Civil Engineers. It has been nominated by them for the same distinction nationally. Once again, Alaskans can be proud.

I cannot speak for the Energy Authority as to what the future might hold. Although, one cannot fail to be impressed with the amount of money, the share of effort and the number of undertakings dedicated to rural Alaska. At a glance it would almost seem an agency designed solely for rural Alaska. It is not, of course, but the villages are certainly very much a part of its mission and concern. There are very few people in Alaskan villages that have not met one of A.E.A.'s circuit riders, or one of the technicians or engineers or emergency response people representing the Energy Authority. For a relatively small agency, the A.E.A.

reaches and affects more individual Alaskans than almost any other --- and its mission, without exception, is to improve their lot.

The legislature has generally been very supportive of this vital agency. In my efforts on its behalf over the years I have had a lot of company on both sides of the aisle. I see no reason to expect that to change; in fact I anticipate improvement of that support, particularly after the next election. Organizations such as yours, becoming more acutely aware of the role they can play in governmental policies and decisions, will work with local legislators and other individuals of influence, with other associations having shared interests, and with businesses and industries having common goals. Together you will bring your influence to bear, and draw attention to the everyday needs and uncommon urgencies which can only be attended by your government.

I commend your activity and urge your participation. You may be assured that my office doors are always open --- both here and in Juneau --- and I often don't know when a person comes through one of those doors whether he lives in my district or not. He is a constituent, in either case. He is a constituent of the Alaskan Government, and I am one of its servants.

I hope the remainder of your meeting is a success, and that you'll all enjoy your stay in Anchorage.



OFFICIAL BUSINESS

Alaska State Legislature

House of Representatives

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POSITION PAPER

RAILBELT ENERGY

APRIL 10, 1991

The following summary compares the existing power demand for the various areas of the railbelt to the existing generating capacity and transfer capability.

The existing interties between Anchorage and Fairbanks consist of a 138KV line between Anchorage and Wasilla, a 345KV line between Wasilla and Healy, and a 138KV line between Healy and Fairbanks.

It is important to understand that the amount of electricity that is put into the line is not the same amount that comes out on the other end. Fairbanks has been purchasing approximately 70MW from Chugach Electric in Anchorage which provides them with about 62MW by the time the power gets to Fairbanks. Therefore, at peak times Fairbanks must fire up its oil generation. The increased cost to the consumer in Fairbanks is approximately 1 cent per kilowatt hour. Assuming an average residential consumer uses 100,000 kilowatts per month, this equates to about \$10.00 per month increase in cost for the Fairbanks residential consumer.

The peak demand for the Fairbanks area is 115 - 120 MW. Fairbanks has two utility companies - Golden Valley Electric and Fairbanks Municipal Utility.

Golden Valley Electric has a coal fired generation plant at Healy capable of generating 25MW of power plus oil fired generation of approximately 150 MW.

Fairbanks Municipal Utility has a 20MW coal fired plant in Fairbanks plus oil fired generation.

This is a total of 45MW of coal fired generation available to

Fairbanks in addition to the oil fired capability. As oil is more expensive than gas from Cook Inlet, Fairbanks buys as much power as it can get over the intertie and supplements any additional requirements with oil fired generation. To summarize, Fairbanks can produce with coal fired generation all but 80MW of the Fairbanks needs during peak demand.

The City of Fairbanks has more than enough oil and generating capacity to meet current demand. The problem is that the cost of generating electricity with oil is significantly more expensive than generating electricity with gas or coal.

This then brings us to the Healy Coal project. In 1989, the Legislature segregated \$30 million within the Railbelt Energy Fund as a contingent appropriation for the construction of a coal co-generation plant at Healy. This appropriation lapsed back into the Railbelt Energy Fund without restrictions on June 30, 1990. The Legislature appropriated \$25 million to the Alaska Industrial Development and Export Authority to help fund the Healy Co-Generation project in 1990.

What does the term co-generation mean? The Federal definition of co-generation is "the utilization of at least 5% of generated energy output for heat load rather than for electric utility use in the electrical grid or area". Usibelli had planned and has requested AIEDA, the proposed project owner, to include provisions in the project design for utilizing heat from the new plant for coal processing (beneficiation). The availability of heat from the plant will depend upon the timing of the coal beneficiation plant, demand for electricity, and the economics of heat sales to Usibelli. Beneficiation is the process of treating coal including crushing coal, turning coal into liquid, drying of coal, and other techniques which enhance the energy value of extracted coal. Coal drying is one of the simplest forms of beneficiation.

Usibelli now exports coal to Korea. With current processing, approximately 1/4 of the tonnage is water. This led to the initial idea of developing a coal drying facility. However, upon further investigation, it became apparent that the quantity of heat necessary to run such an operation in comparison to the monetary benefits to be gained would not be economically feasible in today's market.

At present, the Department of Energy will only support the electrical generation part of the Healy project. DOE is looking for new combustion technology and has awarded a grant in the amount of \$93 million dollars for the construction of the new coal fired power generation plant at Healy.

This new plant will be capable of using "waste coal" whereas the existing plant at Healy can use only pure coal. The surface

of the coal seam must be continually scraped to remove the final amount of overburden (dirt) and expose a clean coal surface. The result of this continual scraping is "waste coal" or coal that is mixed with dirt. In the past, Usibelli has had no market for this "waste coal" and it has been shoved aside and/or buried. The new plant will provide a means to utilize more of the coal resource and minimize loss.

Usibelli is continuing to look at new technologies with the ultimate goal of exporting more coal and coal products. One distinct possibility lies in "carbon marbles" (or pellets) which can be used in place of coke from coking coal for steel making. This is a specialized product which has high potential for market expansion. The demand for coking coal in the Pacific Rim is several million tons per year. It is unknown at this time how much of that market could be captured by Alaskan coal products. At present, the Pacific Rim nations are importing coking coal from as far away as the eastern U.S. via the Panama Canal. Pacific Rim coke prices are reported in excess of \$100 per ton compared to approximately \$40 per ton for raw steam coal from Australia, the chief competitor in Pacific Rim steam coal markets. With Alaska's unique location, we should be able to tap a significant portion of the market. Usibelli anticipates a determination of the potential Alaska market share within one year and anticipates coming on line with a co-beneficiation project at about the same time the new generation plant comes on line.

When considering the cost/benefit of the new generation plant, one must take into consideration several factors. A new plant will enhance conservation of the coal resource (the new plant will be able to burn "waste coal"). New jobs will be created. More pure coal will be utilized thus producing more royalty revenue for the state which helps diversify our economy. And an economic supply of power will be available to the residents of Fairbanks. This would also enhance reliability of the entire grid system from Fairbanks to the Kenai Peninsula.

It is felt that there will be an increased need for base load capacity in this area around the turn of the century. With the Federal grant dollars, this plant will be producing the lowest cost power available around the year 2000. The cost of electricity from the new coal plant is expected to be 4.5 cents per KW hour as compared to a new diesel plant at 6 cents per KW hour, or a new gas fired plant at 4 cents per KW hour.

There are other factors also that should be considered when evaluating this project. We have for a long time held the position that we must diversify our economy and lessen our dependence on oil. Alaska has an abundant supply of natural resources, however most of those resources remain undeveloped or not developed to their maximum economic potential. Coal is

such a resource.

Enhanced processing (beneficiation) will aid in the maximum development of this resource which in turn will produce increased revenues to the state. When considering the potential of increased royalties to the state coffers, one must understand how royalties are calculated.

New leases and leases where royalty adjustments have taken place are based upon a percentage of the "adjusted gross value" (AGV), which is essentially equivalent to a "mine mouth" value for coal. That is, basic production costs are included but transportation and processing are not. Therefore, the royalty basis or AGV would increase only if a beneficiation plant could pay a higher price for raw coal feed to the plant. Some existing leases are still based on a fixed royalty per ton. The primary increase in payments to state coffers would come from the increased quantity of coal produced. Both the power plant and a beneficiation plant would result in increased payments to the state because of increased production.

The next project that must be touched on is the Full Upgrade of the Anchorage - Fairbanks Intertie. The estimated cost of this project is \$118 million dollars. AEA has concluded that the benefit value of a full upgrade is not sufficient to justify spending \$118 million dollars. The full upgrade of the line would increase the maximum power transfer from the existing 62MW output to 225MW output, substantially more than is anticipated being needed in the foreseeable future and would not be cost effective.

The \$10 million dollar partial upgrade on the northern intertie includes upgrading the entire line from Anchorage to Fairbanks. Equipment would be installed on the line that would bring the line up to within acceptable standards of stability. Stability, however, is not the only consideration. Reliability of the line is equally important. It is important to remember that when you upgrade a line and increase the transfer level you also increase the level of losses. This upgrade will only increase the transfer capability from the present 62MW output to 84MW output. Hence, the need to go beyond the partial upgrade for the northern part of the grid area.

Most of the power that is lost in transmission along the Anchorage - Fairbanks route is lost between Healy and Fairbanks. Consequently the recommendation of a second 138KV line between Healy and Fairbanks is warranted. The proposal includes splitting the power at Healy with 1/2 the power going up the existing line and the other 1/2 going up the new line. This will reduce power losses during transmission.

There is also an assumption among the electrical engineers that

by putting in the second line, the transfer capability of the entire circuit would be increased by an additional 20MW as well as reducing power transmission losses.

The railbelt utility companies hired AEA's consultant to look at whether it would be worth spending the required \$58.7 million for the potential increase in benefits that would be derived.

The opinion set forth in 1990 by the consultant is that there would be a \$60 million dollar additional benefit. There are perhaps some weaknesses and soft points that could be pointed out in looking at the cost benefit analysis but AEA has not taken a position on the analysis at this time.

Chugach Electric is now selling power to Fairbanks and the profits generated from these sales are to the direct benefit of the Anchorage consumer. If Healy comes on line, one might assume that there would be an increase in rates to the Anchorage consumer. According to Chugach Electric, any increase would be minimal and would only occur if Anchorage were to remain stagnant with no growth, an unlikely scenario.

The following numbers represent the peak demand needs and the generating capacity in the railbelt area.

LOCATION	PEAK DEMAND	GENERATING CAPACITY	LOCATION OF AND TYPE OF GENERATION

Fairbanks	120 MW	25 MW <u>20 MW</u> 45 MW	Coal - Healy Coal - Fairbanks Coal Generation
Anchorage	550 MW	360 MW 330 MW 30 MW <u>60 MW</u> 780 MW	Gas - Beluga Gas - ML&P Gas - Eklutna Gas - International
Kenai	80 MW	15 MW 40 MW <u>80 MW</u> 135 MW <u>+100 MW</u> 235 MW	Hydro - Cooper Lake Gas - Soldotna Gas - Bernice Lake Hydro - Bradley Lake

TOTAL: 750 MW of Power needed in the Railbelt Area

TOTAL GAS/HYDRO GENERATION AVAILABLE - 1060 MW

Upon first glance, one might assume that we have all the power we need. This simply is not the case when you consider reliability, transmission efficiency, and balance of the costs of the different methods of producing electricity. Additionally, one must realize that power generating plants cannot operate continually at maximum capacity. Gas fired plants are required to keep a substantial spinning reserve. Besides malfunctions which require generators to be shut down, they are also shut down for routine maintenance. This then requires additional backup to meet demand.

Now lets examine a potential outage scenario. Assume Beluga <360MW> goes down, Anchorage can draw 60 MW from Fairbanks over the existing line from the north, and 60 MW from Kenai over the existing line from the south. This combined with other Anchorage generation could provide 530 MW assuming that all other generation is up and working. Anchorage would still be down 20MW if this occurred during peak demand. This analysis is based on existing demand (turned down economy). The scenario will worsen as Anchorage rebuilds its economy.

Out of Municipal Light & Power's 330 MW generating capacity, 3 old turbines which generate 50 MW of power are due to be retired sometime within the near future. ML&P's report states that the remainder of their units are newer and they don't anticipate any major problems or upgrades until the year 2015. It is not economically feasible to design a system that will always meet the peak demand.

The next question examined was the need for the new southern intertie. The existing line is poor for bulk transmission. The line is scheduled for rebuilding and upgrade over the next 10 - 15 years. Technical studies say that with the addition of certain equipment, the existing Kenai transmission line can deliver 75 MW and still remain within the stability limits. Stability, however, is not the only consideration. Although the upgrading and rebuilding of the line will bring it up to a higher capacity, it will not address the reliability problems.

Reliability is very much a problem with the existing intertie between Anchorage and the Kenai Peninsula because it is primarily above ground and is routed along Turnagain Arm. Reliability problems include the line's vulnerability to avalanches, high winds, heavy snowfall and other natural occurrences.

The following table shows outages that have occurred since 1984.

1984 - 3 occurrences	1988 - 8 occurrences
1985 - 0 occurrences	1989 - 4 occurrences
1986 - 1 occurrence	1990 - 4 occurrences
1987 - 2 occurrences	1991 - 1 occurrence YTD

These outages were all the result of natural occurrences. The new proposed intertie would eliminate many of the problems encountered with the existing line because of better routing. The proposed new intertie will be of wood pole construction and will be built along one of two routes. The preferred route is through the Kenai National Wildlife Refuge (fairly level terrain) to Turnagain Arm where it would go under Turnagain Arm in a submarine crossing returning to the surface approximately 9 miles south of Potter Marsh. Limited segments between Turnagain Arm and Anchorage would go underground. The alternate route is along the coast from Kenai to North Kenai, then under Turnagain Arm in a submarine crossing at Point Possession returning to the surface near Point Woronzoff. The alternative coastal route will be more expensive but may need to be utilized if right-of-way problems cannot be resolved with the U.S. Fish and Wildlife Service. Either route will provide a more congenial environment.

Presently, most of the power on the Kenai Peninsula comes from Beluga. When Bradley Lake Hydro comes on line, this scenario will change. Bradley Lake is designed to generate 90 MW of power, however when the reservoir is full, generating capacity increases to approximately 119 MW. If we were to transfer this 119 MW over the existing line, we would have approximately 110 MW when the power arrived in Soldotna. If the reservoir were low, we would have approximately 100 MW of power arrive in Soldotna.

Using the anticipated 100 MW of power from Bradley Lake Hydro coupled with 15 MW of hydro power available from Cooper Lake, Kenai will have a total of 125 MW of hydro generated power available on the Kenai Peninsula. This is in addition to the generating capacity of existing gas turbines. At present, Kenai gets 60 MW from Beluga. Any power needed over the 60 MW from Beluga and the 15 MW from Cooper Lake comes from gas generated power plants at Bernice Lake or Soldotna.

After Bradley Lake comes on line, Kenai will have an excess of 35 MW of hydro power to deliver north if it is needed or wanted. The existing line can deliver this with no problem as far as capacity is concerned. The problem arises in the stability and reliability of the existing line.

The addition of a second 138 KV line would definitely improve reliability. The other consideration in evaluating the necessity of this line is that Bradley Lake cannot operate at maximum capacity full time. It can only operate at maximum capacity when the reservoir is full. Two lines routed through different environs would virtually eliminate transmission line power outages in southcentral Alaska.

One must also consider if the capability of shipping power north

is really necessary considering that Anchorage power suppliers are required to have spinning reserves of 45 MW. This means that Anchorage electric sources are not generating the total power they are capable of generating and could increase that generation by the "flick of a switch", so to speak. However, remaining spinning reserves available in Anchorage are not sufficient to make up the deficit in available power were Anchorage to lose Buluga.

The next topic discussed was the alternate Anchorage - Fairbanks route through Palmer - Glennallen - Delta to connect with Golden Valley's line to Fairbanks which would then provide a tie-in with the Valdez line to the Solomon Gulch hydro plant. The cost of this route would be somewhere in the neighborhood \$200 million dollars. There has been some concern that Solomon Gulch is spilling water (equating to approximately 12 million KW hours during the summer months.) Solomon Gulch operates at less than capacity during the winter months because of the low water level in the reservoir. It is the opinion of the AEA, however, that the benefits to be derived from installation of this line would not be worth the cost.

One must also consider that the lines between Anchorage and Palmer are not that good. There are lines along two routes. One line goes along the west side of Knik Arm from Beluga to Wasilla to Palmer - 138KV line. The other line goes from Anchorage to Eklutna to Palmer - 115 KV line. The northeast intertie route would not provide Anchorage with a full 2nd route. It would provide no more for Anchorage than the limited upgrade proposed and would cost significantly more.

Another consideration would be to construct an intertie from Glennallen to Delta. This would provide the missing link from Solomon Gulch to the Golden Valley Electric system at Delta running north to Fairbanks. During the summer months, Copper Valley Electric would be able to supply additional power to Fairbanks during the summer months should it be needed and would be able to purchase power from Golden Valley Electric or Chugach Electric during winter months. This would add to the total electrical grid system for southcentral Alaska. The current cost of construction of this line is estimated at \$92.5 million. AEA has not issued an opinion on the economic feasibility of this abbreviated project.

The question arose as to whether we could sell power to the Federal government for the Back Scatter Radar Site. Because of the critical nature of the radar site, reliability and stability are very important. AEA has been advised that there is no possibility of selling power to the Federal Government for this project.

Over one-half of Alaska's total population lives along the

railbelt area of the state. It is important that there be reliable sources of power available to this population. Most the state's businesses are also located in this area. If there were to be a major devastation of power sources in the railbelt area today, the mainstream of Alaska's citizenry would be affected. The majority of Alaska's businesses would be affected. If we are to have stability in our economy, we must ensure that there is stability and reliability in our power supplies. Businesses cannot operate in the dark or in the cold.

Additionally, if we intend to expand our economic base, we must be able to provide power to developing businesses. It is only reasonable to believe that new businesses will most likely be considered in areas of population density. If one were to ask the question about where there is population density, the answer would most assuredly be along the railbelt.

Another project that is badly needed is the Seward Intertie. The existing line to Seward has been down many times over the past few years. This line, like the existing southern intertie is extremely vulnerable to avalanches. When this line was built, it was routed along the roadway because of accessibility with the equipment that was available at the time. The new Seward intertie will be routed over more desirable terrain in areas of substantially less vulnerability.

There are many energy projects in the state which can be justified. Alaska spends millions of dollars annually on various projects. Knowing this, it is hard to fathom that many of our residents do not have the benefit of electricity other than through home generated power. It is also hard to fathom that the most highly populated regions of the state are vulnerable to complete power outages without the potential of bringing power in from an alternative source in sufficient quantity to meet at least minimum demand. This potential problem can be solved by construction of the new interties.

The benefits to be derived from the construction of the northern and southern interties and the new coal fired generating plant at Healy include the following:

1. Reliability - Interties affect system reliability which can be measured by the number, duration, and magnitude of customer outages.
2. Economy Energy Transfers - Savings are realized when lower cost energy is brought in from other areas to displace higher cost energy generated locally.
3. Transmission Efficiency - Transmission losses are reduced thus providing a cost savings.

4. State Revenue - State revenues will increase as new interties will lead to the use of more coal and gas, even with Bradley coming on line. Gas and coal will displace oil fired generation.

5. Capacity Sharing - Interties allow separate areas to share capacity thus deferring increasing plant capacities in each geographic location.

6. Operating Reserve Sharing - Interties allow separate areas to share operating reserves and therefore reduce operating costs.

The benefits that reduce to dollars and cents present the following picture:

<u>Project</u>	<u>Cost Benefit Ratio</u>
Healy-Fairbanks 138KV Intertie	1.64
Kenai-Anchorage 138KV Intertie	4.4
Anchorage-Fairbanks Limited Upgrade	4.45

Last but certainly not least is the realization that if these interties are funded this year, we are looking at a minimum of five years to completion. It is imperative that we look at long range planning and not just at the present. Alaska's economy has been in a slow down mode for the last few years, but this will not last forever. The pioneering spirit that built Alaska lives on and Alaska will prosper in the future but we must be wise with our resources, be they money, minerals, fish, or timber and we must plan for the future. We the members of the Legislature are the stewards of our state. Let us use that stewardship to keep Alaska as the Great Land.



Municipality of Anchorage
Tom Fink, Mayor



Municipal Light & Power

1200 East First Avenue
Anchorage, Alaska 99501-1685
Telephone: (907) 279-7871, Telecopiers: (907) 263-5204, 277-9272

February 10, 1993

Representative Mike Navarre
Alaska House of Representatives
Capitol Building, Room 521
Juneau, AK 99801

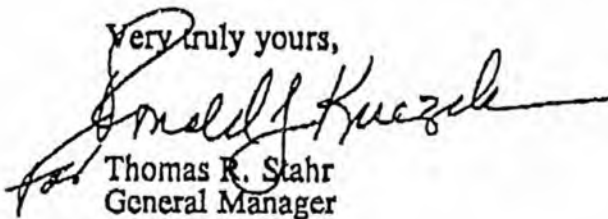
Dear Representative Navarre:

On behalf of Anchorage Municipal Light and Power, please accept this letter as a strong measure of our support for HB 50 and 51. Our organization and I will support any bill which has as its objective construction of the North/South Interties.

We believe that construction of these interties is necessary to improve the electrical infrastructure of the railbelt region. One of the keys to growth is a strong electrical infrastructure.

Thank you for the opportunity to let our collective voices be heard. Should you have any questions regarding our position please advise at your earliest convenience.

Very truly yours,



Thomas R. Stahr
General Manager

Putting Energy into Anchorage for 60 years
"1932 - 1992"



Electric Service for 300,000 Alaskans

Alaska
Rural
Electric
Cooperative
Association, Inc.

703 W. Tudor Rd., #200
Anchorage, AK 99503
(907) 561-6103
FAX (907) 561-5547

February 10, 1993

Rep. Bill Hudson, Chairman
Labor and Commerce Committee
House of Representatives
Juneau, Alaska 99801

Dear Chairman Hudson:

Unfortunately, my travel schedule makes it impossible for me to attend your committee's hearing tomorrow on HB 50 and HB 51. Please accept this letter as comments on those bills from this association.

We have long been the primary advocates of construction of the Railbelt interties authorized by HB 50 and financed by HB 51. We remain strong advocates of those projects, and we encourage the committee to act favorably on them.

It is important to note, however, that construction of these two interties will still leave a number of other important energy needs unsatisfied. Although it has not been introduced yet, we understand that Gov. Hickel plans to introduce an attractive plan which would build a Southeastern intertie, an intertie from Sutton to Glennallen and assure funding of the power cost equalization program for 20 years in addition to constructing the Railbelt interties contained in the bills currently before your committee.

We ask that your committee favorably report HB 50 and HB 51, but we further ask that if the long-anticipated Governor's bill comes before your committee, that it receive the same expeditious consideration.

Sincerely,

David Hutchens
Executive Director



Homer Electric Association, Inc.

CORPORATE OFFICE
3977 Lake Street
Homer, Alaska 99603 7680
Phone (907) 235 6167
FAX (907) 235-3313

Service Center
Spori Way
Homer, Alaska 99603 5280
Phone (907) 235-5411
Fax (907) 235-7123

February 11, 1993

Representative Bill Hudson
Chairman, Labor & Commerce Committee
House of Representatives
Alaska State Legislature
State Capitol
Juneau, Alaska 99801-1182

Dear Chairman Hudson:

REF: TESTIMONY TO LABOR AND COMMERCE COMMITTEE

I am unable to attend your Committee hearing on House Bills 50 and 51. I would appreciate your acceptance of this letter as Homer Electric's comments on the above bills.

As indicated in an earlier letter to you, we emphasized the great importance of the Railbelt Interties to the Kenai Peninsula as well as the rest of the Railbelt. Additionally, we indicated the expectation of a Bill that would be introduced by the Governor. This Bill, if introduced, would address the restructure of the Alaska Energy Authority and include provision to fund the Railbelt Interties.

Please pass House Bill 50 and 51 out of committee, and support later efforts to arrive at a final and viable solution that will use the Railbelt Intertie Fund to fund the north and south Interties.

Sincerely,

HOMER ELECTRIC ASSOCIATION, INC.

A handwritten signature in black ink, appearing to read 'Norman L. Story'.
N. L. Story
General Manager

NLS:em

cc: RF - NLS

bcc: Rep. Mike Navarre

DIVISION OF LEGAL SERVICES

LEGISLATIVE AFFAIRS AGENCY STATE OF ALASKA

(907) 465-3867 or 465-2450
FAX (907) 465-2029
Mail Stop 3101

130 Seward Street, Suite 409
Juneau, Alaska 99801-2105

MEMORANDUM

April 13, 1993

SUBJECT: Sectional Summary of CSHB 50 (L&C). (Authorizing power transmission interties and approving design and construction costs; relating to procurements for transmission lines; creating the four dam pool account)

TO: Representative Bill Hudson, Chair
House Labor and Commerce Committee

FROM: Teresa B. Cramer *TBC*
Legislative Counsel

You have requested a sectional summary of the above-described bill. As a preliminary matter, note that a sectional summary of a bill is not considered an authoritative interpretation of the bill. The bill itself is the best statement of its contents.

Section 1 sets out the legislative intent and findings.

Sec. 2 amends the State Procurement Code to exempt the contracts described, for design and construction of electric transmission lines, from the requirements of the procurement code if the Alaska Energy Authority and the public utilities have satisfied the requirements set out in subparagraphs (A) and (B).

Sec. 3 establishes the four dam pool account in the power development revolving loan fund.

Secs. 4, 5, and 8 authorize the design and construction of power transmission interties between Anchorage and the Kenai Peninsula and between Healy and Fairbanks at the stated costs, contingent on the Alaska Energy Authority and the electric utilities satisfying the requirements set out in sec. 8.

Sec. 6 authorizes the Alaska Energy Authority to design and construct a power transmission intertie between Sutton and Glennallen at the stated cost, contingent on the authority and the participating electric utilities satisfying the requirements set out in subsections (b) and (c).

Representative Bill Hudson
April 13, 1993
Page 2

Sec. 7 authorizes the Alaska Energy Authority to design and construct a power transmission intertie between the Swan Lake and Tyee Lake hydroelectric projects at the stated cost.

Sec. 9 is an immediate effective date.

TC:pl
93-294.plm

April 19, 1993

G. ELAINE NASH

907 745 5450

P. 02

Representative Ron Larson
Alaska State Legislature
Juneau, AK 99801

Dear Mr. Larson:

The purpose of this letter is to ensure that you are aware of a matter this is of great concern to me and to my community; a matter which has caused me to have a heavy heart and has left me with more unanswered questions every time I look further into the issues.

The matter that I am referring to is the proposed INTERTIE between Sutton and the Copper Valley.

Who is the private corporation in Valdez that is attempting to purchase abundant and cheap electricity? What union would be pushing for a project that will result in years of their members employment at double and triple the \$20 million that is being espoused as the price? Are these the people who would have to live with the fact of high-powered electrical lines passing over their private property? Are they the ones who will have to live with the thought that it is possible that their children would be exposed to a possible cancer causing situation?

Why would Beluga state they could produce this electricity when to do so would entail a need for them to purchase a new turbine? Who would pay for that? Would the 2,600 people in the Copper Valley be able to; or would this be passed along to the 28,000 consumers in the Mat-Su valleys?

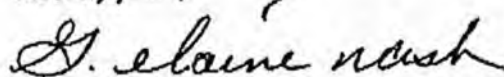
Why haven't the Public Utilities involved spent like amounts of money investigating alternatives to the intertie? As I understand it, the idea of an Intertie is to spread the ability to send electricity in the event of a disaster. But as proposed, doesn't this mean that everyone is dependent on Beluga? Wouldn't it be wiser to obtain another electrical production location? Why aren't alternative ways of producing electricity being investigated? Why are we being asked to put all our eggs into one basket? There's coal reserves that could be utilized. There are gas reserves (in the Copper Valley) that could be utilized. Can you tell me why these are areas that have not been investigated by the utilities -as they are obligated to do so under state statute-?

Town meetings have been held in Glacier View, Chickaloon, and Sutton. The meeting that I attended was on April the 8th at the Sutton Community hall. There were in attendance well over 80 people. WE ARE NOT IN FAVOR OF HIGH-POWER ELECTRICAL LINES RUNNING THROUGH OUR PRIVATE PROPERTY. Would you be in favor of having a 900' stretch of your 3.5 acres being condemned and taken over by RIGHT OF IMMINENT DOMAIN? I think not.

There are ways of getting cheaper electricity out to the folks in the Copper Valley. I certainly empathize with their desires. I just cannot see that ruining my property and giving up the dreams that I've worked towards for the last 11 years is a fair exchange.

I would appreciate any answers your office could provide. Although I realize that you are no longer the 'elected official for my area, I do feel that this matter is of concern also to the people who are being represented by yourself. It is also difficult for me to have faith in fair representation from someone whose not anywhere near from my area. I hope that you could shed some light on this matter, as well as hopeful slow down this steam roller while a better look is taken at all the possibilities there are available.

Sincerely yours,



G. Elaine Nash
P. O. Box 302
Sutton, AK 99674
(907) 745-5450 - Home phone and fax

c: H. Olberg
R. Larson
J. Kerttula
FILES
G. Lincoln

*Linda D. Ketchum
P.O. Box 1132
Chickaloon
Alaska 99674*

April 20, 1993

The Honorable Ron Larson
Room 502
State Capitol
Juneau, AK 99801-1182

Dear Representative Larson:

Although the communities of Sutton, Chickaloon and Glacier View were unwillingly grafted onto a different legislative district as a result of the State's illogical reapportionment plan, we are still very much a part of the Matanuska-Susitna Borough. For this reason I am writing to you to let you that there is strong opposition to the proposed Sutton-Glennallen intertie all along the Glenn Highway/Matanuska River corridor.

A resident of Chickaloon since 1986, I attended the informational meetings held by the Alaska Energy Authority at Glacier View and Chickaloon and listened to the presentations and all comments with interest. My personal reaction to the proposed intertie is total opposition, no matter how many reasoned arguments are presented in its favor. When is society - in this case the utility companies - going to stop basing its development decisions on the dollar cost instead of giving equal weight to the social and environmental costs? For the money invested thus far in cost analyses and feasibility studies, Copper Valley Electric Association could have solicited sound proposals from the private sector, including alternative energy sources such as coal, natural gas, wind and solar power.

My husband and I bought 80 acres on the Chickaloon River in 1989 which we intend to make our home for life. Last fall our only son was born; we finally felt comfortable we had found a suitable environment in which to raise a child. We would never have chosen to locate anywhere near a transmission line, yet may have one thrust upon us only a mile from our home. We are not MEA members, having chosen to be energy self-sufficient. At present we use solar panels, which will eventually be supplemented by a wind generator instead of diesel generation.

I have several objections to this intertie, which are listed below:

- This 80' line will be an eyesore whether or not it is located on the highway
 - on the highway it will have a negative impact on the natural beauty of the area, in my mind the most scenic corridor in the Matanuska-Susitna Borough
 - in the backcountry it will desecrate a popular and accessible recreational area of the state.

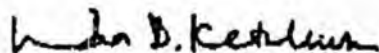
If CVEA switches to a different (cheaper?) energy source, we're stuck with this monstrosity in our backyard for perpetuity.

- The line follows or traverses the historic Knik-Chickaloon-Nelchina Trail for the greater part of its length. The Matanuska-Susitna Borough Cultural Resources Division has received a federal preservation grant to survey the trail in order to identify and evaluate historically significant sites along its route to help local communities document and preserve their history and culture. It's an understatement to note that such a transmission line would considerably detract from the historic value of this famous trail.
- The proposed route cuts a relentless swathe through the Matanuska Moose Range. Opening up access to this would irrevocably affect the nature of hunting for local residents. Game is scarce as it is, but even if construction brings increased moose browse it will also bring unceasing droves of hunters from Anchorage and the Valley with their accompanying all-terrain vehicles. This will impact all wildlife in the area.
- The Chickaloon community was sufficiently concerned about potential siting of transmission lines to include them in the "conditional use" category in the Matanuska-Susitna Borough ordinance implementing the 1991 Chickaloon Comprehensive Plan.
- Last, but not least, the controversy generated by epidemiological studies linking exposure to ELF EMF's with a variety of cancers, whether or not the scientific establishment discounts these as "not proven", has prompted the EPA to demand closer examination and policymakers to recommend "prudent avoidance". Personally, I prefer to avoid all exposure to a risk for which no "safe" level of exposure has been established.

Since utilities are chartered to serve in the public interest, with the responsibility of putting public welfare first, I question whether CVEA has the right to compromise the welfare of my family and neighbors in the interest of stabilizing its members' electric bills. We chose to live here in full knowledge that electricity, should we opt to hook up to MEA, would be expensive. I cannot imagine Copper Valley residents deluded themselves into thinking utilities would ever come cheap in their area of the state.

Sutton, Glacier View and Chickaloon Community Councils have passed resolutions detailing their opposition to the proposal, as has the Sutton Chamber of Commerce. Both the Matanuska-Susitna Borough Planning Commission and Assembly have also passed resolutions reinforcing their 1989 comments regarding the negative impacts on the borough of such a transmission line. Please give consideration to our concerns when considering funding for this project in the legislature.

Sincerely,



Linda D. Ketchum

**MATANUSKA-SUSITNA BOROUGH
PLANNING COMMISSION RESOLUTION 93-10 (Substitute)**

**A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH PLANNING COMMISSION
CONCERNING THE ALASKA ENERGY AUTHORITY COPPER VALLEY INTERTIE
FEASIBILITY STUDY**

WHEREAS, the Matanuska-Susitna Borough Assembly adopted Resolution 89-113 (Sub) on September 5, 1989 concerning the Railbelt Intertie Feasibility Study, Draft Final Report, dated April 1989; and

WHEREAS, the Assembly expressed therein concerns about the impact of the proposed Northeast Intertie on private property, habitable structures and scenic beauty of the Glenn Highway; and

WHEREAS, the Matanuska-Susitna Borough Planning Commission wishes to reiterate those concerns about the proposed intertie's impacts on health, tourism drawing potential, fish and wildlife habitat, and wetlands, including:

- the very popular recreation areas traversed, including sections of the historic Chickaloon-Knik-Nelchina Trail and other well-travelled trails;
- opening up the Matanuska Valley Moose Range with concomitant impacts on wildlife habitat;
- an area of outstanding natural beauty, where the local economy is dependent upon income from tourism; and

WHEREAS, some scientific studies have suggested a high incidence of leukemia in children who live near powerlines.

NOW, THEREFORE, BE IT RESOLVED that the Matanuska-Susitna Borough Planning Commission recommends that the design and location of the intertie be done in such a way as to mitigate these concerns; and

BE IT FURTHER RESOLVED that the Matanuska-Susitna Borough Planning Commission recommends that the Alaska Energy Authority shall also study the feasibility of generating electricity in the Copper Valley from the following sources:


- coal;
- natural gas reserves in the Copper Basin;
- natural gas from the proposed Yukon Pacific gas pipeline; and

BE IT FURTHER RESOLVED that the Matanuska-Susitna Borough Planning Commission recommends that the Alaska Energy Authority investigate the feasibility of upgrading the electrical transmission lines from Glennallen to Fairbanks to utilize energy produced by the Healy clean coal project and Chugach Electric Association; and

BE IT FURTHER RESOLVED that the Matanuska-Susitna Borough Planning Commission recommends that the Alaska Energy Authority perform the feasibility study with the following consideration:

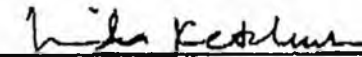
Assessment of the EMF hazards at the O'Neil Substation in Sutton, and relocation of the substation if necessary to mitigate EMF health hazards, so any transmission line connected to the substation would not pose a health problem; and

ADOPTED by the Matanuska-Susitna Borough Planning Commission, this 5th day of April, 1993.



CARL DEPREST, Chairman

ATTEST:



LINDA KETCHUM, Planning Clerk

**MATANUSKA-SUSITNA BOROUGH
RESOLUTION SERIAL NO. 93-035**

**A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY CONCERNING
THE ALASKA ENERGY AUTHORITY COPPER VALLEY INTERTIE FEASIBILITY STUDY.**

WHEREAS, the Matanuska-Susitna Borough Planning Commission adopted Planning Commission Resolution 93-10 (Sub) on April 5, 1993 concerning the Railbelt Intertie Feasibility Study; and

WHEREAS, the Planning Commission expressed therein concerns about the impact of the proposed Northeast Intertie on private property, habitable structures and scenic beauty of the Glenn Highway; and

WHEREAS, the communities of Glacier View, Chickaloon, and Sutton have held multiple public meetings, at which the residents have expressed their concerns; and

WHEREAS, the Matanuska-Susitna Borough Assembly adopted Resolution 89-113 (Sub) on September 5, 1989 concerning the Railbelt Intertie Feasibility Study, dated April 1989; and

WHEREAS, the Matanuska-Susitna Borough Assembly wishes to reiterate those concerns about the proposed intertie's impacts on health, tourism drawing potential, fish and wildlife habitat, and wetlands, including:

- the very popular recreation areas traversed, including sections of the historic Chickaloon-Knik-Nelchina Trail and other well-travelled trails;
- opening up the Matanuska Valley Moose Range with concomitant impacts on wildlife habitat;
- an area of outstanding natural beauty, where the local economy is dependent upon income from tourism; and

WHEREAS, some scientific studies have suggested significant health impacts from electro-magnetic fields to children living near transmission lines.

NOW, THEREFORE, BE IT RESOLVED that the Matanuska-Susitna Borough Assembly recommends that the Alaska Energy Authority shall also study the feasibility of generating electricity in the Copper Valley from other sources including:

- coal;



THE GREATER SUTTON
CHAMBER OF COMMERCE

P.O. Box 24
Sutton, Alaska 99674

A RESOLUTION OF THE GREATER SUTTON CHAMBER OF COMMERCE
CONCERNING THE PROPOSED COPPER VALLEY INTERTIE FROM
SUTTON TO GLENNALLEN

WHEREAS, the initial Copper Valley intertie
proposal of 1989 was soundly opposed by residents along
the Glenn Highway corridor; and

WHEREAS, the Matanuska-Susitna Borough Assembly
resolved not to support the proposal of 1989 through
Resolution 89-113; and

WHEREAS, the area involved by the proposed intertie
still relies on tourism and the scenic beauty as a
source of economy; and

WHEREAS, the negative impact on wildlife habitat
and historic trails cannot be entirely remediated; and

WHEREAS, the possible health impacts from
electromagnetic fields pose a very real fear for local
residents that studies have shown justified.

NOW, THEREFORE, BE IT RESOLVED that the Sutton
Chamber of Commerce recommends that alternative sources
for the power needs of the Copper Valley Electric
Association be explored and considered for resolving
this issue.

ADOPTED by the Greater Sutton Chamber of Commerce
this Fifth day of April, 1993.

Lynne Woods
Lynne Woods, President

ATTEST:

Barbara Leppanen
Barbara Leppanen, Board of Directors

- natural gas reserves in the Copper Basin;
- natural gas from the proposed Yukon Pacific gas pipeline; and

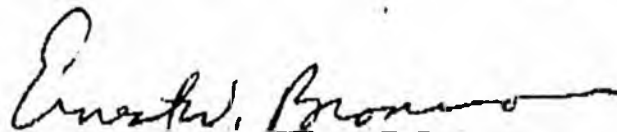
BE IT FURTHER RESOLVED that the Matanuska-Susitna Borough Assembly recommends that the Alaska Energy Authority investigate the feasibility of upgrading the electrical transmission lines from Glennallen to Fairbanks to utilize energy produced by the Healy clean coal project and Chugach Electric Association; and

BE IT FURTHER RESOLVED that the Matanuska-Susitna Borough Assembly recommends that the Alaska Energy Authority perform the feasibility study with the following consideration:

Assessment of the EMF hazards at the O'Neil Substation in Sutton, and relocation of the substation if necessary to mitigate EMF health hazards, so any transmission line connected to the substation would not pose a health problem; and

BE IT FURTHER RESOLVED that if all other alternatives are explored and found not be feasible, that the Matanuska-Susitna Borough Assembly recommends that the design and location of the intertie be done in such a way as to mitigate these concerns.

ADOPTED by the Matanuska-Susitna Borough Assembly, this 13 day of April, 1993.


ERNEST W. BRANNON, Borough Mayor

ATTEST:


LINDA A DAHL, Borough Clerk

(SEAL)

SUTTON COMMUNITY COUNCIL
P.O. BOX 344
SUTTON, AK 99674

RESOLUTION 93-001

A RESOLUTION OF THE SUTTON COMMUNITY COUNCIL CONCERNING THE PROPOSED COPPER VALLEY INTERTIE FROM SUTTON TO GLENNALLEN

WHEREAS, residents of Sutton and other communities strongly oppose the construction of an intertie to provide additional electric power to Copper Valley Electric Association consumers without appropriate study of feasibility, environmental risks, and alternate sources to provide that same power; and

WHEREAS, the request by CVEA to the Alaska Energy Authority to perform a feasibility study does not provide enough funds to do a thorough investigation of alternative power sources but only the study of the "Northeast Intertie" routing along the Glenn Highway corridor; and

WHEREAS, this project depends on appropriation of funds from the state of Alaska and thus decisions on the use of public money should be based on scientific data utilizing technologies appropriate for the present needs and future impacts of people and environment; and

WHEREAS, CVEA appears to be trying to circumvent the statutory/regulatory intent for a systematic process of selecting the best ways to meet the state's energy needs through reconnaissance study to feasibility study to finance plan to legislative action; and

WHEREAS, public comment received by this Community Council values the environmental habitat, personal health, and beauty of the land they have built their homes and businesses over the priority of constructing an intertie and resolve to oppose the project as long as it is being considered.

NOW, THEREFORE, BE IT RESOLVED that the Sutton Community Council opposes the Copper Valley Intertie.

Adopted by the Sutton Community Council on this 14th day of April, 1993.

Theresa K. Anderson
President

Attest:
Shirley Twitchell
Secretary

Glacier View Community Council (G.V.C.C.) Resolution
Sutton to Glennallen Intertie
April 7, 1993

This is a resolution from the G.V.C.C. (mile 89 to 138 of the Glenn Highway, consisting of approximately 300 land owners) concerning the Sutton to Glennallen Intertie. The only route that we would support would be to the north of Anthracite Ridge, continuing and remaining north of Syncline Mountain and north of Old Man Creek to the Mat-Su Borough boundary.

Katherine E. Wright, Secretary G.V.C.C.
H.C.O.3. Box 8496
Palmer, AK 99645
907-745-4763

RESOLUTION

WHERE AS, the Matanuska - Susitna Borough Assembly adopted resolution 89 - 113(sub) on September 5, 1989 concerning the Railbelt Intertie Feasibility Study, draft final report dated April 1989; and

WHERE AS, the assembly expressed therein concerns about the impact of the proposed northeast intertie on private property, habitable structures and scenic resource of the Glenn Highway; and

WHERE AS, the community council of Chickaloon wishes to reiterate those concerns and more about the proposed intertie's impacts on;

- the very popular recreational areas traversed, including sections of the historic Chickaloon - Knik - Nelchina Trail and other well used trails.

- opening up the Matanuska Moose Range with concomitant impacts on wildlife and habitat

- an area of outstanding scenic beauty, where the local economy is dependent upon income from tourism;

- the life style and future of the area as stated in the Chickaloon Comprehensive Land Plan

- the acceptance and compliance of a conditional use permit for electrical transmission lines as stated in regulations of the Chickaloon Special Land Use District;

- human biological systems by electromagnetic fields, which are still under study.

Additionally, the council believes that M.E.A, C.V.E.A and the A.E.A have not researched effective alternatives such as the existing new coal fired generating facility Hobbs Industries owns 30 miles from Glennallen.

NOW, THEREFORE, BE IT RESOLVED that the Chickaloon Community Council recommends that the intertie not be built within our planning area.

ADOPTED by the Chickaloon Community Council, this 13th day of April 1993.

-ATTEST:

Debra A. [Signature]
Secretary

President

[Signature] S. Kelley

SUTTON COMMUNITY COUNCIL
P.O. BOX 344
SUTTON, AK 99674

RESOLUTION 93-001

A RESOLUTION OF THE SUTTON COMMUNITY COUNCIL CONCERNING THE
PROPOSED COPPER VALLEY INTERTIE FROM SUTTON TO GLENNALLEN

WHEREAS, residents of Sutton and other communities strongly oppose the construction of an intertie to provide additional electric power to Copper Valley Electric Association consumers without appropriate study of feasibility, environmental risks, and alternate sources to provide that same power; and

WHEREAS, the request by CVEA to the Alaska Energy Authority to perform a feasibility study does not provide enough funds to do a thorough investigation of alternative power sources but only the study of the "Northeast Intertie" routing along the Glenn Highway corridor; and

WHEREAS, this project depends on appropriation of funds from the state of Alaska and thus decisions on the use of public money should be based on scientific data utilizing technologies appropriate for the present needs and future impacts of people and environment; and

WHEREAS, CVEA appears to be trying to circumvent the statutory/regulatory intent for a systematic process of selecting the best ways to meet the state's energy needs through reconnaissance study to feasibility study to finance plan to legislative action; and

WHEREAS, public comment received by this Community Council values the environmental habitat, personal health, and beauty of the land they have built their homes and businesses over the priority of constructing an intertie and resolve to oppose the project as long as it is being considered.

NOW, THEREFORE, BE IT RESOLVED that the Sutton Community Council opposes the Copper Valley Intertie.

Adopted by the Sutton Community Council on this 14th day
of April, 1993.

Shirley K. Anderson
President

Attest:
Shirley Twitchell
Secretary



THE GREATER SUTTON
CHAMBER OF COMMERCE

P.O. Box 24
Sutton, Alaska 99674

A RESOLUTION OF THE GREATER SUTTON CHAMBER OF COMMERCE
CONCERNING THE PROPOSED COPPER VALLEY INTERTIE FROM
SUTTON TO GLENNALLEN

WHEREAS, the initial Copper Valley intertie proposal of 1989 was soundly opposed by residents along the Glenn Highway corridor; and

WHEREAS, the Matanuska-Susitna Borough Assembly resolved not to support the proposal of 1989 through Resolution 89-113; and

WHEREAS, the area involved by the proposed intertie still relies on tourism and the scenic beauty as a source of economy; and

WHEREAS, the negative impact on wildlife habitat and historic trails cannot be entirely remediated; and

WHEREAS, the possible health impacts from electromagnetic fields pose a very real fear for local residents that studies have shown justified.

NOW, THEREFORE, BE IT RESOLVED that the Sutton Chamber of Commerce recommends that alternative sources for the power needs of the Copper Valley Electric Association be explored and considered for resolving this issue.

ADOPTED by the Greater Sutton Chamber of Commerce this Fifth day of April, 1993.

Lynne Woods

Lynne Woods, President

ATTEST:

Barbara L. ...

MATANUSKA-SUSITNA BOROUGH
RESOLUTION SERIAL NO. 93-_____

**A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY CONCERNING
THE ALASKA ENERGY AUTHORITY COPPER VALLEY INTERTIE FEASIBILITY STUDY.**

WHEREAS, the Matanuska-Susitna Borough Planning Commission adopted Planning Commission Resolution 93-10 (Sub) on April 5, 1993 concerning the Railbelt Intertie Feasibility Study; and

WHEREAS, the Planning Commission expressed therein concerns about the impact of the proposed Northeast Intertie on private property, habitable structures and scenic beauty of the Glenn Highway; and

WHEREAS, the communities of Glacier View, Chickaloon, and Sutton have held multiple public meetings, at which the residents have expressed their concerns; and

WHEREAS, the Matanuska-Susitna Borough Assembly adopted Resolution 89-113 (Sub) on September 5, 1989 concerning the Railbelt Intertie Feasibility Study, dated April 1989; and

WHEREAS, the Matanuska-Susitna Borough Assembly wishes to reiterate those concerns about the proposed intertie's impacts on health, tourism drawing potential, fish and wildlife habitat, and wetlands, including:

- ♦ the very popular recreation areas traversed, including sections of the historic Chickaloon-Knik-Nelchina Trail and other well-travelled trails;
- ♦ opening up the Matanuska Valley Moose Range with concomitant impacts on wildlife habitat;
- ♦ an area of outstanding natural beauty, where the local economy is dependent upon income from tourism; and

WHEREAS, some scientific studies have suggested significant health impacts from electro-magnetic fields to children living near transmission lines.

NOW, THEREFORE, BE IT RESOLVED that the Matanuska-Susitna Borough Assembly recommends that the Alaska Energy Authority shall also study the feasibility of generating electricity in the Copper Valley from other sources including:

- ♦ coal;

- natural gas reserves in the Copper Basin;
- natural gas from the proposed Yukon Pacific gas pipeline; and

BE IT FURTHER RESOLVED that the Matanuska-Susitna Borough Assembly recommends that the Alaska Energy Authority investigate the feasibility of upgrading the electrical transmission lines from Glennallen to Fairbanks to utilize energy produced by the Healy clean coal project and Chugach Electric Association; and

BE IT FURTHER RESOLVED that the Matanuska-Susitna Borough Assembly recommends that the Alaska Energy Authority perform the feasibility study with the following consideration:

Assessment of the EMF hazards at the O'Neil Substation in Sutton, and relocation of the substation if necessary to mitigate EMF health hazards, so any transmission line connected to the substation would not pose a health problem; and

BE IT FURTHER RESOLVED that if all other alternatives are explored and found not be feasible, that the Matanuska-Susitna Borough Assembly recommends that the design and location of the intertie be done in such a way as to mitigate these concerns.

ADOPTED by the Matanuska-Susitna Borough Assembly, this _____ day of _____, 1993.

ERNEST W. BRANNON, Borough Mayor

ATTEST:

LINDA A DAHL, Borough Clerk

(SEAL)

DOCUMENTATION OF PUBLIC COMMENTS
ALASKA ENERGY AUTHORITY
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Please submit your comments as soon as practical to the following:

Mr. Richard Emerman
Alaska Energy Authority
P.O. Box 190869
Anchorage, AK 99519-0869

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Name of Person Commenting: Mark Bertels
Mailing Address: P.O. Box 263
Sutton, AK 99674
(907) 745-7686

COMMENTS:

This letter is in response to the proposed Copper Valley Intertie Project which would consist of a 138-kv electric transmission line from Sutton to Glennallen.

During the public meeting held in Sutton on March 15, 1993, some serious questions were raised on the feasibility and impact of such an impending proposal. This project is more than just a transmission line from Sutton to Glennallen, this is an energy corridor that requires a 150' cleared easement and condemns a 900' wide space for homes and other daily human activities. The plan for this corridor is to cross residential areas in the communities of Sutton, Chickaloon and other private properties along the Glenn Highway.

So what are the implications of this proposal? Well, first and foremost is, or should be, a concern for health. In 1990 the Environmental Protection Agency issued a warning linking electromagnetic fields with leukemia, lymphoma and brain cancer. Two studies done in Sweden by Stockholm's Karolinska Institute and

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Name of Person Commenting:

Paula Harris

Mailing Address:

Box 53

Sutton AK 99674

COMMENTS:

I think this is going to be a worthless dinosaur come the year 2000. Buy them all BRAND NEW generators & save \$60,000,000. I'd like to see these people get power but there has got to be a better way.

Continued on Back

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ALASKA ENERGY AUTHORITY
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Name of Person Commenting:

Mailing Address:

745-4515

EDWARD Wm "Bill" Doyle
AC-03 Box 8300
POLMETH AIR 99648

COMMENTS:

I FEEL THAT THE COPPER VALLEY POWER AUTH. SHOULD
BUILD THEIR OWN POWER HOUSE (COAL FIRED) IN
THE GLEN ALLEN AREA AND SUPPLY THEIR OWN
POWER AND LEAVE THE SUTTON SCHOOL
AND COMMUNITY & CHICKA LOWN COMMUNITY
CLEAR OF THESE POWER LINES ALSO I FEEL

Continued on Back

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ALASKA ENERGY AUTHORITY
COPPER VALLEY INTERTIE FEASIBILITY STUDY

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Name of Person Commenting:

Mike Pearson

Mailing Address:

Box 6

SUTTON AK 99674

NO!!! I DON'T WANT INTERTIE GOING THRU MY
COMMENTS: PROPERTY OF THE MAT VALLEY EVER!
THE WHOLE IDEA IS RIDICULOUS AND ONLY
A MONEY SCHEME. YOU AND I BOTH KNOW
THERE ARE CHEAPER AND BETTER WAYS OF CREATING
MORE POWER UP THERE. THIS IS JUST
ANOTHER WAY OF GETTING STATE DOLLARS AT
TAXPAYERS EXPENSE!

Continued on Back

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Name of Person Commenting:

Nancy Beetz

Mailing Address:

P.O. Box 2763

Sutton, AK 99674

COMMENTS:

I am opposed to the construction of this intertie. Copper Valley is not even trying to find alternative sources of power. My lifestyle should not be sacrificed so that the residents in the Copper Valley can have cheaper power.

The intertie is an archaic solution to supplying power to residents of the Copper Valley. The search for alternative sources of power should begin NOW!
(coal, hydroelectric, natural gas, etc)

Continued on Back

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ALASKA ENERGY AUTHORITY
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Name of Person Commenting:

Tim Bauer

Mailing Address:

Box 172

Sutton - AK 99624

COMMENTS:

Hopfully a better alternative can
be found.

Continued on Back

DOCUMENTATION OF PUBLIC COMMENTS
ALASKA ENERGY AUTHORITY
COPPER VALLEY INTERTIE FEASIBILITY STUDY

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Name of Person Commenting:

Saturday Orzelsky

Mailing Address:

PO 143

Sutton Alaska

99674

COMMENTS:

I don't like it - move it to the other side of the river - or have Copper River generate its own power!

What an ugly eye sore.

Continued on Back

to say nothing of the health risk!

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ALASKA ENERGY AUTHORITY
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Name of Person Commenting:

LINDA S. DELLINGER

Mailing Address:

PO BOX 33

SUTTON AK 99674

PHYSICAL LOCATION: 1/4 MI. JONESVILLE RD.

COMMENTS: I OPPOSE THE COPPER VALLEY INTERTIE PROJECT AS IT MAY DIRECTLY AFFECT MY HEALTH BECAUSE OF OUR HOME & LAND BEING IN CLOSE PROXIMITY TO THE PROJECT. ALSO, IT MAY NEGATIVELY AFFECT THE SMALL TOURISM VENTURES IN PLACE NOW AS WELL AS DISCOURAGE FURTHER VENTURES IN THE FUTURE

Continued on Back

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ALASKA ENERGY AUTHORITY
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Name of Person Commenting:

Margaret A Smith

Mailing Address:

P.O. Box 255

Sutton AK 99674

COMMENTS:

I am extremely upset. I am worried about the future of my home which seems to mean nothing to the State of Alaska. It seems that the quality of living is less important than cheaper electricity in Glen Hill. I oppose this proposition.
Margaret A Smith.

Continued on Back

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ALASKA ENERGY AUTHORITY
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Name of Person Commenting:

Lisa Rhodes

Mailing Address:

PO Box 169

Palmer AK 99645

COMMENTS:

As a resident of Sutton and live approximately 300 yards from the Sutton Substation, I'm very opposed to the installation of the Glennallen Intertie as planned. I am extremely concerned about the health risks of those people in close proximity to the line. The homeowners I have been established for a long time - many have young children which would be @ health risk. Besides being @ risk for having their homes and property condemned. I urge you to reconsider your other alternatives.

Continued on Back

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Name of Person Commenting:

MERLE D. LAWSON

Mailing Address:

P.O. Box 277
SUTTON AK 99674

COMMENTS:

THE MONEY IT WOULD TAKE TO CONSTRUCT THIS LINE COULD BE USED TO DEVELOPE A POWER PLANT IN COPPER CENTER OR GLENNALLEN
I AM OPPOSED TO THE CONSTRUCTION OF THIS POWER LINE.

Continued on Back

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Name of Person Commenting:

JAMES A GRENDA

Mailing Address:

PO Box 326
Sutton, AK 99674-0326
907-745-0956

COMMENTS:

I firmly oppose this project
Do something different

James A Grenday
Continued on Back

4-6-93

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ALASKA ENERGY AUTHORITY
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Name of Person Commenting:

Dave Dweji

Mailing Address:

P.O. Box 76
Sutton, AK 99674

COMMENTS: I strongly oppose the construction of the proposed inter-tie between Glennallen and Sutton. As per the cost of construction and the prime hunting lands and scenic passages of the line. I strongly recommend another alternative to this project and not another route.

Continued on Back

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Name of Person Commenting:

Dave Kurtz, Hick Creek

Mailing Address:

HCO 3 8410

It is unacceptable.

COMMENTS:

Continued on Back

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Name of Person Commenting:

Nancy E Johnson

Mailing Address:

Box 254
Sutton, AK 99674

I don't want this intertie system to go
COMMENTS: through Sutton. I feel that the Copper
River Valley should pursue natural gas or
hydroelectric power plants for their local area.

Continued on Back