

ALASKA LEGISLATURE COMMITTEE FILES, 1989-1990 8672

6398 SENATE LABOR & COMMERCE

802

Northeast Intertie Concerned Residents
NEICR

EXHIBIT B
RESOLUTION 89-1

The purpose of this description is to describe a rerouting of a portion of the Northeast Intertie. This reroute description begins at the Chickaloon River approximately mile 70 of the Glenn Highway then goes through the foothills of the Talkeetna Mountains north of the highway and the Matanuska River Valley to Eureka at mile 140 of the Glenn Highway. There are several alternate routes that branch off the main reroute centerline.

The aforementioned reroute is more particularly described as follows; commencing at the NW 1/4 corner of Sec. 23, T.20 N, R.5 E, S.M., Ak; thence Northeasterly north of Boulder Creek to the W 1/4 corner of Sec. 33 T.21 N., R 7 E, which is common with the point of beginning for the alternate route 1; thence easterly along Boulder Creek to the section corner common to sections 21,22,15 & 16 of T 21 N., R 8 E.; thence Southeasterly to the SE 1/16 Cor of Sec. 19, T 21 N., R 9 E, said point being the point of beginning for alternate route 2; thence Northeasterly to the W 1/4 corner of Sec. 12, T 21 N., R 9 E.; thence generally Northeasterly to the SE Sec. Corner of Sec 36, T 22 N, R 10 E; thence easterly along the southerly section line of Section 31, T 22 N, R 11 E to the SE section corner of said section; thence Northeasterly to the Section Corner common to Secs. 25,26,35,36 T 22 N, R 11 E; thence Easterly to the peak of a hill within the SE 1/4 of Sec. 27 T 22 N, R 12 E; thence Northeasterly to a point within Section 33, T 3 N, R 10 W, C.R. Meridian Alaska, said point is the terminus of this description for the purpose of describing a proposed rerouting of a portion of the NE Intertie proposal.

Alternate route 1 described as follows: Commencing at the W 1/4 corner of Sec. 33, T. 21 N, R 7 E, S.M.; thence Northeasterly along Boulder Creek, through Chitna Pass, along Chitna creek, along Caribou creek; this route generally follows a trail as designated on USGS Anchorage (D 3) Quadrangle; Terminus of alternate 1 is an intersection of the afore described and the main reroute centerline, said intersection lying in the NW 1/4 of Sec. 10 T 21 N, R 10 E.

Alternate route 2 is described as follows: Commencing at the afore described SE 1/16 Cor of Section 19; thence Easterly to the W 1/4 corner of Sec. 21, T 21 N., R 11 E; thence Northeasterly to the peak of a hill located within the SE 1/4 of Sec. 27, T 22 N, R 12 E, S.M., AK., said point being the terminus of alternate route 2.



GOLDEN VALLEY ELECTRIC ASSOCIATION INC. Box 1249, Fairbanks, Alaska 99707-1249, Phone 907-452-1151

March 30, 1989

TO: Senator John Coghill

FROM: Mike Kelly, General Manager, Golden Valley Electric Assn. 

**STATUS REPORT CONCERNING USE OF A PORTION OF THE RAILBELT
ENERGY FUND FOR THE NORTHERN ELECTRICAL INTERTIE (ANCH-FBKS)**

The Governor's Railbelt Energy Council recommended use of the Railbelt Energy Fund (1) to construct a 230 kV Southern electrical intertie between Soldotna and Anchorage (original APA-estimated cost - \$80 million); and (2) to upgrade the existing Northern intertie system between Anchorage and Fairbanks by constructing new 230 kV lines from Wasilla to Willow and Healy to Fairbanks (original APA-estimated cost - \$118 million.) These intertie lines are needed to increase electrical transfer capability between Alaska's major population centers thereby improving reliability and reducing costs by increasing economy energy transactions, reducing electrical losses, increasing reserve sharing, etc.

The purpose of this communication is to apprise you of a dramatic cost reduction in the utility request for the Northern Intertie System - from \$118 million to \$60 million. This has been done with the concurrence of Bob LaResche, ARECA and the other Railbelt utilities. Why? Because we realize the financial crunch that the legislature is dealing with and have made a good-faith attempt to pare our request to a minimum. We have backed off from a request for a "four-lane electrical highway" to a two-lane country road. This, when combined with a reduced-cost Southern Intertie, will give over 75% of Alaska's population a reduced, but reasonable share of their energy entitlement and will still leave the legislature over one hundred million of the REF to dedicate to other energy and non-energy needs.

Here are a few technical points to help make clear what we propose:

- (1) The original \$118 million plan would have provided a 230 kV, 300 megawatt low-loss electrical intertie system between Anchorage and Fairbanks. This would increase transfer capability from the present 70 megawatts.
- (2) Our \$60 million proposal will (a) eliminate the request for a new Wasilla to Willow 230 kV line; (b) reduce the request for a new Healy to Fairbanks line from 230 kV to 138 kV (same voltage as the existing GVEA 138 kV line which the new line will roughly parallel); and (c) will add voltage compensation to the line. These actions will result in an Anchorage-to-Healy total delivery capability of 100 MW and a Healy-to-Fairbanks total delivery capability of 200 MW. This will substantially reduce Healy-to-Fairbanks electrical line losses; will increase transfer capability to-from Anchorage; will accommodate GVEA's existing 25 MW Healy coal-fired powerplant plus Usibell's proposed 35 MW cogeneration plant and will leave room for addition of another 40 MW plant at Healy in the future.

GOLDEN VALLEY ELECTRIC ASSOCIATION INC.

Status Report - REF
March 30, 1989
Page 2

- (3) The dual transmission lines will substantially increase the reliability of future power deliveries from Healy to the Fairbanks load center.
- (4) GVEA has retained Harza Engineering and Power Technologies, Inc. to fine tune our cost estimate and line configuration calculations. Decision Focus, Inc. will assist in calculating the benefit to cost ratio. The draft APA report demonstrated a base case expected SCR of .7 for the original \$118 million plan. We are very confident that at one-half the cost our new \$60 million plan will demonstrate a 1+ BCR.

I purposefully kept this short. Therefore it lacks detail. I would be happy to help clarify any questions by phone or can come to Juneau on very short notice to testify, etc.

3/30/89
 WEDNESDAY
 DAILY NEWS

GVEA chops request for intertie funds by half

By **MARK HANCOCK**
Staff Writer

Quebec Hydro Electric Agency has cut in half its request for intertie funds to build a bridge over the Saguenay Fjord.

"I was a first-class beer lover at the time," GVEA General Manager Kelly said. "The facts are we had to cut back

to a two-lane secondary road," he said.

GVEA wants the road built with state money so it can import cheap gas-fired power from Anchoirage and will not have to start up expensive oil-fired generators in the area. Even with the existing intertie line, the 100-Mw gas generators owned by GVEA's subsidiary Hydro-Quebec will be 19 hours a year or more, Kelly said.

GVEA wants the money taken from the state's gas-million Fund. But Energy Fund, which helps

buy and sell, Steve Campier may need to balance the budget.

Kelly presented the new plan to legislators at the gathering for the conditional intertie agreement held every other Tuesday from 7:30 p.m. Legislators reacted favorably to the Kelly's revised plan.

"I've looked at the proposal in more detail, from the financial side. I think the state's facing, but I think everyone is looking very cautious because we absolutely don't know the revenue situation," Rep. Mike

Devlin, D-Fairbanks, said this morning.

Until a few weeks ago, GVEA and other utilities had asked legislators to allocate \$20 million for intertie between Anchoirage and Willow and Kelly and Fairbanks. Another \$20 million was requested to build a larger line between the Bradley Lake dam on the Kamin Peninsula and Anchoirage.

The new plan would drop plans to build the higher capacity line between Anchoirage and Willow. Instead, village compensation

members would be limited to increasing the line's capacity, Kelly said.

The proposal for intertie between Kelly and Fairbanks would be built, but on a smaller scale than previously planned. It would have the same capacity as the existing line.

Taken together, the lines like Fairbanks could carry roughly 200 megawatts under the new plan, down from 200 megawatts under the \$120-million plan. At present, the line can carry 70 megawatts.

The 200-megawatt line allows GVEA to import cheap gas-fired power, Kelly said.

Kelly said Anchoirage also are attempting to pay their request for the Bradley Lake and Anchoirage. He expects they will receive \$20 million of the price tag of \$20 million.



GOLDEN VALLEY ELECTRIC ASSOCIATION INC. Box 1249, Fairbanks, Alaska 99707-1249, Phone 907-452-1161

March 29, 1989

Mr. Brian Phillips
 Manager, City of Fairbanks
 410 Cushman Street
 Fairbanks, Alaska 99701

RE: Railbelt Energy Fund

Dear Brian,

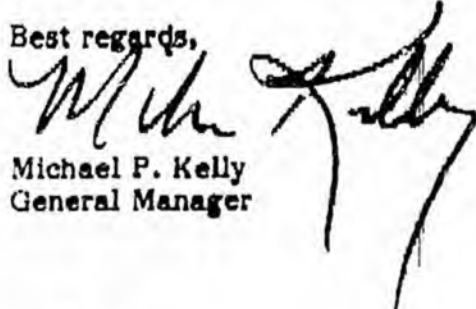
Attached are copies of:

1. The resolution I drafted which was approved by the Chamber Energy Committee which reflects GVEA's position regarding the Northern intertie construction. I expect Chamber Board approval on April 3, 1989.
2. A resolution which Kathy Usbell-Fulp and I collaborated on which passed the Chamber Board on March 27 supporting the Usbell power plant/coal drying facility.

You have indicated that Councilman Hayes may be interested in introducing similar resolutions before the City Council. I believe this would be an excellent idea. Last night I testified before the Interior delegation by teleconference concerning usage of the Railbelt Energy Fund for purposes reflected in #1 above. We discussed the fact that the Interior is far more united concerning use of the REF than the Southern railbelt. For example, we have delegation, utility, Borough, Chamber, labor, and hopefully the City, united behind the plans reflected in the attached resolutions. If I can be of any help, or Jim needs me to testify, please call.

On another matter, I was pleased to learn that you will soon be addressing long-range plans concerning FMUS. As I promised, I will send you a preliminary letter-proposal regarding FMUS power supply, Chena purchase, etc. by April 10.

Best regards,


 Michael P. Kelly
 General Manager

cc. Best Stamp
 Ron Saylor



Greater Fairbanks

Chamber

RESOLUTION

A RESOLUTION URGING SUPPORT FOR INTERTIE CONSTRUCTION USING RAILBELT ENERGY FUNDS

- WHEREAS, the Railbelt Energy Fund has not been fully utilized; and
- WHEREAS, Alaskans in other regions of the state continue to enjoy the benefits of state-financed energy projects and the Bush continues to receive annual energy cost subsidies through the Power Cost Equalization program; and
- WHEREAS, the Railbelt Energy Fund is in danger of being diverted almost entirely to uses other than its original purpose unless it is appropriated for Railbelt energy projects this legislative session; and
- WHEREAS, the Railbelt Energy Council endorsed use of a portion of the Railbelt Energy Fund to upgrade the Anchorage-Fairbanks electrical intertie system, including construction of a new transmission line between Fairbanks and Healy; and
- WHEREAS, because of limited intertie capability between Fairbanks and Anchorage, Golden Valley Electric Association is currently required to operate oil-fired generation to meet load whenever temperatures are below -10°F ; and
- WHEREAS, a new electrical transmission line between Healy and Fairbanks will enable the Usibelli cogeneration project to deliver its full output to the Fairbanks electrical load center; and
- WHEREAS, the original estimate for the Anchorage to Fairbanks 230 kV transmission upgrade was \$118 million; and
- WHEREAS, the utilities have been asked by key legislators to reduce their request for intertie funding in recognition of state financial difficulties; and
- WHEREAS, the Golden Valley Electric Association, working with the Alaska Power Authority, has reduced their request for the Anchorage-Fairbanks intertie upgrade from \$118 million to approximately \$60 million by reducing design voltage from 230 kV to 138 kV and by eliminating the request for a new transmission line between Wasilla and Willow;



Greater Fairbanks

Chamber

OF COMMERCE

1000 Ashcroft Street
Fairbanks, Alaska

Resolution _____
Page 2

NOW, THEREFORE, BE IT RESOLVED, that the Greater Fairbanks Chamber of Commerce urges the Governor and the legislature to support an appropriation of \$60 million from the Railbelt Energy Fund to the Alaska Power Authority for construction of a new 138 kV line between Healy and Fairbanks and the addition of voltage compensation on the existing Anchorage-Fairbanks transmission system.

Signed this _____ day of _____, 1989.

By: _____
George Whyel
Chairman

By: _____
W. R. Cox
President and CEO

DISTRIBUTION:

- Governor Steve Cowper
- Members, Alaska State Senate
- Members, Alaska State House
- Robert LeResche, Alaska Power Authority
- Dave Hutchens, Alaska Rural Electrification Assn.



Greater Fairbanks

Chamber

OF COMMERCE

709 Second Avenue

(907) 452-1105

FAIRBANKS, ALASKA 99701

RESOLUTION #10-0389

RESOLUTION URGING THE LEGISLATURE TO SUPPORT AN APPROPRIATION OF \$30 MILLION FROM THE RAILBELT ENERGY FUND TO ENHANCE THE OPPORTUNITY OF SECURING FEDERAL CLEAN COAL FUNDS IN 1989

- WHEREAS, the Healy Cogeneration Project (HCP) is a prospective significant development in Alaska's economically depressed Railbelt Region; and
- WHEREAS, the HCP, comprising a 50 MW high-technology coal-fired powerplant and a coal processing (drying) plant which will produce 500,000 tons of premium fuel per year, will bring major economic benefits to Alaska and the Railbelt region in particular; and
- WHEREAS, the HCP will utilize and promote the increased and wise use of Alaska's most abundant non-renewable resource - Coal - in an environmentally sound and efficient manner; and
- WHEREAS, the HCP will create at least 130 direct long-term quality jobs as well as numerous indirect jobs exclusive of a construction force which could peak at 300, and
- WHEREAS, the HCP could be a prototype development leading to broad commercialization of coal-drying (beneficiation) technology to produce large volumes of premium low-sulfur fuel having great potential in export markets; and
- WHEREAS, the electrical power to be produced from the HCP will be used in the Northern Railbelt to meet power requirements and support economic expansion in the region; and
- WHEREAS, the Board of Golden Valley Electric Association is supportive of the HCP construction using federal, state and private financing to provide a long-term source of reliable and attractively priced electrical power; and
- WHEREAS, the HCP sponsors recognize that a new transmission line from Healy to Fairbanks is essential to deliver HCP produced electricity to Fairbanks; and

WHEREAS, the project sponsors are being encouraged to submit the HCP for possible federal funding under the Department of Energy Clean Coal Technology Program; and

WHEREAS, chances of obtaining federal clean coal funds, which could approximate \$55 million for the HCP, will be greatly enhanced by the demonstration of strong political and financial support for the HCP from the State of Alaska; and

WHEREAS, the HCP is an energy producing project located in the Railbelt.

NOW, THEREFORE BE IT RESOLVED that the Greater Fairbanks Chamber of Commerce urges the Governor and Legislature to support an appropriation of \$30 million from the Railbelt Energy Fund to enhance the opportunity of securing federal clean coal funds in 1989 for this very important economic development project.

Passed this _____ day of _____, 1989.

By _____

By _____

By: Walt Johnson
Chirs Birch
J.B. Carnahan
Paul Chlamar
Hank Hove
Don Lowell
Jerry Norum
Joe Ryan
Jeff Waltzin
Bonnie Williams

Introduced: 01/26/89
Responed: 01/26/89
Amended: 02/09/89
Adopted: 02/09/89

RESOLUTION NO. 89-011

A RESOLUTION RELATING TO THE RAILBELT ENERGY FUND AND THE CONSTRUCTION OF AN ELECTRICAL INTERTIE

WHEREAS, the Railbelt Energy Fund was established by the Fourteenth Alaska Legislature for the exclusive purpose of financing energy development within the Railbelt Region including the Matanuska Valley, Anchorage, Fairbanks, and Kenai Peninsula areas; and

WHEREAS, in 1980-1982 approximately one billion, two hundred seventy thousand dollars was spent on various large hydroelectric projects, energy loans, rate stabilization and power generation and distribution facilities to rural Alaska; and

WHEREAS, the Legislature established the Railbelt Energy Council to recommend the best options of planning, financing, constructing and managing power facilities in the Railbelt; and

WHEREAS, the Railbelt Energy Council has determined that transmission interties are a necessary part of any Railbelt energy development program; and

WHEREAS, construction of electric interties would eliminate problems in the present transmission system which include limited capacity, transmission stability problems, and reliability throughout the Railbelt region; and

WHEREAS, upgrading the Healy-Fairbanks line would increase the transfer capacity and lower costs to Fairbanks North Star Borough residents; and

WHEREAS, there seems to be a feeling that if the funds in the Railbelt Energy Fund are not used for Railbelt energy projects in the near future the Railbelt region may lose those funds.

NOW, THEREFORE BE IT RESOLVED by the Fairbanks North Star Borough as follows:

Section 1. That the Fairbanks North Star Borough Assembly urges the Alaska Legislature and the Administration to ensure that the monies in the Railbelt Energy Fund are used for their designated purpose of energy development within the Railbelt, region where more than three-fourths of the state's population resides.

Section 2. That the Fairbanks North Star Borough Assembly supports the use of the Railbelt Energy Fund for the construction of the Anchorage-Homer intertie and the upgrading of the Healy-Fairbanks intertie.

Section 3. That copies of this resolution shall be sent to the Honorable Steve Cowper, Governor, State of Alaska; Senators Binkley and Uehling, Co-chairmen of the Senate Finance Committee; Senator Fahrenkamp, Chair of the Senate Resources Committee; Representatives Larson and Hoffman, Chairmen of the House Finance Committee; Representatives Menard and Davidson, Co-chairmen of the House Resources Committee; and all members of the Interior Delegation.

PASSED AND APPROVED THIS 9TH DAY OF FEBRUARY, 1989.

Presiding Officer

ATTEST:

Clerk of the Assembly

RESOLUTION NO. 89-011



GOLDEN VALLEY ELECTRIC ASSOCIATION INC. Box 1249, Fairbanks, Alaska 99707-1249, Phone 907-452-115

March 2, 1989

Mr. John Sims
Vice-President, Marketing
Usibelli Coal Mines
122 First Avenue, Suite 302
Fairbanks, Alaska 99701

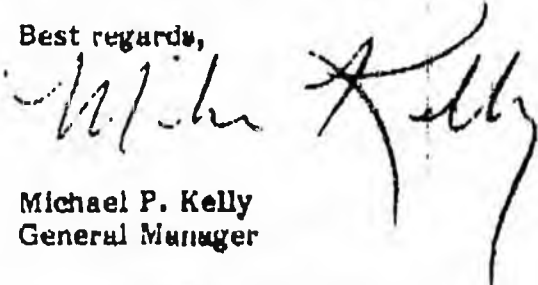
RE: Healy Coal-fired Generation and Coal Drying Facility

Dear Mr. Sims:

Thank you for the update at our February 27, 1989 board meeting concerning UCM's plans to construct the 50 MW Healy coal generation and 500,000 ton/year coal-drying project. GVEA is very interested in a Healy mine-mouth project supplying our next increment of base-load generation if it can be done at competitive prices. GVEA may even be interested in an ownership share in any Healy project and would want to enter into an operating agreement for any Healy power plant. As we have discussed and agreed, such a project is really only feasible if a new transmission line is built between Healy and Fairbanks. GVEA has been working for five years with AEM Corporation in relation to their plans to build a Healy coal-fired plant. Although not privy to any of the details, we understand AEM and Usibelli may be discussing fuel supply for AEM.

If AEM does not proceed with their plant and if the State funds the proposed Healy-to-Fairbanks intertie, we enthusiastically support your proposal to use private capital, Federal Clean Coal Technology funds and State funds from Railbelt energy funds that are surplus to identified southern and northern intertie needs, to construct the plant. We understand from UCM that such a funding plan would result in very competitively priced firm power in the mid-1990's.

Best regards,


Michael P. Kelly
General Manager

cc: Governor Cowper
Interior Delegation
Bob LeResche, APA
Borough Assembly Members
City of Fairbanks Council Members
City of North Pole Council Members
Dave Hutchens, ARECA
Board of Directors/Staff, GVEA

Re: SB 220

Alaska Power Authority

Project Approval Process
Sequence of Events

March 20, 1984

All significant power projects that are undertaken by the Alaska Power Authority will follow the sequence of events listed below unless modified by Board on a project specific basis. Some events may be concurrent.

Step No.	Description	Approved By			
		Staff	Board	OMB	Leg
1.	Annual Plan for Reconnaissance Studies		X		
2.	Appropriation Request for Reconnaissance Studies		X	X	X
3.	Award Contract for Reconnaissance Study	X			
4.	Authorization to submit Reconnaissance Study to OMB		X		
5.	Approval of Reconnaissance Study			X*	
6.	Annual Plan for Feasibility Studies		X		
7.	Appropriation Request for Feasibility Study		X	X	X
8.	Award Contract for Feasibility Study	X			
9.	Approve conditional Power Sales Agreements		X		
10.	Authorization to submit feasibility study, and preliminary plan of finance to OMB and Legislature		X		
11.	Recommend Project Approval or Disapproval to Governor and Legislature			X*	
* 12.	Authorization of Project and Construction Cost				X*
13.	Approval to submit license application to FERC		X		
14.	Annual Plan for Design		X		
15.	Appropriation Request for Design		X	X	X
16.	Approval of Initiation of Detailed Design, updated Power Sales Agreements, and Updated Plan of Finance		X		
17.	Award Contract for Detailed Design	X			
18.	Annual Plan for Construction		X		
19.	Approval of Final Plan of Finance and Power Sales Agreements		X		
20.	Appropriation for Construction		X	X	X
21.	Approval of Start of Project Construction		X		
22.	Award Construction Contracts	X			

* Statutory requirements.

Approved


Chairman

Date

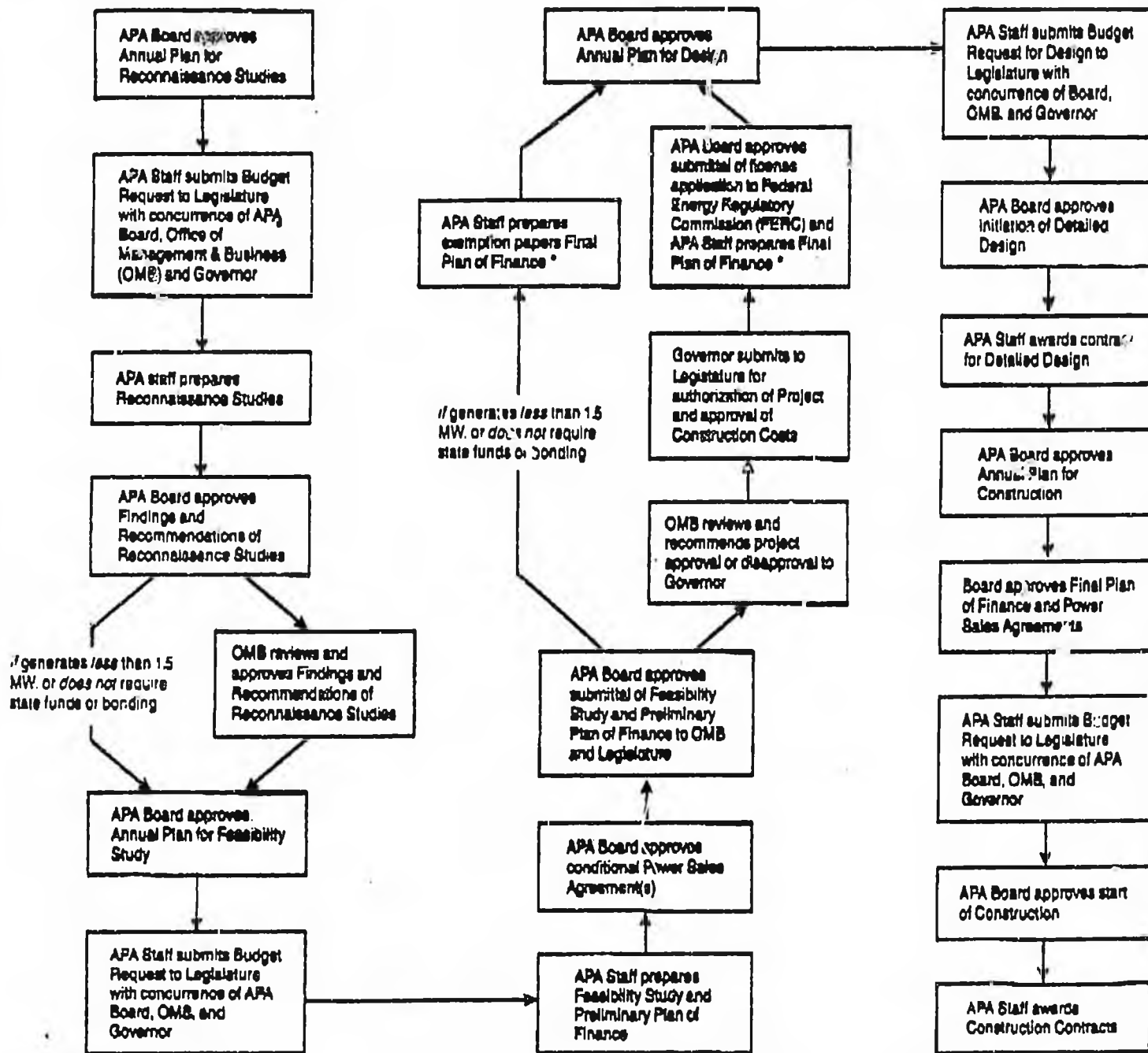
4.11.84

Note:

OMB's review is required for new projects that are larger than 1.5 MW for generation projects or cost more than \$3,000,000 for transmission

Project Approval Process

All significant projects undertaken by the Alaska Power Authority follow the sequence of events outlined below. This project approval process, adopted in 1984, serves to clarify staff, Board, Office of Management and Budget and legislative approvals necessary for project completion. Public and agency input is also identified.



* includes Loan & Bond Agreements, Power Sales Agreements & Operation Agreements

DATE BOARD ADOPTED 4-11-84

Northeast Intertie Concerned Residents
P.O. Box 427
Palmer, Alaska 99645
745-8474 561-7669

March 31, 1989

Alaska State Senate
Labor & Commerce Committee
P.O. Box V
Juneau, Ak 99811

RE:SB 220 Railbelt Energy Fund; Anchorage-Fairbanks Intertie, Northeast
Routing

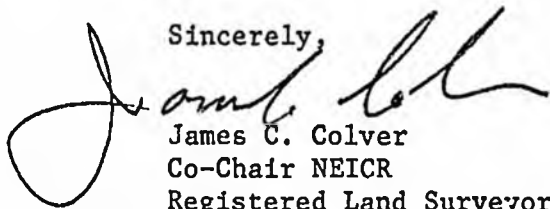
Dear Senators:

Enclosed is a copy of Resolution 89-1 as ratified unanimously by the Northeast Intertie Concerned Residents (NEICR) on March 30, 1989 at a meeting at Glacier View School. Also Enclosed are supporting documents and research we have gathered. Many of our concerns are with the Northeast Intertie Feasibility Study of January 27, 1989 prepared for the Alaska Power Authority. Our goal is to get the preliminary design of this Intertie relocated North of the Matanuska River Valley into the foothills of the Talkeetna Mts., and to get the Alaska Power Authority to comply with Alaska Law.

Your assistance in investigating APA's procedures will be appreciated by us and all Alaskans. Senators thank you for the opportunity appear before the committee in a teleconference on Monday April 3rd.

This letter and enclosures that are being faxed to you today will be followed by finalized documents. Please contact me if I can be of assistance.

Sincerely,



James C. Colver
Co-Chair NEICR
Registered Land Surveyor

RESOLUTION Serial #89-1

A resolution for the purpose of rerouting the proposed Northeast Intertie out of the Matanuska River Valley corridor and into the valley corridors immediately behind the mountains on the north side of the highway where applicable, and beyond the visual range in the other areas where appropriate.

Let it be known that we are not against the installation of the intertie powerline. Indeed, we sincerely seek to establish an avenue of communication whereas we, the North East Intertie Concerned Residents (NEICR) and the Alaska Power Authority (APA), may work amicably together toward a more favorable rerouting process, culminating in a mutually beneficial solution.

However, let it also be known that the APA has been remiss in its obligations to the citizens of the state of Alaska, specifically the residents living along the Glenn Hwy., in that the residents, to this date, have not been informed, in any way, nor has APA made any attempt to do so, of the designing or routing plans and procedures of this proposed power line, and that we have been unsuccessful in acquiring accurate, uncontradictory, and timely information when we have attempted to contact pertinent agencies, and that, therefore, we believe our legal rights have been usurped, and that the law-given rules of procedure have been miscarried, pursuant to the following Alaska Statutes (AS):

AS44.62.310 Agency meetings published.

"All meetings...are open to the public..."

AS44.62.312 State policy regarding meetings.

(2) "...actions of those units [i.e. APA] be taken openly and that their deliberations be conducted openly."

(4) "the people...do not give their public servants [i.e. the right to decide what is good for the people to know and what is not good for them to know,".

(5) "the people's right to remain informed shall be protected

so that they may retain control over the instruments they have created."

AS44.82.220. Public records; open meetings.

"The authority [i.e.] shall publish a proposed agenda of its meetings and afford the public an opportunity to be heard in accordance with AS44.62.312."

and, whereas the APA is required at the reconnaissance study phase to "include public comment from residents of the community and adjacent area" (as per AS44.83.177. [4] Reconnaissance study.)

and, whereas the APA, did in fact, never conduct, nor ever draw up, a reconnaissance study, by which they are required by law to do so pursuant to AS44.83.177 (a) "...the authority shall...complete a reconnaissance study for each proposed new power project or combination of projects" (there are no exceptions mentioned within this law),

and whereas the reconnaissance study phase is to precede the feasibility study phase (into which the APA is currently acting upon),

and, whereas in recognition of the APA's power of eminent domain as granted them by AS09.55.240-09.55.460,

we feel sufficiently concerned, and compelled, to list items to accomplish the following:

I. Declare, and give reasons for, our desire to reroute the intertie.

II. Submit our own route proposal.

III. Initiate a number of requirements and guarantees in accordance with our right to do so under the Alaska laws.

I. Reasons for rerouting.

A. Scenic and Tourism:

1. Scenic qualities disrupted, due to right-of-way clearings, and steel tower and line placements.

2. Tourism adversely affected, due to disrupted scenic qualities.

a. Mat-Su Convention and Visitors Bureau's efforts to designate the "Golden Circle" route, of which the Glenn Hwy. is a major portion of, would be seriously damaged, again hurting tourism.

3. Local businesses, therefore, would also be adversely affected, due to a decrease in highway touring use.

B. Affects upon residents.

1. Relocation of residents, due to close proximity of powerline, concern for health risks from electromagnetic radiation, and unsightliness of powerline.
2. Relocation of businesses, for the same reasons as above.
3. Decrease in property values, for the same reasons as above.
4. Possible communications interference.
5. Increased activities along powerline right-of-way, resulting in a potentially unpleasant and dangerous environment, due to increases in firearm use, ATV use, and noise levels associated with these activities. The Jan. 27th, 1989 Feasibility Study warns to that affect in sec. IX p.7, "There is potential for increased hunting and fishing due to access from right-of-way."

C. Health hazards.

1. Higher risks of leukemia (especially in children), brain cancer, and various brain dysfunctions. Abundant, eclectic, recent research very strongly correlates extremely low frequency (ELF) radiation, such as given off by high-powered electric lines, with abnormally high incidences of all of the above mentioned maladies. The APA, as stated in its Feasibility Study, has decided to disregard any potential health hazard concerns in any further reports, based entirely upon a single, antiquated report issued by the U.S. Dept. of Energy (1982). We believe the more recent research demonstrates enough evidence of health problems to call into question the wisdom of APA's decision, that the evidence should not be avoided, nor disregarded, so easily, and that, at the very least, it warrants further consideration.

II. Our powerline proposal.

A (see exhibit A. of attached sheets for maps and routes).

B. The route generally runs from Sutton to Gunsight Mt. behind the Talkeetna mountains immediately facing the highway from the north, and follows various valley corridors therein. From Gunsight Mt. on, it generally should remain far enough away from the highway so as

not to be visually disruptive, or be of much consequence to humans healthwise.

(see exhibit B. of attached sheets for more detailed descriptions).

C. This new proposed route is more favorable for the following reasons:

1. It is shorter than the APA's proposed Northwest and Southeast routes, due to a more direct, less encumbered, and straighter route.

2. It has fewer potential avalanche hazards.

3. Much, or most, of the route is on already existing roads or trails, and traverses high-ground areas in the Talkeetna mountains, consisting mostly of treeless and/or low brush or tundra vegetation, thus affording minimal clearing and eliminating much future vegetation control.

4. There are far fewer private properties to cross.

5. The scenic view and health hazard consequences would be virtually negligible.

Whereupon we declare

III. Our requirements and guarantees.

A. We require representation by an individual, or individuals, approved by the NEICR, for the purpose of reviewing and approving all research designs, actively participating in field investigations, attending all meetings relating to any matters concerning the proposed Northeast Intertie, or at least having the opportunity to do so for all of the above.

B. A guarantee of ample notification of all meetings or actions relating to the proposed Northeast Intertie, pursuant to Alaska State Law.

C. A guarantee of public participation in any and all matters pertaining to the routing and/or design of the Northeast Intertie, pursuant to Alaska State law.

D. A guarantee that the APA will abandon its proposed routes, specifically the segments that traverse through residential communit-

ies, along the entire Glenn Hwy. route, ad infinitum, and that the APA will endeavor to earnestly and honestly work with the residents of the highway to plan a more favorable route.

E. That the APA Northeast Transmission Intertie Feasibility Design and Cost Estimate Study, and any subsequent, updated draft or reports thereof, be amended to reflect and accommodate the aforementioned proposals, suggestions, and concerns of the residents.

F. That a meeting be arranged and conducted post haste at the Glacier View School with members and/or representatives of the NEICR and representatives from the APA, for the purpose of discussing any and all matters concerning the routing of the Northeast Intertie.

We expect the APA will recognize that our route is a proposal, and that, therefore, we are not limited by it.

It is of our opinion that Hart Crowser, Inc. and Power Engineers, Inc., the firms responsible for conducting and drawing up the feasibility study, over emphasized system studies in lieu of drastically underemphasizing the selection process of the physical route, as evidenced by APA's statement that, "...a significant part of the criteria for selection was the ease of obtaining the right-of-way" (sec. IX p.1 of feasibility study) and, "To minimize potential problems with acquiring rights-of-way...the route is contained within the highway right-of-way" (sec. X. p.1 of feasibility study), and that this policy was followed, together with the exclusion of the reconnaissance study phase, for the express purpose of expediting the entire powerline routing process, in order to reach the feasibility study phase, so that the project could be submitted to the legislature this session to show a viable need for the Railbelt Energy Fund moneys, all at our expense.

We regret, and abhor, the temerity with which the APA has conducted itself in this entire matter. As proclaimed in AS44.62.312 (3), "the people of this state do not yield their sovereignty to the agencies which serve them " We have blatantly been misled, disregarded, and ignored repeatedly by the APA since October, when our inquiries first began. Numerous letters have been sent, and phone calls made to

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no avail.

In light of the evidence, we sincerely believe that the spirit and intent of the law have not been honored and served by the APA, that APA is in violation of the law, and that the best interests of the citizens of this state have been served with callous disregard.

Therefore, we, the members of NEICR, hereby summon the APA to rectify all transgressions, and contact and inform us of its reactions, opinions, and/or recommendations regarding this resolution and its proposals, requirements, guarantees, and findings, no later than April 15th, 1989, and that further actions are pending upon receipt.

We sincerely hope for an expeditious and equitable solution to this entire matter for all parties concerned.

Herein, witness the attached list of residents who, herewith, did ratify and sign this resolution in concurrence with its contents thereof, on this day of March 30th, 1989.

(7)

The list of residents who are in concurrence with the attached said resolution, dated March 30th, 1989.

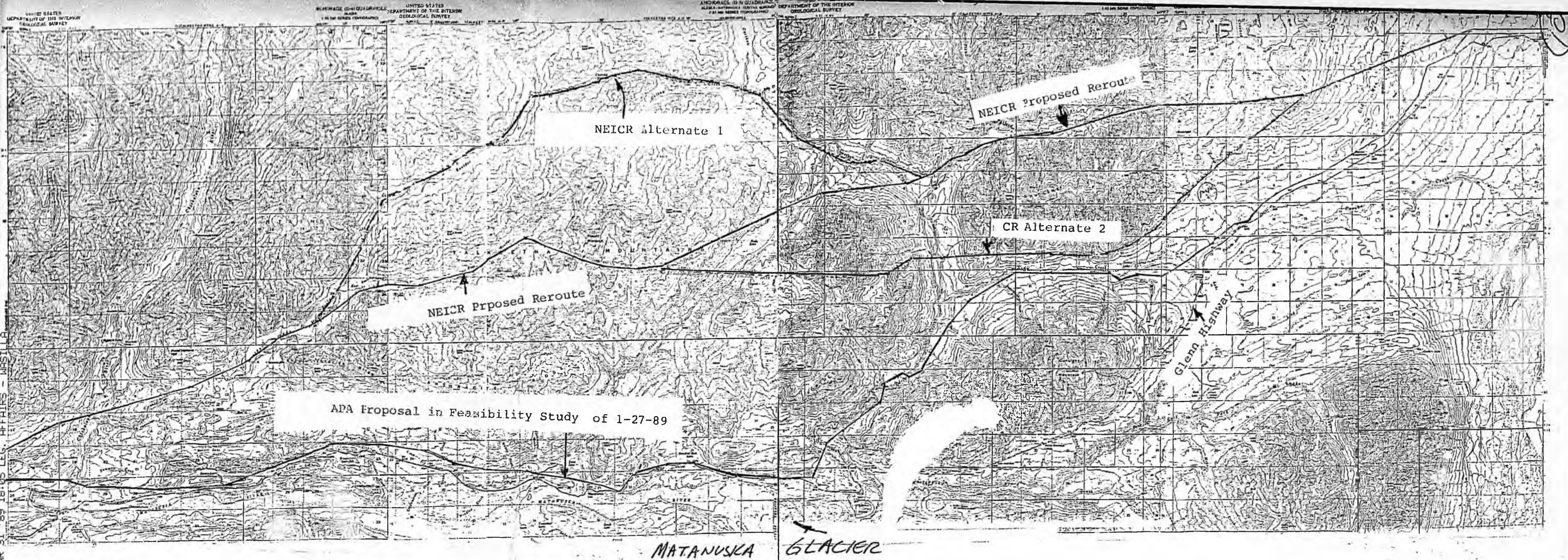
PRINTED NAME	SIGNATURE	ADDRESS
FRANCES L. WHITMILL	Frances Whitmill	HCO3 Box 8445 PALMER, AK.
Gaila T Rinke	Gaila T Rinke	HCO3 Box 8447-A Palmer, AK.
JAMES C. COLVER	James C. Colver	PO Box 427 Palmer, Alaska
Elden Reese	Elden Reese	HC 03 Box 8451 Palmer, AK
Nancy Reese	Nancy Reese	HC 03 Box 8451 Palmer AK.
EUGENE WHITMILL	Eugene Whitmill	HCO3 BOX 8445 PALMER AK
Michael J MEEKIN	Michael J Meekin	HCO3 Box 8513 Palmer AK
Mark D. Owen	Mark D. Owen	HCO-3 Box 8426 Palmer, AK.
Herbert P. Simon	Herbert P. Simon	HCO-3 Box 8591, PALMER, AK
Jacqueline H. Simon	Jacqueline H. Simon	HCO 3 Box 8591 Palmer AK
Linda Den Bleyker	Linda Den Bleyker	HCO3 Box 8376 Palmer, AK
Thomas H. Wright	Thomas H. Wright	HCO-3, Box 8496, Palmer, AK 99645
JOHN M. THATCHER	John M. Thatcher	HCO-3 Box 8425 PALMER, AK 99645
Aulis D Riallae	Aulis D Riallae	HCO3 Box 8438 Palmer AK 99645
Herbert L. Fey	Herbert L. Fey	PO Box 1101 Chickaloon AK 99674
Virginia Brannum	Virginia Brannum	P.O. Box 1101 Chickaloon AK 99674
Sherry May	Sherry May	HCO3 Box 8438-Z Palmer AK 99645
Lewis May	Lewis E. May	SRC box 8438-Z Palmer AK 99645
Dennis Potocnik	Dennis Potocnik	HCO3 Box 8442-A Palmer, AK. "
William E WAGNER	William E Wagner	HCO3 Box 8484-Z Palmer, AK 99645
RICHARD P. WOOD	Richard P. Wood	HCO3 8407 Palmer 99645
DIANE MOFFATT	Diane Moffatt	P.O. Box 1122 Chickaloon, AK 99674
Loren M. Thomas	Loren M. Thomas	HC 03 Box 8364-Y, Palmer 99645
RONALD J. ANTAYA	Ronald J. Antaya	HCO3 Box 8484 PALMER, AK 99645
Joseph Dietrich	Joseph Dietrich	HCO3 Box 8484 PALMER, AK 99645
Dewey Taylor	Dewey Taylor	HCO3 Box 84494 Palmer, AK 99645
DENNIS ALLEN	Dennis Allen	HCO3 Box 8443D Palmer, AK 99645
Colleen Dietrich	Colleen Dietrich	HCO3 8484 Palmer, AK 99645
Keith W. Allen	Keith W. Allen	HCO3 8443 Palmer AK 99645
Katherine Wright	Katherine Wright	HCO3 8496 Palmer AK. 99645
Nancy H. Cohen	Nancy H. Cohen	HCO3 8378 Palmer AK 99645
Patrick A. Cohen	Patrick A. Cohen	HCO3 Box 8378 PALMER, AK 99645
MARVIN DEN BLEYKER	Marvin Den Bleyker	HCO3 Box 8376 PALMER, AK 99645
DOROTHY STEADMAN	Dorothy Steadman	HCO3 Box 8453 PALMER, AK 99645
CLIFFORD B STEADMAN	Clifford B Steadman	HCO3 Box 8453 Palmer AK 99645
Roger M. Wimer	Roger M. Wimer	HCO3 Box 8449B Palmer, AK 99645

PRINTED NAME	SIGNATURE	ADDRESS
STAN GILLBESPIC	<i>Stan Gillbepic</i>	H.A.M.3 Box 8392 PALMER

Signed and Sealed before me on the 30th day of March 1989

Frances J. Whitmill

FRANCES J. WHITMILL, NOTARY PUBLIC
STATE OF ALASKA
MY COMMISSION EXPIRES 1/19/92



MAR 31 '89 18:05 LEG. AFFAIRS - WASTILA

EXHIBIT "A"
NORTHEAST INTERIE CONCERNED RESIDENTS
RESOLUTION 89-1
March 30, 1989

Northeast Intertie Concerned Residents
NEICR

EXHIBIT B
RESOLUTION 89-1

The purpose of this description is to describe a rerouting of a portion of the Northeast Intertie. This reroute description begins at the Chickaloon River approximately mile 70 of the Glenn Highway then goes through the foothills of the Talkeetna Mountains north of the highway and the Matanuska River Valley to Eureka at mile 140 of the Glenn Highway. There are several alternate routes that branch off the main reroute centerline.

The aforementioned reroute is more particularly described as follows; commencing at the NW 1/4 corner of Sec. 23, T.20 N, R.5 E, S.M.,Ak;thence Northeasterly north of Boulder Creek to the W 1/4 corner of Sec. 33 T.21 N., R 7 E, which is common with the point of beginning for the alternate route 1; thence easterly along Boulder Creek to the section corner common to sections 21,22,15 & 16 of T 21 N., R 8 E.;thence Southeasterly to the SE 1/16 Cor of Sec. 19, T 21 N., R 9 E, said point being the point of beginning for alternate route 2; thence Northeasterly to the W 1/4 corner of Sec. 12, T 21 N., R 9 E.; thence generally Northeasterly to the SE Sec. Corner of Sec 36, T 22 N, R 10 E; thence easterly along the southerly section line of Section 31, T 22 N, R 11 E to the SE section corner of said section; thence Northeasterly to the Section Corner common to Secs. 25,26,35,36 T 22 N, R 11 E; thence Easterly to the peak of a hill within the SE 1/4 of Sec. 27 T 22 N, R 12 E; thence Northeasterly to a point within Section 33, T 3 N, R 10 W, C.R. Meridian Alaska, said point is the terminus of this discription for the purpose of describing a proposed rerouting of a portion of the NE Intertie proposal.

Alternate route 1 described as follows: Commencing at the W 1/4 corner of Sec. 33, T. 21 N, R 7 E, S.M.; thence Northeasterly along Boulder Creek, through Chitna Pass, along Chitna creek, along Caribou creek; this route generally follows a trail as designated on USGS Anchorage (D 3) Quadrangle; Terminus of alternate 1 is an intersection of the afore described and the main reroute centerline , said intersection lying in the NW 1/4 of Sec. 10 T 21 N, R 10 E.

Alternate route 2 is described as follows: Commencing at the afore described SE 1/16 Cor of Section 19; thence Easterly to the W 1/4 corner of Sec. 21, T 21 N., R 11 E; thence Northeasterly to the peak of a hill located within the SE 1/4 of Sec. 27, T 22 N, R 12 E, S.M., AK., said point being the terminus of alternate route 2.

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Power Lines and Cancer: The Evidence Grows

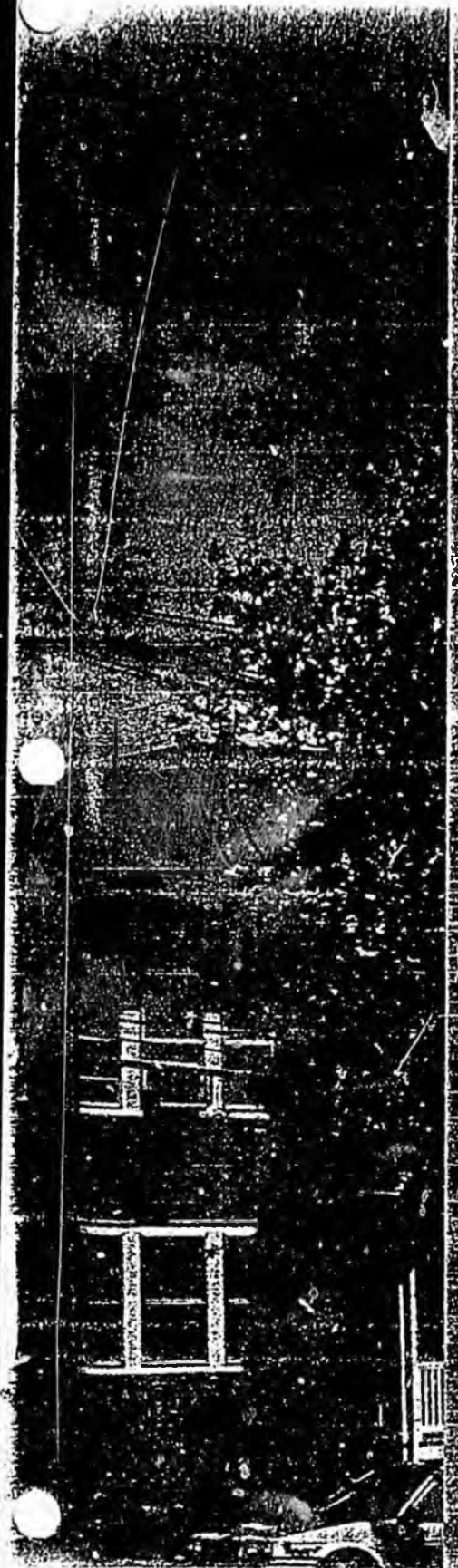
At a time when studies suggest a link between cancer and exposure to the magnetic fields generated by electrical power lines, government research funds are drying up.

UTILITY companies long ago realized that building power plants, whether coal or nuclear, could be the cause of major headaches. Those headaches are becoming migraines as more and more studies suggest a link between cancer and the extremely low frequency (ELF) fields emitted by electrical power lines. For each power plant, utility planners have to grapple with the "not in my backyard" syndrome. But when it comes to power lines, they face an endless series of backyards. In the United States alone, there are 600,000 miles of overhead transmission lines in place, and thousands more under construction or being planned.

The risk of developing cancer from exposure to power line fields is still far from proven. While some studies suggest an association between living or working near power lines and a higher incidence of cancer, others show no such association. U.S. juries, however, are already making sizable awards based on the available data. In late 1985, for instance, a Texas jury ordered Houston Lighting and Power Co. to pay a local school district \$25 million in punitive damages after the utility built a transmission line through school property without permission. The

BY LOUIS SLESIN

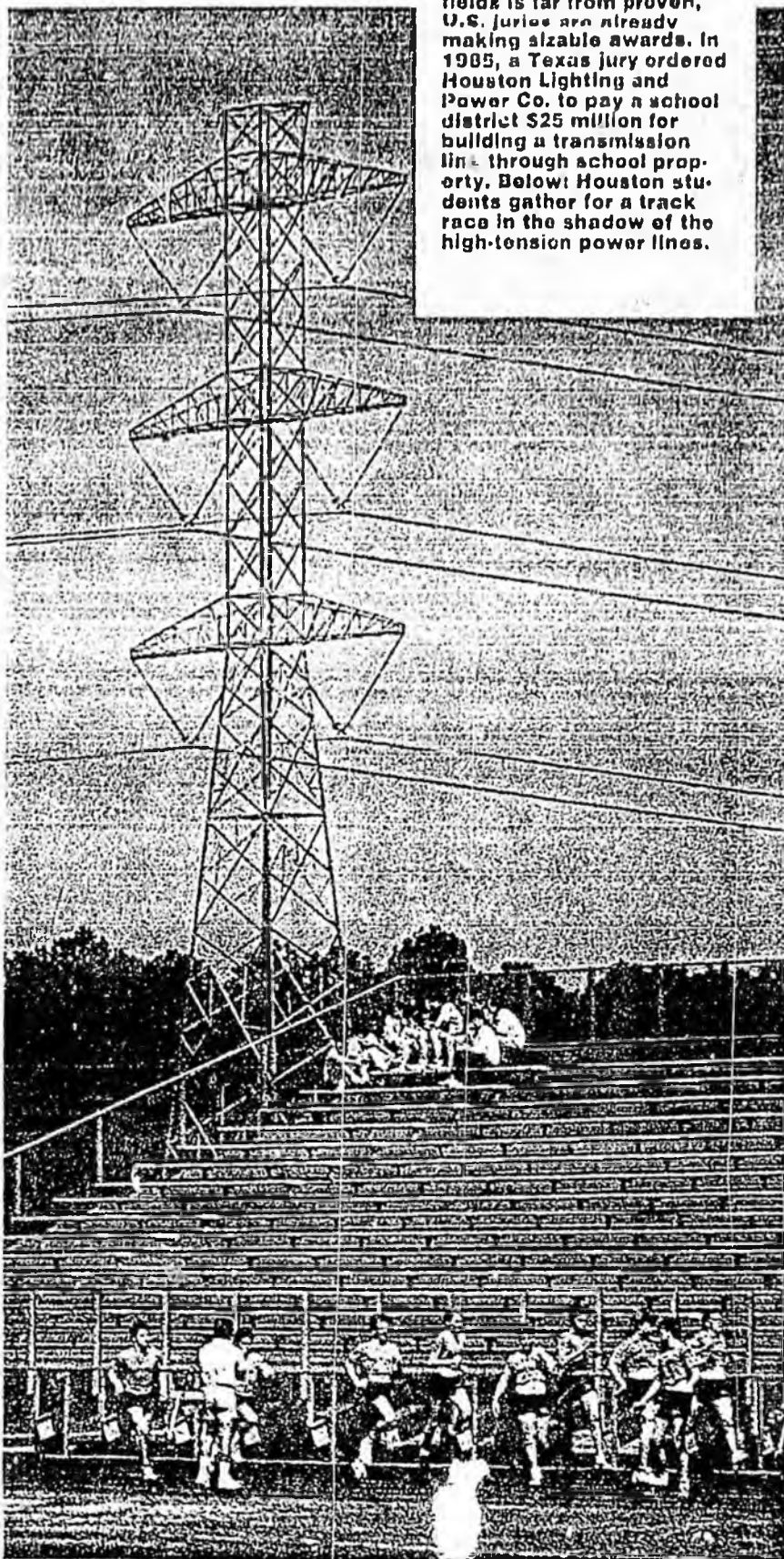
ILLUSTRATION: JOAN HEIDENSON/VISUAL CONSPIRACY



Provided by James Colver, NE Intertie
Concern Residents

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Even though the cancer threat from power line fields is far from proven, U.S. juries are already making sizable awards. In 1985, a Texas jury ordered Houston Lighting and Power Co. to pay a school district \$25 million for building a transmission line through school property. Below: Houston students gather for a track race in the shadow of the high-tension power lines.



jury's award was based almost entirely on the potential cancer threat, according to H. Dixon Montague, the plaintiff's attorney. In Florida, juries have awarded more than \$1 million to owners of land next to high-voltage power lines. Here again, expert testimony on the cancer link has been pivotal. Without doubt, juries are the wrong forums in which to settle complex scientific controversies. But they can indicate the relative credibility of each side's expert witnesses.

All of these cases are under appeal. Nevertheless, such large sums of money are strong incentives to other plaintiffs, and to lawyers looking for ways to make a name for themselves. That fact, coupled with the sheer pervasiveness of power line fields, explains why a senior executive with the Electric Power Research Institute (EPRI), a utility-supported group, recently called the ELF-cancer link a "juggular issue" for the industry.

A Priceless Natural Resource

Electromagnetic fields (EMFs) and radiation are the cornerstones of the electronic age. The non-ionizing electromagnetic spectrum ranges from the ELF fields associated with power lines—60 cycles per second, or hertz (Hz), in North America and 50 Hz in Europe—to visible radiation from the sun at 500 trillion Hz. The electromagnetic spectrum is a priceless natural resource; its applications are without limit and, like all resources, competition for its use is fierce.

Radio and television stations broadcast between 530 kilohertz (kHz: 1 kHz equals 1 thousand Hz) and 806 megahertz (MHz: 1 MHz equals 1 million Hz). Microwave ovens operate at 2.45 gigahertz (GHz: 1 GHz equals 1 billion Hz), a frequency similar to those used for satellite communications and telephone links. Radars and electronic warfare systems use a host of different types of radiation in the MHz and GHz bands. Hyperthermia heat treatments for can-

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*Power station operators
were found to have 2.5 times the death
rate from leukemia.*

cerous tumors operate in frequencies from 50 MHz to 1 GHz, and the nuclear magnetic resonance imager, a powerful tool for diagnosing certain diseases, uses various types of MHz radio signals. Meanwhile, electric power lines share the ELF frequencies with some remote communication systems. The U.S. Navy's Project ELF, designed for sending messages to submerged submarines, operates at 76 Hz.

Unlike nuclear and X-ray radiation, EMFs are not powerful enough to break molecular bonds or create charged particles, called ions. As a result, many observers have concluded that as long as EMFs do not cause shock or heating of body tissue, there is nothing to worry about. Over the years, however, more and more studies have suggested that non-ionizing radiation can produce non-thermal effects.

Power line EMFs were first linked to cancer by Nancy Wertheimer and Ed Leeper in 1979. They combed childhood mortality records in the greater Denver, Colo., area and correlated the incidence of cancer with the network of high-current power lines. This landmark epidemiological study showed an association between long-term exposure to weak (60 Hz) magnetic fields and increases in the incidence of cancer. At the time, the findings seemed preposterous. After all, the magnetic fields in question were a hundred times smaller than that of the earth. There is one crucial difference, however. The earth's magnetic field is relatively steady, while power line fields are constantly oscillating.

The cancer issue resurfaced in 1982—this time in the workplace. "In the course of updating a study of occupational mortality, I noticed that among men whose occupation required them to work in electrical and magnetic fields there were more deaths due to leukemia than would be expected," Samuel Milham told readers of the *New England Journal of Medicine*. For instance, compared with other people not exposed to EMFs, power station operators had two-and-a-half times the death rate from all types of leukemia.

By publishing his work in one of the world's leading medical journals, Milham, a well-known occupational health physician at the Washington State Department of Social and Health Services, prompted renewed interest in EMF interactions. A bustle of

activity followed as researchers checked whether Milham's findings for Washington State workers held true for other sets of cancer data. Letters to the editor soon appeared in the medical literature, and most supported what Milham had called a "suspicious association."

By early 1986 even skeptics were becoming troubled by the weight of evidence. Out of 17 occupational surveys of electrical and electronic workers, 15 showed some link between ELF fields and cancer. That February, at a meeting of power engineers, Tom Tenforde, a researcher in the Biology and Medicine Division of the Lawrence Berkeley Laboratory in California, warned that "something is going on," and that there is a "real need" for further studies, given the "apparent correlation between cancer and EMFs." Yet few in the utility business seemed to care. Only a couple dozen of the more than 2,000 attending the meeting bothered to come to the specially organized symposium on the biological effects of power lines.

Meanwhile, new evidence supported the Wertheimer/Leeper contention that the general public—those not employed at work—might also be at risk. Dr. Lennart Tomenius, a Swedish researcher, working in his spare time, without funding, had painstakingly repeated and found support for the original 1979 findings. In a study published in *Bioelectromagnetics*, he confirmed that the distribution of childhood cancer in Stockholm was linked to power line magnetic fields. Meanwhile, Wertheimer and Leeper had extended their findings to adults: though the association between cancer and EMFs was weaker than the one they had observed in children, it was still statistically significant.

A Mini-Explosion of Activity

Many scientists, however, were not convinced. They wanted more substantial evidence of a cancer risk. Yet large epidemiological studies are notoriously expensive and time-consuming. Without major funding, no one could try to repeat the Wertheimer/Leeper study for the general public or initiate a full-scale occupational study. Money was scarce, and the Reagan administration had no interest in opening up a new front of environmental activity. The field might have stayed quiescent had it not been for a 10-year-old power line dispute in New York State.

In 1973 the New York Power Authority an-

LOUIS SLESIN is the editor and publisher of *Microwave News*, a New York City-based newsletter that covers the health effects of all types of non-ionizing electromagnetic fields and radiation.

weak high-frequency fields.

The greatest pressure to admit the existence of non-thermal EMF effects has come from those who believe that electromagnetic fields can mend broken bones, neutralize chronic pain, and even regenerate nerve cells. Indeed, Becker and Marino, who played a central role in the New York power line dispute, were initially interested in the potential biomedical applications of ELF fields. Becker's laboratory started working on EMF effects in the late 1950s, and one of his earliest efforts was to find out how salamanders harness internal electromagnetic forces to regenerate limbs.

Other scientists have been trying to understand just how ELF fields affect basic molecular processes in animal and human cells. In the 1970s, Dr. W. Ross Adey and Suzanne Bawin, now at the Veterans Hospital in Loma Linda, Calif., discovered that 16 Hz fields, as well as microwave radiation modulated at 16 Hz, could alter the behavior of calcium ions in brain tissue. Calcium plays a key role in a large number of cellular reactions.

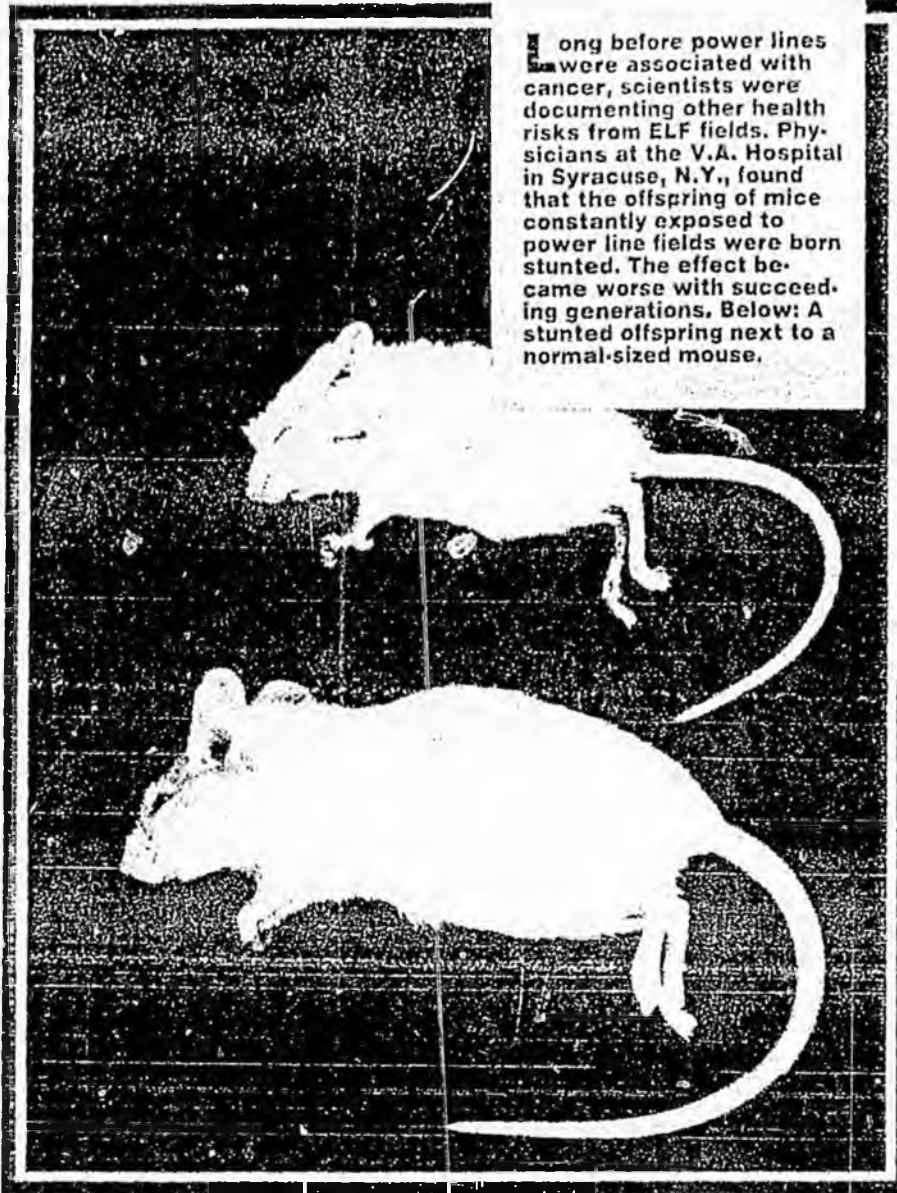
The calcium work has been repeated and extended in a number of labs—notably by Carl Blackman of the EPA. He has found that fields of 50 Hz and 60 Hz can activate the movement of calcium within cells. Also, Adey and Blackman have discovered that other changes occur in cells exposed to ELF fields. Such exposure, for instance, can alter the surface of cell membranes.

The research by Adey and Blackman clearly shows that ELF interactions are very subtle: changes occur only at certain "windows" of frequencies and power levels. For example, as the frequency of the field increases above 16 Hz, the calcium flow subsides, only to bounce back at 45 Hz. Small changes in the length of the field can induce a similar disappearing-reappearing act.

More recently, Adey has pieced together a three-stage theory to explain how weak ELF fields (at 60 Hz) might promote cancer. The field hits the cell,

sparkling a chemical change on its surface, and the altered chemical signal is transmitted into the cell interior. Once there, it triggers a sequence of chemical reactions that distorts the normal flow of biochemical information in the cell and between cells. A key step is the amplification of the weak field on the membrane surface.

The result is a cell whose growth is out of control. Adey's theory is controversial, and more experimental work is needed to provide confirmation. However, other research supports the idea that EMFs can affect cell regulation. Abraham Liboff, a professor at Oakland University in Rochester, Mich., has shown that a wide range of magnetic fields can enhance DNA production in cell cultures. According to research by Reba Goodman of Columbia University, EMFs can induce RNA to generate proteins that would otherwise not be found in cells. And Jerry Phillips of the Cancer Therapy and Research Foundation in San Antonio, Tex., has discovered that human tumor cells, when exposed to power line fields, proliferate more easily and are more immune to attack.



Long before power lines were associated with cancer, scientists were documenting other health risks from ELF fields. Physicians at the V.A. Hospital in Syracuse, N.Y., found that the offspring of mice constantly exposed to power line fields were born stunted. The effect became worse with succeeding generations. Below: A stunted offspring next to a normal-sized mouse.

*Phillips sent a chill
through the crowd when he said he would not buy a house
along a right-of-way.*

nounced plans to build a 765-kilovolt (kv) transmission line to import cheap hydroelectricity from Canada. Environmental groups fought the line, citing studies that even then pointed to health risks. The state's Public Service Commission (PSC) okayed the line, but, after acknowledging that the hearing record contained "unrefuted inferences of possible risks that we cannot responsibly ignore," ordered the utilities to chip in \$5 million for a five-year research project on the health effects of EMFs. In 1981, the New York Department of Health began soliciting proposals.

One of the experiments the PSC found especially persuasive showed that the offspring of mice constantly exposed to power line fields were born stunted. In 1976, Dr. Robert Becker and Andrew Marino, then working at the Veterans Administration Hospital in Syracuse, N.Y., reported that the effect became worse with succeeding generations. Their study, done on a shoestring budget, was corroborated by Richard Phillips and Larry Anderson in a well-funded experiment sponsored by EPRI.

The New York Power Line Project initiated a mini-explosion of activity that permanently transformed research on the biological effects of EMFs. The money not only paid for new studies but also brought fresh ideas into an otherwise stagnating field.

Most important, the New York project paid for a repetition of the Wertheimer/Leeper epidemiological research—an initiative that neither the federal Department of Energy nor EPRI had been willing to support. David Savitz, a young epidemiologist then at the University of Colorado, teamed up with two colleagues in the school's Department of Electrical Engineering and embarked on a \$350,000 study. They made extensive measurements of the local power line magnetic fields in the homes of children who had developed cancer as well as those of healthy children. But even after they took every precaution they could think of to ensure that their results would be sound, there were still insoluble problems: the researchers would never know the precise magnetic fields the children had been exposed to years earlier. Any conclusions from the Savitz group could therefore always be disputed.

By the fall of 1986, results were overdue. Rumors began to circulate that Savitz would support the Wertheimer/Leeper cancer link. In September utility managers assembled in Toronto for the first inter-

national symposium on the health effects of power line fields. The attendance itself told much of the story: it was double the expected number. Savitz was there but still not ready to disclose his findings.

The meeting might have simply been a tutorial for the uninitiated had it not been for the disaffection of one of the leading EMF researchers, Richard Phillips. After years of doing ELF research at the Battelle Pacific Northwest Labs, a private consulting firm in Washington State, Phillips had joined the Environmental Protection Agency (EPA) in 1984.

No one regards Phillips as a Cassandra. The editor-in-chief of the Bioelectromagnetics Society's journal, Phillips is well known and trusted in the utility industry. In fact, many of his studies at Battelle were funded by the utilities through EPRI. So Phillips told a jammed audience at the Toronto conference that he would not buy a house along a power line right-of-way—not even with a \$25,000 discount to mitigate any perceived risk—he sent a chill through the crowd. He said that prospective home owners often consulted him on such matters, and that his usual response was, "If it bothers you, don't buy it." For years utility companies had sloughed off such queries. The Edison Electric Institute, a trade association based in Washington, D.C., attempted to allay any public anxiety about living near power lines by telling readers of its brochure, "The electric utility industry is confident that the voltage levels currently in operation pose no risks to humans or animals."

At another conference two months later, Savitz finally announced that "prolonged exposure to low-level magnetic fields may increase the risk of developing cancer in children." This July when the New York project released its final report, it endorsed Savitz's conclusion but maintained that the cancer link was still a hypothesis, albeit now a "stronger one." The cancer story made headlines all over the world.

How ELF Fields Affect the Body

If ELF power line fields can promote cancer, they are obviously capable of affecting human biochemistry. Even though some experts still regard both propositions as heretic, no one should find them surprising. Fish and birds can detect and interpret minuscule fields for orientation and navigation. Most significantly, the human eye can detect extraordinarily

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At stake is the entire network by which utilities move electricity into customers' homes.

Such findings are hard to believe because the fields at issue are so small. Indeed, the Wertheimer/Leeper and Savitz studies implicate not only high-voltage transmission lines but the smaller, primary distribution lines that run along every Main Street in the United States. (Any wire conducting electric current will generate a magnetic field.) At stake in this debate is the entire network by which utilities move electricity from generating stations into customers' homes. (Some utilities are switching to direct current, or DC, power lines, which avoids the cancer issue but may raise other environmental concerns. DC lines, however, remain a tiny fraction of the existing network.)

Holes in the ELF-Cancer Link

The utility industry now realizes that the power line cancer dispute will not be settled without much more research. EPRI has recently expanded its EMF effects program and hired new staff. Leonard Sagan, EPRI's recently appointed manager for radiation studies, wants to expand even further. "The utilities are taking this matter very seriously," he says, "though there is still a lot of skepticism."

Some epidemiologists and utility experts who have had the chance to read Savitz's report for the New York project also remain unconvinced. Florida is drafting power line exposure standards, and Dr. Philip Cole, chairman of the Department of Epidemiology at the University of Alabama, Birmingham, has informed the state that the Savitz study is only "suggestive of a weak effect," and that the data are inconsistent. Moreover, Cole says the research shows no "dose-response relationship"—that is, it provides no direct proof of a relationship between ELF exposure and cancer. Indeed, Cole characterizes the entire ELF literature as showing that "either there is no relationship between EMFs and cancer in human beings or if there is an effect it must be of very low magnitude even among people who are moderately to heavily exposed."

Others, like Dr. Sol Sax, chief physician at Ontario Hydro, argue that the Savitz data are "ambiguous," because the study found a weaker association between cancer and *measured* ELF fields within homes than between cancer and the index used to *predict* exposure. The index, first developed by Wertheimer and Leeper, estimates the long-term exposure that children would have had to ELF fields, given the type

of power lines near their homes. If a 60-Hz power line is 240 kv, for instance, the index predicts that the exposure would be higher than it would be in a house at the end of the electrical distribution network.

Wertheimer, Leeper, and Savitz, among many others, argue that the index is a far better indicator of long-term exposures than a few instantaneous readings. Field surveys suggest large variations in ambient ELF fields, and the index provides a way of addressing this variability.

With or without the index, much more work needs to be done to address people's exposure to EMF. Sax would like to see additional health surveys of individuals and workers with higher exposures than those in the Savitz study. On this point, he agrees with Wertheimer and Leeper, who have been pressing for studies on users of electric blankets. (The zigzagging wires in the blankets carry electric current that generates both heat and ELF magnetic fields.) Wertheimer and Leeper have already shown that pregnancies among couples who use electric blankets are more likely to end in miscarriages than those among couples who do not heat their beds electrically. However, a possible cancer connection has yet to be investigated.

The Funding Dilemma

Risk assessment will not be easy. Regulators used to setting standards for nuclear radiation and toxic chemicals on the basis of direct dose-response relationships will scratch their heads when confronted by EMF effects that can come and go as the field becomes stronger. Mechanisms of cause and effect will have to be verified and thresholds discerned. Yet at the precise time when new studies are showing increasing cause for concern, government research funds have dried up.

The Reagan administration has consistently slashed budgets within the various federal agencies for research on the health effects of non-ionizing radiation. Sometimes those budgets are reinstated by Congress; other times they're not. For instance, Phillips's bioelectromagnetics lab at EPA hung on through budget cycles from fiscal 1983 to fiscal 1986, fighting each year to remain open. In 1980, there were 26 scientists working in that area, but by the end of 1986 there were none. EPA officials in Washington had finally succeeded in forcing Phillips

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The extremely low frequency (ELF) fields generated by power lines can modify cells' biochemistry. Below is an artist's rendering of one theory of how these fields could promote cancer. The field hits a cell's surface (a), causing chemical change, and a "forest" of highly charged proteins (b) amplifies the

altered signal. The signal is transmitted through the cell membrane (c), where it affects powerful chemical reactions. For instance, it can affect two important enzymes: adenylylase (d), which controls the cell's metabolism, and ornithine decarboxylase (e), which is essential for DNA synthesis.



to completely disband his research group. A similar
ame has occurred at the Department of Energy. Its
fiscal 1986 budget for EMF research was cut in half
from the fiscal 1985 level.

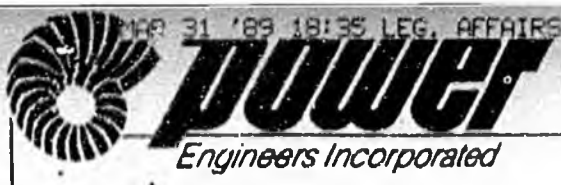
The New York State Power Line Project has
folded, stranding most of those who had been at-
tracted to the field. The funding paradox has not
been lost on Savitz, who is now at the University of
North Carolina in Chapel Hill. "The credibility
keeps growing, but the money keeps shrinking," he
sres.

The U.S. Congress could take a cue from Sweden.
ere, health officials have already embarked on a
large-scale epidemiological study of all those with
ertain types of cancer who lived within 300 meters
of a 220- or 400-kv power line for at least one year
between 1960 and 1983. This and related ELF re-
arch will cost the Swedish government \$1 million.
eden, a relatively small country, continues to lead
world in its commitment to the environment and

occupational health.

The Savitz study has prompted Congress to hold
hearings, but the funding burden will probably fall
elsewhere—perhaps again on New York State. Early
this year, a group of more than 55 landowners filed
a \$60 million suit against the New York Power Au-
thority, alleging that a power line—a half-completed
extension of the originally disputed line from Can-
ada—could create a "cancerphobia corridor," de-
stroying the market value of their property.

Some observers claim that these landowners are
primarily concerned about the aesthetic damage re-
sulting from the construction of large power lines.
But regardless of their motivations, their attorneys
will take the cases to court. Because the industry and
the government have refused to fund the necessary
studies, policies for siting power lines will remain in
the hands of local juries across the country, and there
is now plenty of credible data supporting those who
allege a cancer risk. □



PROJECT NO. 1361
ISSUED TO: _____

**ALASKA POWER AUTHORITY
NORTHEAST TRANSMISSION INTERTIE
FEASIBILITY DESIGN AND COST
ESTIMATE STUDY**

DRAFT REPORT

JANUARY 27, 1989

HART CROWSER, INC.

*Provided by James
Colver, NE Intertie
Concern Residents*

1020 AIRPORT WAY
P.O. BOX 1066
HAILEY, IDAHO 83333
(208) 788-3456

POWER ENGINEERS, INC.



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HARZA ENGINEERING COMPANY CONSULTING ENGINEERS

Handwritten:
Khan
Dick

September 13, 1988

RECEIVED BY
ALASKA POWER AUTHORITY

88 SEP 16 P4:31

Messrs. D. Shira and A. Khan
Alaska Power Authority
701 East Tudor Road
Anchorage, Alaska 99519-0869

Subject: North East Intertie Feasibility Study

Reference: RFP - APA88-R-33

Gentlemen:

The decision to select a competing firm for the North East Intertie Study is a disappointment for us, but we accept it as being in the best interest of the State and South Central Utilities.

We understand that your decision turned on the fact that the selected firm emphasized system studies over route selection. In our case, we felt that the assignment would require more work on selection of the physical route. Our work plan included basic system studies. We are confident that the feasibility of the project can be established on the basis of information obtained from load flow studies.

Handwritten star symbol

The Power Authority's Request for Proposal confronted us with an ambitious scope of services and a fixed budget. The fixed budget and total scope required us to decide which tasks were most important. Our opinion is that route selection should be emphasized more at this stage than system studies because an infeasible physical route will be more costly to rectify than the incremental cost to revise the engineering plan.

Our work plan was based on extensive load flow studies and did not include transient stability studies. We expected that there would be a great deal of work done on the Teeland-Palmer, Palmer-Eklutna, Palmer-Glen Allan sections, and that power flow levels at 115 kV would not be acceptable thus requiring a scope change to study more 230 kV. In our technical judgment, load flow studies will be sufficient to establish necessary system configuration and project alignment as well as provide basic technical information about transient stability.

Based on our experience with development of electric utility systems, we would like to suggest that the Power Authority and Utilities consider a separate Reliability Study of the existing system with the recommended

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Messrs. D. Shira and A. Khan

September 13, 1988

Page 2

system expansion. Under this suggestion, the study system would consist of Bradley Lake Project and one of the following:


Anchorage - Kenai Transmission Intertie
Anchorage - Fairbanks Intertie Upgrade
North East Intertie

The scope of the suggested future study would refine the proposed system and establish certain equipment and operating constraints. The study would require: transient stability calculations, short circuit calculations, transient network analyzer studies, and relay coordination studies. The suggested study would be similar to the Reliability Study for the Railbelt System done in 1982 (AFA study R 2499).

If this approach is taken, then the Power Authority will have route selection feasibility reports for three projects. That is (1) Anchorage - Kenai, (2) Anchorage - Fairbanks Intertie Upgrade, and (3) North East Intertie. After the legislature has agreed to fund one of these projects, it will be possible for the Power Authority and Utilities to carry out the proposed Reliability Study for the actual system that will be built, and the results will be of immediate value to the design effort.

We appreciate the opportunity to have presented our proposal and look forward to future consideration in future projects.

Very truly yours,


Eric P. Yould
Vice President

EPY/cs

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Alaska Power Authority

State of Alaska

March 28, 1989

Dwight and Colleen Dietrich
HC03, Box 8484
Palmer, Alaska 99645

Subject: Northeast Transmission Intertie Study

Dear Mr. and Mrs. Dietrich:

Thank you for your letter of February 16, 1989 in which you expressed concerns related to the Northeast Transmission Intertie Feasibility Study. Allow me to explain the purpose of this study and how it fits into the context of a larger, overall Railbelt study.

In July 1987, \$2.5 million was appropriated by the Alaska State Legislature from the Railbelt Energy fund for preparing studies dealing with electric interties the Kenai Peninsula and Fairbanks. Subsequently, the amount of the appropriation has been reduced to \$2.25 million and the scope of the studies expanded until, now, they contain the following projects proposed for assessment:

1. A new transmission line between Anchorage and the Kenai Peninsula.
2. Upgrade of the existing intertie between Anchorage and Fairbanks to substantially higher transfer capability.
3. A new transmission line from Palmer through Glennallen to Delta Junction where it would connect with the Golden Valley system in the Fairbanks area.
4. A natural gas pipeline from Cook Inlet to Fairbanks.
5. Coal fired powerplants in the Railbelt.
6. Electric end-use conservation programs designed to promote higher levels of efficiency among electric energy consumers.

A feasibility level assessment is being performed on these selected projects and programs and will result in a comparison of their expected economic costs and benefits. A comparison of their expected environmental consequences will also be performed as part of the feasibility study.

The Northeast Transmission Intertie Feasibility Study will provide preliminary design, environmental, and cost information to be used in the larger Railbelt Intertie Feasibility Study. All of these studies

PO Box AM Juneau, Alaska 99811 (907) 465-3575
 X PO Box 190869 701 East Tudor Road Anchorage, Alaska 99519-0869 (907) 861-7877

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Mr. and Mrs. Dietrich

March 28, 1989

Page 2

are informational tools for the decision making process and in no way serve as a recommendation that any of these projects/programs will be built or adopted.

Regarding the project of your particular interest, the Northeast Intertie, the capital cost is estimated to be \$155 million with operation and maintenance costs of approximately \$2.3 million per year. To be initially considered for construction, the economic benefits would need to outweigh the costs. To be constructed with the Railbelt Energy fund, this project would need to be more beneficial than any of the proposed alternatives. In essence, the Northeast Intertie is far from being a sure thing.

With respect to the concerns you raise regarding aesthetics, the Northeast Intertie routing study recognizes the scenic value of the Matanuska Glacier and Sheep Mountain and identifies the preferred route on the North side of the Glenn Highway in this area.

Concerning potential health hazards associated with transmission lines, we would like to first point out that the National Electric Safety Code (NESC) prohibits construction of transmission lines over buildings, one may not live directly beneath the lines.

The effect of transmission lines on health has been studied intensively for many years. These studies focus on two different types of fields, magnetic and electric.

The magnetic field of a transmission line is directly related to the current flowing in the conductors and to the height and configuration outside of the right-of-way, the strength of the field decreases approximately in proportion to the inverse square of the distance from the centerline. In other words, it decreases rapidly. Ground level magnetic fields of Extremely High Voltage (EHV) transmission lines (500-1000kV) rarely exceed 50 micro-Tesla. For transmission lines of the order we are investigating such as the Northeast Intertie which is designed at 138KV, the field strength at the edge of right-of-way would generally be less than 2 micro-Tesla. Few structures provide shielding to magnetic fields. Even so, the magnetic fields encountered in homes frequently come from electrical appliances and typical values range from 0.1 to 1000 micro-Tesla. The following table gives the magnetic fields of several low power appliances.

DEVICE	DISTANCE (inches)	MAGNETIC FIELD (micro-Tesla)
Welders	20	1000
Soldering Gun	Contact	1000
Arc Furnace	80	300
Wall Clock	2	300
Alarm Clock #1	Contact	300
Massager	2	200

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Mr. and Mrs. Dietrich
March 28, 1989
Page 3

DEVICE	DISTANCE (inches)	MAGNETIC FIELD (micro-Tesla)
Fluorescent Light	2	200
Teakettle	Contact	30
Heating Pad	Contact	17
Razor	Contact	10
Alarm Clock #2	1	10
Television	10	1



The second type of field propagated by a transmission line is an electric field. Its strength is proportional to the voltage of the line and to the height and configuration of the conductors. As with magnetic fields, the strength of the field decreases approximately in proportion to the inverse square of the distance from the conductor. In summary, we do not expect any health or safety hazards associated with this line or lines of similar design.

With respect to your last concern related to funding of a Sheep Mountain distribution line, you should be aware that the Power Authority is not requesting funding for either the Northeast Intertie or the Sheep Mountain completion at this time due to the limitation of state monies. Copper Valley Electric Association (CVEA) strongly supports the Sheep Mountain project and, although the Sheep Mountain distribution line was not included in the Power Authority's FY89 budget request, we have informed the legislature that there is strong local interest in the project. We would consider a loan in support of the project should that be of interest to CVEA.

In closing, if there is interest, we can schedule a public meeting in your area later this spring to further discuss the Northeast Intertie study. Mrs. Marnie Isaacs, our Information Officer, is coordinating that effort. Please feel free to contact her at 561-7877 if you have any other questions or concerns.

Sincerely,

Robert E. LeResche
Executive Director

TJA:REL:tlj

cc: Marnie Isaacs, Alaska Power Authority
Donald L. Shira, Alaska Power Authority
Afzal Khan, Alaska Power Authority

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Power lines? Electric blankets? Do they really give off bad vibes?

An electrifying new hazard

On cold Colorado nights, Nancy Wertheimer likes to warm her bed with an electric blanket—but she unplugs it before going to sleep. The University of Colorado health researcher suspects that the electromagnetic fields given off by the blanket may promote cancer and birth defects.

Biophysicist Andrew Marino of Louisiana State University wouldn't live in a house near an overhead power line. Says Marino: "The chances of getting sick are just too great."

David Savitz, an epidemiologist at the University of North Carolina at Chapel Hill, has just finished a two-year study of young leukemia victims. "Prolonged exposure to low-level magnetic fields may increase the risk of developing cancer in children," he concludes.

Dr. Leonard Sagan, a physician with the utility-sponsored Electric Power Research Institute in Palo Alto, Calif., says the growing evidence that ordinary electricity may be a health hazard is an increasing worry for power-industry executives. "They'd like the whole thing to go away," he says.

Ghostly fields of electromagnetism surround every wire that carries electric power. The fields course through our bodies as we work in the office, mow the lawn or read a book. They pulse from household wiring and TV's, hair dryers and myriad other appliances that use electricity. Few people have given it much thought—until now. Electromagnetic radiation, or EMR, has become the newest threat of the modern age, suspected of damaging the body's ability to fight disease and regulate the central nervous system.

No easy explanations

"We're seeing troubling health effects that can't be easily explained away," warned Richard Phillips, director of the developmental and cell-toxicology division of the Environmental Protection Agency's health-effects research laboratory, at a recent meeting of 350 utility executives in Toronto. Phillips, who is also editor of the *Bioelectromagnetics Journal*, calls electromagnetic fields "a potent and probably hazardous biological force." And new sources of "electropollution" are proliferating, from medical imagers such as

nuclear magnetic-resonance machines to underground radio-transmitter grids and video display terminals.

The latest studies focus on radiation at frequencies below 300 hertz, or cycles per second. These extremely low frequencies, nestled at the very bottom of the electromagnetic spectrum, take in the 60-hertz alternating current that powers U.S. homes, offices and factories. This radiation, as well as microwaves and radar waves higher in frequency, is "non-ionizing." Unlike ionizing radiation, such as X-rays, gamma rays and nuclear radiation at much higher frequencies, non-ionizing radiation is too weak to rip electrons away from atoms and molecules, converting them to charged ions. Instead, it just holds and shakes these bits and pieces of matter. At relatively high fre-

quencies, the shaking generates heat—which is how a microwave oven cooks food. At the lowest frequencies, the consequence of the shaking is less well known, and that's what researchers are trying to understand.

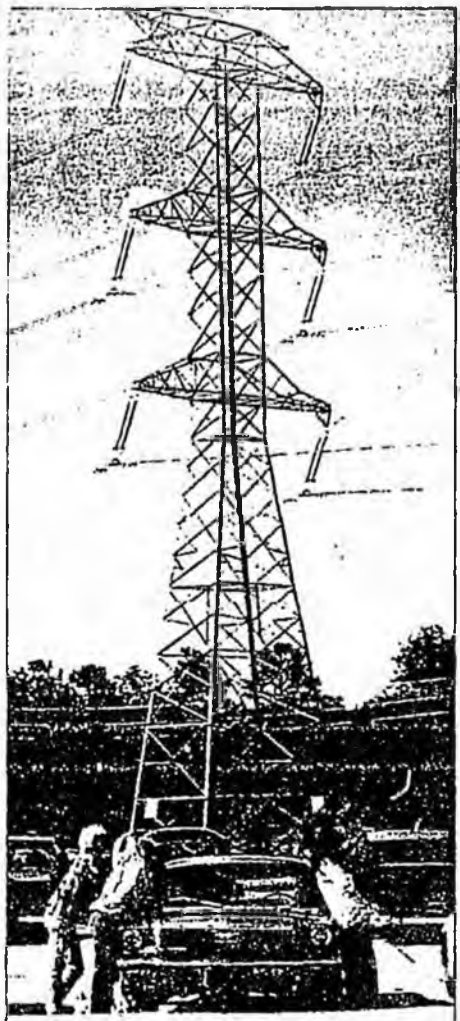
Pattern of cancer cases

Public concern has erupted sporadically since the 1950s over the high-voltage transmission lines, strung from tall poles and assemblages of girders, that crisscross the nation. They still are a major source of alarm. Some residents living near the lines long have complained of headaches, lethargy, memory loss, more illnesses than usual—and a constant, irritating hum. Farmers grumble about stunted crops, calves with birth defects and less milk from dairy herds that graze under the wires. The list is impressive—but no one has ever proved that the high-voltage lines are responsible.

Nonetheless, such anecdotal evidence led in 1973 to a still continuing debate in New York over the potential health effects of a proposed 765,000-volt power line running 200 miles, from the Canadian border to Utica. A prolonged public investigation delayed construction of the line for five years. It also triggered the interest of health physicists and other academics in the possible biological hazards of all kinds of electromagnetic fields.

The first fruits of that interest emerged in 1979—a landmark report by the University of Colorado's Wertheimer and physicist Edward Leeper that found more cancer cases than would have been expected among children in the Denver area living near power-distribution lines. More recent studies have shown the same pattern. Last November, epidemiologist Savitz reported that, applying Wertheimer and Leeper's methods to a different sample of Denver homes, he confirmed their findings. The intensity produced by ordinary utility lines strung along a street clearly seemed to increase the risk of leukemia in children living nearby. In homes with the greatest exposure, five times more children got cancer than would have been expected by chance.

Savitz declines to suggest corrective measures, such as shielding, until more studies are done. "There is a definite correlation, but it needs to be confirmed by others," he says. It's difficult to prove cause and effect, because epi-



Parking lot of Klein Oaks High School in Houston and a 345,000-volt power line

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238

SB 238 - Power Project Revolving Loan Fund

Senate Bill 238, submitted at the request of Governor, relates to the powers of the Alaska Energy Authority. This legislation converts the existing power project fund from a fund supported by the general fund to a revolving loan fund financed primarily by the sale of bonds. The new revolving loan fund will allow communities around the state to apply for small project loans which otherwise would not be feasible.

SB 238 also authorizes the agency to sell waste heat directly to retail customers. This will allow the Alaska Energy Authority to assist cities and schools with reducing their expenses for heating fuel. Utilization of waste heat saves heating fuel costs which in turn provides a long-term savings to the State and local governments.

SB 238 will allow the Alaska Energy Authority to assist in the financing for small, feasible energy projects which it currently is unable to do. I support this legislation and I recommend passage of SB 238.

ADDITIONAL INFORMATION

1. The AEA will sell revenue bonds to finance this revolving loan fund, but there are limits in place regarding the size of projects for which AEA can loan money. A single project over 1.5 megawatt OR a transmission line for more than \$3 million must follow the 21 step project approval process which necessitates legislature approval. THEREFORE, the revolving loan fund will only be used for relatively small projects.

2. The principal and interests of loans made under the existing power project fund minus administrative costs will return to the general fund.

3. The sheet entitled WASTE HEAT PROJECTS AND PROGRAM outlines AEA's involvement in the waste heat program.



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STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

March 23, 1989

The Honorable Tim Kelly
President of the Senate
Alaska State Legislature
P.O. Box V
Juneau, AK 99811

Dear Mr. President:

Under the authority of art. III, sec. 18, of the Alaska Constitution, I am transmitting a bill relating to the powers of the Alaska Power Authority. This bill has two main components:

1. the conversion of the power project fund from a fund supported by the general fund to a revolving loan fund financed primarily by the sale of bonds, and
2. the authorization permitting the agency to sell waste heat directly to retail customers.

With regard to the first of these components, the authority would sell bonds to finance loans from the power project revolving loan fund. The fund would consist of appropriations, repayments of principal to the fund, interest on loans made from the fund, income from investment of money in the fund, and the proceeds of bond sales. The authority would pledge the money repaid to the fund as security for bond debt service, but the balance from appropriated money would be returned to the general fund at the end of each fiscal year.

Although temporary retention of interest and income in the fund raises an issue under the dedicated-fund prohibition of art. IX, sec. 7, of the Alaska Constitution, the Department of Law believes that the constitutionality of that "dedication" of interest and income would be defensible. 1982 Op. Att'y Gen. No. 13 (Nov. 30).

The bill provides a mechanism for the authority to recover money to which the borrower is entitled under the power cost equalization program, or from another state agency, when the borrower is in default on its loan payments to the fund.

The list of eligible borrowers would be expanded from those utilities eligible under AS 44.83.170 to include school districts, regional educational attendance areas, regional housing authorities, and certain business enterprises (defined in sec. 14 of the bill). The list of activities eligible for loans would be expanded to include the acquisition of an existing power project, the acquisition of bulk fuel reserves, or other energy resources, and consumer end-use improvements to reduce the demand for energy.

In addition, the loan fund would no longer be limited to costs associated with a "small-scale power production facility." Instead, AS 44.83.170(b)(1)(B) would refer to "power projects," as including those activities described in the bill. The definition of "small-scale power production facility" would be repealed. Sections 5 and 15 of the bill.

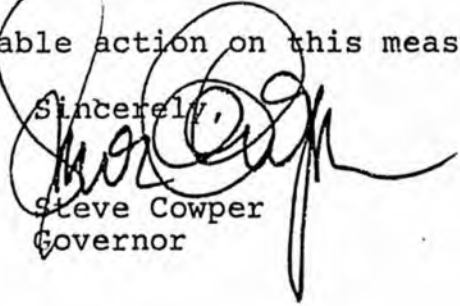
Under existing law, the authority sells energy to utilities, who then pass the energy on to their retail customers. This bill would permit the authority to bypass the utilities and to sell waste heat directly to retail consumers. The waste heat sold by the APA would displace other heat sources, such as diesel fuel and oil, currently being used to heat the retail customers' facilities.

The proposed amendments described above necessitate the following additional changes in existing statutes. In order to enhance marketability of bonds, AS 44.83.187(a) is amended in sec. 12 of the bill so that projects financed by the power project revolving loan fund would not be subject to OMB review, and approval by the legislature, under AS 44.83.177 -- 44.83.185. The statement of the enumerated powers of the authority would be amended by sec. 2 of the bill, to reflect the authority's power to sell waste heat to retail consumers. The requirement that loan repayments be deposited in the general fund would be repealed (in sec. 15) since those payments would be paid into the power project revolving loan fund and used as security for the bond financing.

Additionally, the bill would make several technical corrections. One is that the reference in AS 44.83.187(a)(1) (sec. 12 of the bill) to the renewable resources fund would be eliminated since that fund was repealed in 1984. Section 16, ch. 161, SLA 1984. Another is that the terms "cities" and "boroughs" would be deleted from two lists in AS 44.83.170(b) which also include "municipalities." As defined in AS 29.71.800, the term "municipality" includes cities and boroughs, making the separate references unnecessary. Section 5 of the bill.

I urge your prompt and favorable action on this measure.

Sincerely,

A handwritten signature in black ink, appearing to read "Steve Cowper", written over the typed name and title.

Steve Cowper
Governor

238

FISCAL NOTE

REQUEST:

Revision Date: _____ Agency Affected: AK Power Authority
 Title: Act relating to Power Project BRU: _____
 fund
 Sponsor: Rules
 Requestor: Governor Components: _____

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0	0	0	0	0	0
CAPITAL	0	0	0	0	0	0
REVENUE	0	0	0	0	0	0


FUNDING: (Thousands of Dollars)

GENERAL FUND	0	0	0	0	0	0
FEDERAL FUNDS						
OTHER						
TOTAL	0	0	0	0	0	0

POSITIONS:

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

ANALYSIS : (Attach a separate page if necessary)

Prepared by:  Phone: 465-3575
 Division: APA Date: 17 March 89
 Approved by Commissioner: _____ Date: _____
 Agency: _____

Distribution (by preparer):
 Legislative Finance
 Legislative Sponsor
 Requestor
 Office of Management and Budget
 Impacted Agency(ies)

STATE OF ALASKA
1989 LEGISLATIVE SESSION

BILL VERSION: SB 238

PUBLISH DATE: 3/23/89

FISCAL NOTE

REQUEST:

Revision Date: _____
Title: An Act relating to the power project fund,
and to the powers of the Alaska Power Authority to
Sponsor: Labor & Commerce & Finance
Requestor: Governor

Agency Affected: Alaska Power Authority
BRU: _____
Components: _____

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
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
REVENUE	0	0	0	0	0	0

FUNDING: (Thousands of Dollars)

GENERAL FUND	0	0	0	0	0	0
FEDERAL FUNDS	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

ANALYSIS : (Attach a separate page if necessary)

Prepared by: for Robert E. LeResche Phone: 465-3675
Division: Alaska Power Authority Date: 3/29/89

Approved by Commissioner: _____ Date: 3/29/89
Agency: Commerce and Economic Development

Distribution (by preparer):

- Legislative Finance
- Legislative Sponsor
- Requestor
- Office of Management and Budget
- Impacted Agency(ies)

SENATE AMENDMENT

By Senator Eliason

To: Committee Substitute SENATE BILL No. 238 (Fin)

To: _____ HOUSE BILL No. _____

PAGE: LINE:

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Delete "reserves"

Alaska Power Authority

WASTE HEAT PROJECTS AND PROGRAM

In the early 1980's the Alaska Power Authority entered into construction agreements to build thirteen waste heat systems in rural Alaska. Through the agreements, electric utilities serving these rural communities were responsible for the operation and maintenance of the systems and the sale of waste heat to schools, city halls and other public facilities.

The systems were constructed and put into operation, although nine (9) of the systems were not maintained as planned and required under the agreements. Because of the inoperable condition of the systems, the customers of the local utilities were not receiving the benefits of waste heat. Local utilities cited a number of reasons as to why they were not providing for waste heat sales to the intended customers. Among these were that the utility operators did not have the adequate skills or interest in maintaining the systems and a number of utilities decided they did not want to accept the responsibility for heat and preferred to remain entirely in the business of electricity sales.

As the systems were still viable, the Alaska Power Authority took back the systems, refurbished them and established a preventative maintenance and inspection program which currently is in place. The cost of refurbishing and the necessary O & M was addressed and is financed through a shared savings contract. Presently, under the agreements in place, this provides consumers of waste heat with a 20 -50% savings in heating fuel costs.

As a result of the APA's expertise and experience in the area of waste heat recovery system design and construction, the systems are now standardized and are proving to be relatively easy to operate and maintain after installation. Customers are generally schools and public facilities or large buildings, usually 2 to 3 buildings in each community. Utilization of waste heat clearly saves heating fuel costs which in turn provides a long-term savings to the State and local governments.

The waste heat provisions proposed in SB 238 are a result of the APA's efforts in looking into ways to assist cities and schools with reducing their expenses for heating fuel, and as an avenue to finance these systems without the reliance on general fund monies. Financing of waste heat systems as proposed in SB 238 will save general fund dollars. The retail sales language as proposed in the bill was included on the recommendation of bond counsel. This language clarifies the APA's ability to sell heat for other than resale and the provisions apply only to heat.

Alaska Power Authority

WASTE HEAT RECOVERY SYSTEMS

In cooperation with the Alaska Village Electric Cooperative, the Power Authority has repaired and recommissioned seven waste heat recovery systems in Grayling, Elim, Savoonga, Kaltag, Kiana, Ambler and Shungnak. These communities and/or their associated school districts have signed 15-year operation, maintenance and heat sales agreements for those systems. Under the agreements, the city or school district pays the Power Authority 50% of the cost it would otherwise incur if it used fuel oil to heat schools or other public buildings now heated by waste heat. The Power Authority uses these revenues to pay for operation costs of the waste heat systems.

Ten separate agreements are currently in place:

Bering Straits School District:	Elim Savoonga
City of:	Kiana Grayling Ambler Shungnak
Iditarod School District:	Grayling Kiana
Northwest School District:	Shungnak Ambler
Total FY89 billings to date: =	\$27,087.00*

* This represents one half of the fuel savings accruing from these waste heat sales agreements.

Alaska Power Authority

WASTE HEAT FORMULA

$$\begin{aligned} \text{COST OF WASTE HEAT (\$)} = & \text{BASE FUEL SAVINGS (gal)} \\ & \times \text{ACTUAL GENERATION (kwh)} \\ & + \text{BASE GENERATION (kwh)} \\ & \times \text{FUEL PRICE (\$/gal)} \\ & \times .50 \end{aligned}$$

This gives one half of the cost savings, or the amount due to the Power Authority on a monthly basis for the nine winter months the agreements are in effect.

**AMBLER WASTE HEAT PROJECT
HEAT SALES AGREEMENT**

THIS AGREEMENT, entered into this 31st day of MAY, 1988, between the City of Ambler (the City) and the Alaska Power Authority (the Power Authority), outlines the responsibilities of the parties hereto and the procedures to be followed in connection with the calculation and submittal of payment for heat delivered to the City from the Ambler Waste Heat Project, hereinafter referred to as the "Project."

Article A. ALASKA POWER AUTHORITY COVENANTS

The Power Authority will:

1. Each month obtain from the Alaska Village Electric Cooperative (AVEC) the average fuel price and the kilowatt hour production for Ambler for the previous month.

2. Based on the information provided by the AVEC, calculate the cost of waste heat for the previous month using the formula:

$$\text{COST OF WASTE HEAT (\$)} = \text{BASE FUEL SAVINGS (gal)} \\ \times \text{ACTUAL GENERATION (kwh)} + \text{BASE GENERATION (kwh)} \\ \times \text{AVEC FUEL PRICE (\$/gal)} \times .50$$

The BASE FUEL SAVINGS has been calculated through a computer simulation of the system, assuming that the total building use without waste heat is 17,444 gallons per year.

BASE FUEL SAVINGS:

January	2,144 gallons	July	0 gallons
February	2,077 gallons	August	0 gallons
March	1,444 gallons	September	967 gallons
April	1,299 gallons	October	1,504 gallons
May	1,027 gallons	November	2,000 gallons
June	0 gallons	December	1,885 gallons

Total Annual Savings: 14,347 gallons

The BASE GENERATION is as follows:

January	78,701 kwh	July	47,358 kwh
February	77,102 kwh	August	51,268 kwh
March	55,378 kwh	September	63,766 kwh
April	50,543 kwh	October	85,426 kwh
May	39,860 kwh	November	79,619 kwh
June	49,041 kwh	December	70,085 kwh

Ambler Heat Sale Agreement
Page 2 of 3

The above formula would have produced the following COST OF WASTE HEAT in the base year if the average fuel price were \$1.23/gallon:

January	\$1,318	July	\$ 0
February	\$1,277	August	\$ 0
March	\$ 887	September	\$ 595
April	\$ 798	October	\$ 925
May	\$ 631	November	\$1,229
June	\$ 0	December	\$1,159

Total Annual Cost: \$8,819

If additions are made to the waste heat recapture system, the school, or the pump house, the above formula will be subject to review by the parties to this Agreement.

3. Reduce monthly charges by 3% for each day the waste heat system has been out of service, provided that the City notifies the Power Authority about the outage no later than the following business day.

4. Invoice the City each month for 25 percent of the COST OF WASTE HEAT as calculated above.

Article B. CITY OF AMBLER COVENANTS

The City will:

1. Immediately notify the Power Authority in case an error is found in an invoice or in case no invoice has been received by the 15th of the second month following the month of service.

2. Pay to the Power Authority 25 percent of the amount determined by the formula outlined in Article A, Section 2 above within 30 days after receipt of invoice.

3. Pay to the Power Authority interest of 1.5% per month on any undisputed amount which has not been paid within 30 days after receipt of invoice.

Ambler Heat Sale Agreement
Page 3 of 3

THIS AGREEMENT has been reviewed, agreed to, and executed by the following parties:

ALASKA POWER AUTHORITY

[Signature]
Robert E. LeResche
Executive Director

5/19/88
Date

STATE OF ALASKA }
THIRD JUDICIAL DISTRICT } ss.

The foregoing Agreement was acknowledged before me this 19th day of May, 1988, by Robert E. LeResche, the Executive Director of the Alaska Power Authority, an Alaskan Corporation, on behalf of the corporation.

[Signature]
Notary Public, State of Alaska
My commission expires: 8/31/90

Approved:
[Signature] 5-18-88
Assistant Attorney General Date

CITY OF AMBLER

[Signature]
Mayor

7/9/88
Date

STATE OF ALASKA }
THIRD JUDICIAL DISTRICT } ss.

The foregoing Agreement was acknowledged before me this 21 day of July, 1988, by Arthur Douglas Mayor of the City of Ambler.



[Signature]
Notary Public, State of Alaska
My commission expires: _____



ALASKA RURAL ELECTRIC COOPERATIVE ASSOCIATION, INC.

237 E. FIREWEED LANE • SUITE 301
ANCHORAGE, ALASKA 99503 • (907) 276-3235

April 5, 1989

Senator Richard Eliason
Senate Labor and Commerce Committee

RE: Senate Bill 238

Dear Senator Eliason:

I was not able to attend your committee meeting on April 3rd when you considered SB 238, so I would like to submit comments on behalf of our association by this letter.

We support the major thrust of this bill which is to permit the Alaska Power Authority to pledge the revenue stream and other assets of the Power Project Fund as security for bonds, with the bond money then being used for new power project loans. We understand the desire of members of the committee to place a limit on either the size of the project to be financed in this way or on the total amount of bonds that APA can sell under this program before they would need to come back to the legislature for approval. We hope a reasonable agreement can be reached on this point which will permit this program to go forward.

We do have a different kind of concern, however, which I need to bring to the committee's attention. On pages 4 and 5 (Section 5) new language is added to permit school districts, regional education attendance areas, regional housing authorities, and business enterprises to borrow from the Power Project Revolving Fund. It is our understanding that the reason these entities are being added is they would be eligible to borrow money for the fuel supply and energy conservation purposes being added by paragraphs (D) and (E) at the top of page 5. We have no objection to that intent; however, the way this bill is drafted, these new participants in this state loan program could borrow state funds to put in electrical generation facilities.

The loss of this load by the electric utility could drastically increase the cost of power to everyone else in the community, and it increases the cost to the state through the power cost equalization program. In severe cases, the feasibility could be destroyed for the continued existence of the local utility.

DEMOCRACY IN ACTION

Senator Richard Eliason
April 5, 1989
Page 2

We ask that SB 238 be amended in a way to take essentially all of the new language in Section 5 and put it into a separate subsection of AS 44.83.170 so that there can be no misunderstanding: power project loans should go to the schools, housing authorities and businesses only for the purposes of securing fuel supplies and for energy conservation.

Sincerely,

A handwritten signature in cursive script that reads "Dave".

David Hutchens



COPPER VALLEY ELECTRIC ASSOCIATION, INC.

P.O. BOX 45 GLENNALLEN, ALASKA 99588-0045

Glennallen (907) 822-3211
Valdez (907) 835-4301
Telefax # (907) 822-5586

March 30, 1989

The Honorable Dick Eliason
Senate Labor and Commerce Committee
Alaska State Legislature
P.O. Box V (MS 3100)
Juneau, Alaska 99811

Dear Senator Eliason:

As the 1989 legislative session continues, the monetary constraints caused by declining oil revenues seem to be almost insurmountable. Understandably, many important projects must be postponed to prevent over spending, and we appreciate your efforts in these areas.

During the 1988 legislative session there were three projects submitted to the Alaska Power Authority (APA) for consideration. These projects were, Sheep Mountain Phase II, (\$250,000), Lake Louise, (\$1,500,000) and Chistochina (\$1,800,000) line extensions. Funding was not available for these projects and we were advised that they would be considered in 1989. (See attached letter of February 1, 1989)

In November of 1988, the APA 1989 Capital Budget was presented and these projects were not included. We responded to this in our letter of November 22, 1988 (copy attached) and were subsequently allowed to present our case at the APA Board of Directors meeting on Thursday, December 15, 1988. This meeting was via tele-conference to Healy, Glennallen and Chistochina. Testimony was provided by several parties as to the need for these projects. It was the consensus of the Board to have APA provide the legislators with the information relating to these projects, and to have APA look at alternate funding sources for these projects.

A description of the projects was sent to the Senate Finance Committee dated March 15, 1989. (copy attached)

We realize that the budget situation will not allow for funding of all these new projects, but we also feel that prioritizing these projects may alleviate some confusion and enhance project viability for critical projects.

SERVING MEMBER-OWNERS IN THE COPPER RIVER BASIN AND VALDEZ

The Sheep Mountain Phase II project (\$250,000) perhaps is the most important project since it is actually the final portion of a project started in 1986. We have included a copy of the 1986 Feasibility Report prepared for this project to provide you with a comprehensive overview of the project.

Since budgeting constraints prohibit the commencement of new and extensive projects, we would ask for your consideration in allowing us to see this project to its completion in 1989. If it would be possible to establish the Chistochina and Lake Louise projects for future funding, the residents would appreciate the action in order to more readily plan their future expenditures.

We hope that you will consider introducing legislation which will appropriate \$250,000 for completion of the Sheep Mountain Phase II Line Extension Project. Again, we appreciate the opportunity to address this issue and express our thanks for your efforts.

We look forward to hearing from you soon.

Sincerely,



R.D. (Doug) Bursey
General Manager

cc: Brent Petrie, APA
Dorothy A. Jones, Mat-Su Borough

Enclosures



COPPER VALLEY ELECTRIC ASSOCIATION, INC.

P.O. BOX 45 GLENNALLEN, ALASKA 99588-0045

Glennallen (907) 822-3211
Valdez (907) 835-4301
Telefax # (907) 822-5586

January 15, 1988

FILE

Alaska Power Authority
701 East Tudor
P.O. Box 190869
Anchorage, AK 99519-0869

ATTN: Brent Petrie

SUBJECT: Grant Funds for Construction of Power lines within
CVEA Service Area

Gentlemen:

Copper Valley Electric Association (CVEA) request the Alaska Power Authority solicit grant funds in behalf of CVEA from the state legislature, during the 1988 legislative session, in the amounts listed below. These funds would be used by CVEA to complete Phase II of the Sheep Mountain Line Extension Project construct a power line into the Lake Louise area to extend CVEA's power lines to the community of Chistochina.

Phase II of the Sheep Mountain Line Extension Project would extend CVEA's overhead power line an additional 4.5 miles along the Glenn Highway and would provide service to approximately 20 residential consumers located between Caribou Creek and Sheep Mountain Lodge. The Lake Louise extension would require the construction of 22 miles of power line and would provide service to four lodges and 4-6 residential consumers. The Chistochina extension would require construction of 25 miles of single phase distribution line and would provide service to an estimated 35 residential consumers, the school and lodge.

CVEA estimates the amount of grants fund need to construct each project is as follows:

Sheep Mtn. Phase II (4.5 miles) - \$250,000
Lake Louise Extension (22 miles) - \$1,500,000
Chistochina Extension (25 miles) - \$1,800,000

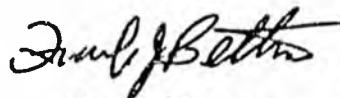
SERVING MEMBER-OWNERS IN THE COPPER RIVER BASIN AND VALDEZ

Alaska Power Authority
January 15, 1988
Page 2

Estimated percentage expenditures, by major categories, are listed below.

Materials - 15%
Construction labor - 55%
R.O. W. clearing - 5%
R.O.W. permits - 5%
Surveying - 5%
Engineering and Inspection - 15%

Sincerely,



Frank Bettine
Manager of Engineering

GS\FJB\APARQST.FJB



Alaska Power Authority

State of Alaska

RECEIVED

FEB 03 1988

1 February 1988

COPPER VALLEY
ELECTRIC ASSOC.

Mr. Frank Bettine
Manager of Engineering
Copper Valley Electric Association, Inc.
P.O. Box 45
Glennallen, Alaska 99588-0045

SUBJECT: Grant Funds for Construction of Powerlines Within
the CVEA Service Area

Dear Frank:

Thank you for your letter of January 15, 1988, listing three projects which are a priority for extension of CVEA service. This type of input is extremely helpful in formulating our annual capital budget request. Unfortunately, our formal FY89 budget request has already been voted upon by our Board of Directors and the Governor's Office of Management and Budget and has been submitted for legislative approval. However, we would be glad to consider your request in preparing our formal FY90 budget request. That process will formally begin in August 1988 and we could work with you in the meantime to prepare project descriptions and present them to our Board for consideration.

There is another alternative that you may wish to consider if you are in a position to begin construction in 1988. We do have about \$1.7 million in loan funds available in our Rural Electrification Revolving Loan Fund (RERLF) that might meet your needs. I am enclosing a description of the program and you can determine if the projects would be suitable for funding through that program. The advantage with this approach is that we actually have the funds on hand and if an application was received and approved funds could likely be made available in time for the 1988 construction season. The statutory requirements for the RERLF are a bit cumbersome, though, and if you have any questions on the enclosed information please call our loan officer, Mr. Ernie Whitney, at 561-7877 for more information.

- P.O. Box AM Juneau, Alaska 99811 (907) 465-3575
- P.O. Box 190869 701 East Tudor Road Anchorage, Alaska 99519-0869 (907) 561-7877

Mr. Frank Bettine

1 February 1988

Page 2

An additional alternative is to let your elected legislators know your desires on project funding. Although APA's budget has been formally submitted this year, it is still subject to review and change by the legislature.

Please give me a call if you have any questions.

Sincerely,



for Brent N. Petrie
Director, Agency Operations

BNP:momk

Enclosure

cc: Doug Bursey, CVEA
R. LeResche, APA
E. Whitney, APA



Alaska Power Authority

State of Alaska

ALASKA POWER AUTHORITY LOAN PROGRAMS

	<u>Power Project Fund</u> (AS 44.83.170)	<u>Rural Electrification Revolving Loan Fund</u> (AS 44.83.361 + 363)
Eligible Projects	Small scale power production facilities, or facilities for conservation, bulk fuel storage or transmission and distribution. Potable water projects.	Extension of new electric service
Eligible Borrowers	Electric utilities, subdivisions of state government, village councils, regional electric authorities, regional or village corporations, and non-profit marketing cooperatives.	Electric utilities with APUC certificate for area to be served
Loan Size	No limit, depending on fund balance.	\$250,000 or \$500,000 depending on Fund balance*
Loan Term	Maximum of 50 years, usually less to match productive life of assets acquired.	None, but loans will only be made where full repayment is likely within 10 years
Interest Rate	Average municipal bond rate, or a rate which makes the project financially feasible; but not less than 5%.	2%
Security	Required unless borrower is regulated by APUC and has a substantial history of repaying long-term loans.	May be required
Other		Recommendation of local committee required. Project must serve at least 3 new customers

* Utility must make a minimum investment in the project, which equals the cost for acquisition and installation of one transformer, one span of line, one pole and one service drop for each initial customer.

PO. Box AM Juneau, Alaska 99811 (907) 465-3575
 PO. Box 190869 701 East Tudor Road Anchorage, Alaska 99519-0869 (907) 561-7877



COPPER VALLEY ELECTRIC ASSOCIATION, INC.

P.O. BOX 45 GLENNALLEN, ALASKA 99588-0045

Glennallen (907) 822-3211
Valdez (907) 835-4301
Telefax # (907) 822-5586

COPY

November 22, 1988

Mr. Robert LeResche
Alaska Power Authority
P.O. Box 190369
Anchorage, Alaska 99519-0869

Subject: Sheep Mountain, Lake Louise and Chistochina Line
Extension Projects

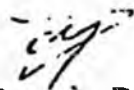
Dear Mr. LeResche:

It has come to our attention that funding for the Sheep Mountain, Lake Louise and Chistochina line extension projects was not included in the FY89 Alaska Power Authority Capital Budget.

These projects were omitted from the FY88 Alaska Power Authority Capital Budget and were to be reviewed for incorporation in the FY89 Capital Budget. It was assumed that funding would be available in 1989 since no information was provided to the contrary. We feel that potential consumers affected by these projects would have been more vocal with their concerns had they known that funding was once again in doubt.

Since the quality of life for almost 100 of our neighbors stands to be greatly improved with the realization of these projects, we respectfully request the Alaska Power Authority reconsider funding of the Sheep Mountain, Lake Louise and Chistochina line extension projects.

Sincerely,


R. D. (Doug) Bursey
General Manager

cc: Sue White, Alaska Power Authority
Senator Jack Coghill
Representative Dick Shultz

Alaska Power Authority

March 15, 1989

The Honorable Rick Uehling, Co-Chairman
Senate Finance Committee
Alaska State Legislature
P. O. Box V
Juneau, AK 99811

Dear Senator Uehling:

The Alaska Power Authority submitted a capital projects budget for fiscal year 1990 in October of last year. After that budget was submitted, four projects were resubmitted to the Authority for further review. Some of these projects have been introduced as part of CSSB130 (Fin), and members of the Legislature have requested our analysis. The purpose of this letter is to describe these projects to you, as instructed by our Board of Directors.

1. Electrification of the area between the entrance of Denali Park and Carlo Creek.

An extension of service for the area just south of the entrance to Denali National Park, down the Parks Highway to Carlo Creek. A transmission line would be run from the Park entrance, down the east side of the Highway for fourteen miles. The cost to the State of this line extension would be approximately \$1.5 million. This extension would be built through a grant agreement with Golden Valley Electric Association. Consumer electric rates charged to customers would be about ten cents per kwh, the same as the rates charged other area residents. Current costs of electricity from self-generation are anywhere from thirty five to forty cents per kwh. Residents conducted a survey which indicated that approximately 14 residences and 14 businesses would hook up to the line immediately if it were constructed. This area is a growing tourist and service center, serving the growing number of visitors to Denali National Park.

Attached is a copy of the survey done by the residents of the community, and a map of the area to be electrified.

2. Lake Louise Extension

An extension of service for the Lake Louise Road from the Glenn Highway to the end of the road, a distance of approximately twenty-two miles. The cost to the State is estimated at \$1.5 million. This extension would be built through a grant agreement with Copper Valley Electric Association. Rates charged would be the same as those paid by other Four Dam Pool customers, five and one half cents per kwh (wholesale). The current cost per kwh in the area is about eighty-five cents. The extension would serve four major lodges and one other business year round, and up to 26 residences. The area is a growing recreational area.

Attached are letters and petitions from area residents.

3. Sheep Mountain Phase II Extension.

An extension of existing power lines approximately four and one half miles south along the Glenn Highway to Sheep Mountain Lodge. Cost to the State is estimated at \$250,000. It would be built through a grant agreement with Copper Valley Electric Association, with resulting wholesale power rates again of five and one half cents per kwh. This area serves the tourism industry and travelers along the Glenn Highway. The extension would serve fifteen customers, including the Sheep Mountain Lodge.

Attached are letter^s and petitions from area residents.

4. Chistochina Extension.

An extension of existing power lines of approximately 25 miles from Gakona Junction north along the Tok cutoff to Chistochina. The cost of this project to the State is estimated at \$1.8 million. This project would also be built through a grant agreement with Copper Valley Electric Association, and would lead to wholesale power rates for the community of 5.5¢ per kwh. The extension would serve a school, a lodge, a Department of Transportation airport, a church, ten other commercial customers and 32 residences in Chistochina. This project would provide power to an entire village that provides full services and caters to tourism.

Attached are letters and petitions from area residents.

Sincerely,

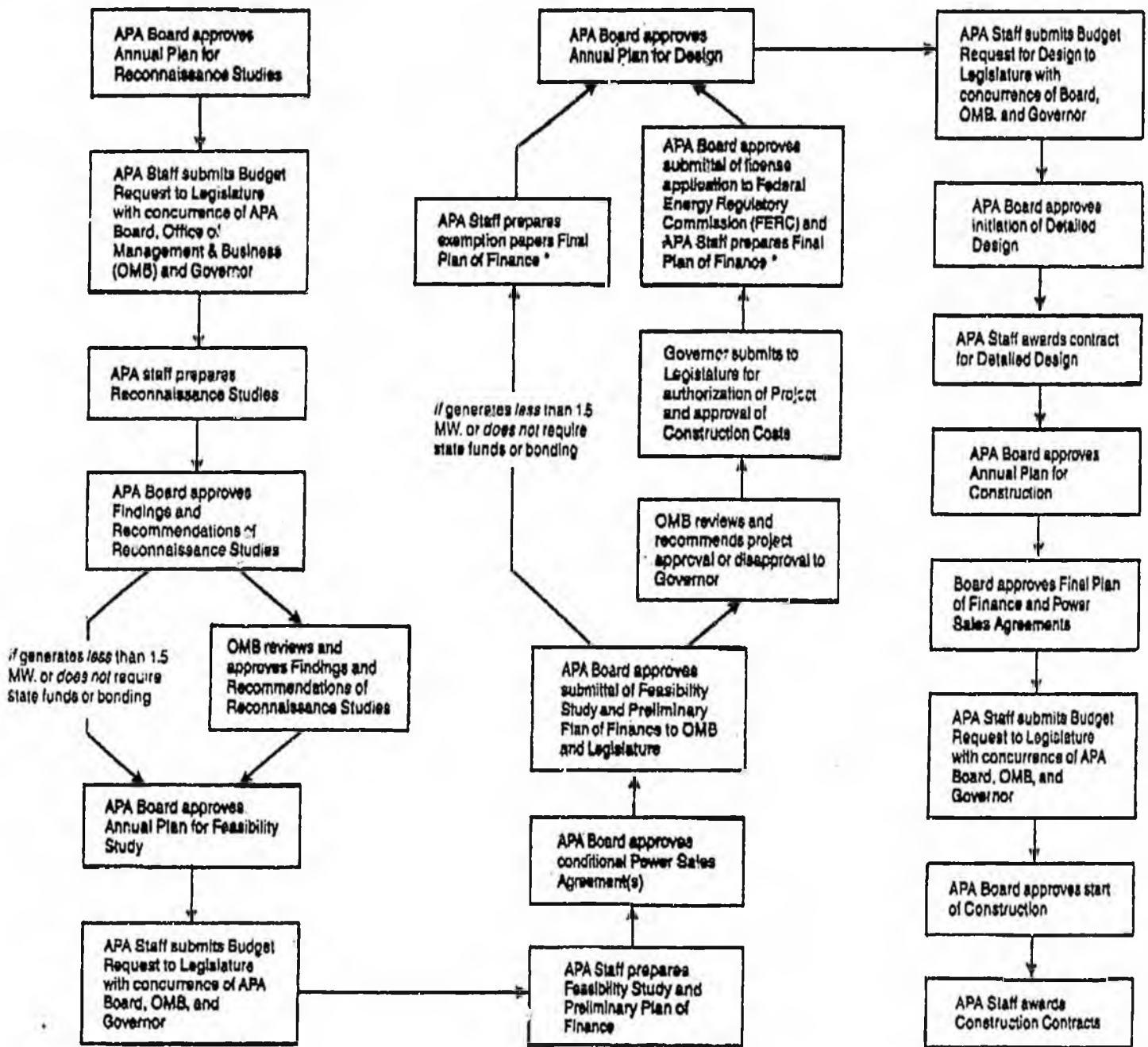

Robert E. LaRoche
Executive Director

REL:pf

cc: Senator Jack Coghill
Senator Jalmar Kerttula
Doug Bursey, General Manager, Copper Valley Electric Association
Mike Kelly, General Manager, Golden Valley Electric Association

Project Approval Process

All significant projects undertaken by the Alaska Power Authority follow the sequence of events outlined below. This project approval process, adopted in 1984, serves to clarify staff, Board, Office of Management and Budget and legislative approvals necessary for project completion. Public and agency input is also identified.



* includes Loan & Bond Agreements, Power Sales Agreements & Operation Agreements

<i>Village</i>	<i>PCE Amount (Cents/kWh)</i>	<i>Consumer Rate (Cents/kWh)</i>	<i>Consumer Rate Increase with 10% PCE Reduction</i>
Akhiok	26.50	n/a	n/a
Akiachak	28.30	22.20	13%
Akiak	18.00	16.90	11%
Allakaket	30.90	30.20	10%
Anaktuvuk	12.00	2.50	48%
Aniak	24.60	18.80	13%
Arctic Village	21.50	49.50	4%
Atka	15.10	n/a	n/a
Aimautluak	24.60	20.00	12%
Atkasuk	12.60	1.50	84%
AVEC Villages*	25.80	11.20	23%
Beaver	27.00	28.20	10%
Bethel	7.20	9.90	7%
Bettles	31.70	22.70	14%
Birch Creek	31.30	27.10	12%
Brevig Mission	21.70	13.90	16%
Buckland	17.00	n/a	n/a
Central	27.60	23.00	12%
Chefornak	17.60	20.10	9%
Chenega Bay	22.20	15.80	14%
Chignik	13.60	17.30	8%
Chitina	23.70	19.40	12%
Circle	36.10	8.50	42%
Clarks Point	15.70	23.30	7%
Coffman Cove	6.20	12.70	5%
Cold Bay	23.30	10.60	22%
Cordova	7.50	12.20	6%
Craig	3.70	15.40	2%
Deering	18.00	24.60	7%
Diomede	12.00	35.20	3%
Eagle (City)	27.10	10.50	26%
Eagle Village	41.80	13.20	32%
Egegik	37.90	19.50	19%
Ekwok	15.70	14.30	11%
Elfin Cove	15.40	13.30	12%
False Pass	14.80	24.00	6%
Fort Yukon	18.80	21.40	9%
Galena	10.10	27.40	4%
Golovin	29.20	15.80	18%
Gustavus	38.50	8.50	45%
Haines	4.00	15.80	3%
Hughes	36.30	14.50	25%
Hydaburg	6.80	14.40	5%
Igiugig	39.80	16.20	25%
Illamna	32.70	10.90	30%

Kaktovik	10.90	4.50	24%
Karluk	27.10	15.00	18%
King Cove	9.40	10.10	9%
Kobuk	21.10	32.40	7%
Kokhanok	38.70	18.60	21%
Koliganek	16.40	8.50	19%
Kongiganak	24.20	22.60	11%
Kotzebue	10.80	13.50	8%
Koyukuk	22.00	n/a	n/a
Kwethluk	16.70	27.30	6%
Kwigillingok	26.10	24.30	11%
Larsen Bay	21.10	17.20	12%
Levelock	31.20	14.30	22%
Manley	38.00	u/a	n/a
Manokotak	21.10	8.90	24%
McGrath	23.10	14.40	16%
Middle Kuskokwim**	38.90	17.20	23%
Naknek	13.10	14.20	9%
Napakiak	38.50	8.50	45%
Napaskiak	38.50	20.50	19%
Nelson Lagoon	21.20	18.90	11%
Newtok	35.10	13.10	27%
Nikolai	20.70	33.20	6%
Nikolski	33.50	24.50	14%
Nome	8.30	6.30	13%
Northway	17.40	12.00	15%
Nuiqsut	12.60	1.50	84%
Nushagak	8.40	12.30	7%
Ouzinkie	12.10	15.20	8%
Pedro Bay	40.00	21.20	19%
Pelican	3.00	12.10	2%
Perryville	16.40	16.20	10%
Pilot Point	20.50	10.80	19%
Point Hope	10.90	4.50	24%
Point Lay	12.00	2.50	48%
Port Heiden	11.50	8.50	14%
Rampart	41.80	18.20	23%
Ruby	23.70	29.80	8%
Saint George	25.50	33.90	8%
Saint Paul	14.40	22.80	6%
Sand Point	4.40	20.80	2%
Sheldon Point	22.50	26.70	8%
Skagway	2.40	16.80	1%
Stevens Village	26.50	33.80	8%
Takotna	12.90	36.60	4%
Tanana	18.40	27.80	7%
Tatitlek	29.20	9.80	30%
Telida	40.40	21.20	19%
Teller	32.50	13.40	24%

Tenakee Springs	21.80	16.30	13%
Tetlin	24.20	20.50	12%
Thorne Bay	13.10	17.10	8%
Tlingit-Haida***	21.70	15.30	14%
Tok	5.00	19.90	3%
Tuluksak	21.30	8.50	25%
Tuntutullak	16.30	31.20	5%
Unalakleet	12.20	14.20	9%
Unalaska	6.20	13.70	5%
Venetle	17.00	43.80	4%
Wainwright	10.90	4.50	24%
White Mountain	21.80	17.20	13%
Yakutat	6.10	15.10	4%

*AVEC Villages:	Alakanuk	Koyuk	Russian Mission
	Ambler	Lower Kalskag	Savoonga
	Chevak	Marshall	Scammon Bay
	Eek	Mekoryuk	Selawik
	Elim	Minto	Shageluk
	Emmonak	Mountain Village	Shaktoolik
	Gambell	New Stuyahok	Shishmaref
	Goodnews Bay	Noatak	Shurgnak
	Grayling	Noorvik	Saint Mary's
	Holy Cross	Nulato	Saint Michael
	Hooper Bay	Nunapitchuk	Stebbins
	Huslia	Old Harbor	Togiak
	Kaltag	Pilot Station	Toksook Bay
	Kiana	Pitkas Point	Tununak
	Kivalina	Quinhagak	Upper Kalskag
			Wales

** Middle Kuskokwim Elec. Coop. Villages

Chauthbaluk
Crooked Creek
Red Devil
Sleetmute
Stony River

***Tlingit-Haida Elec Coop. Villages

Angoon
Hoonah
Kake
Kasaan
Klawock

Alaska Power Authority

SENATE BILL NO. 238 (MARCH 23, 1989)

"An Act relating to the power project fund, and to the powers of the Alaska Power Authority to finance and make loans from the power project fund and to sell waste heat; and providing for an effective date."

The proposed legislation has far reaching statewide impact on, and the support of, electric utilities. In fact, the existing Power Project Fund is a very popular loan program which allows electric utilities and communities to borrow funds for utilities needs.

Enactment of the bill will allow to fund this loan program through issuance of bonds and therefore, it will remove the demand for state appropriations from the General Fund.

It is important to note that no defaults have occurred within this loan program since its inception.

There is tremendous growing interest in the Power Project Loan fund which has been spurred by the reduction of direct grants to communities and utilities for electrification purposes. Communities and utilities are now seeking loans rather than direct grants for electrification, which should work to the long-term advantage of the State of Alaska's economic development.

The Power Project Loan Fund is one of the few State loan programs (perhaps the only one?) where the interest rate typically is the market rate. The fact that Alaskan communities and utilities are expressing such a strong interest in this program despite the lack of a State subsidized interest rate indicates the high priority of their electrification needs.

Recommendation:

Support. The bill is consistent with the program objective and the mandate of Alaska Power Authority; the bill should be enacted.

Submitted by Don Shira, Director of
Operations + Program Development, + Gloria
Manning, Director Finance + Admin
5383/DD48/1

Alaska Power Authority
Project Approval Process
Sequence of Events

March 20, 1984

All significant power projects that are undertaken by the Alaska Power Authority will follow the sequence of events listed below unless modified by Board on a project specific basis. Some events may be concurrent.

Step No.	Description	Approved By			
		Staff	Board	OMB	Leg
1.	Annual Plan for Reconnaissance Studies		X		
2.	Appropriation Request for Reconnaissance Studies		X	X	X
3.	Award Contract for Reconnaissance Study	X			
4.	Authorization to submit Reconnaissance Study to OMB		X		
5.	Approval of Reconnaissance Study			X*	
6.	Annual Plan for Feasibility Studies		X		
7.	Appropriation Request for Feasibility Study		X	X	X
8.	Award Contract for Feasibility Study	X			
9.	Approve conditional Power Sales Agreements		X		
10.	Authorization to submit feasibility study, and preliminary plan of finance to OMB and Legislature		X		
11.	Recommend Project Approval or Disapproval to Governor and Legislature			X*	
12.	Authorization of Project and Construction Cost				X*
13.	Approval to submit license application to FERC		X		
14.	Annual Plan for Design		X		
15.	Appropriation Request for Design		X	X	X
16.	Approval of Initiation of Detailed Design, updated Power Sales Agreements, and Updated Plan of Finance		X		
17.	Award Contract for Detailed Design	X			
18.	Annual Plan for Construction		X		
19.	Approval of Final Plan of Finance and Power Sales Agreements		X		
20.	Appropriation for Construction		X	X	X
21.	Approval of Start of Project Construction		X		
22.	Award Construction Contracts	X			

* Statutory requirements.

Approved


Chairman

Date

4.11.84

Note:

OMB's review is required for new projects that are larger than 1.5 MW for generation projects or cost more than \$3,000,000 for transmission projects.

ALASKA POWER & TELEPHONE COMPANY

P. O. BOX 222 • 702 WATER STREET
PORT TOWNSEND, WASHINGTON 98388
(206) 385-1733

February 1, 1989

Senator Eliason
State of Alaska
P.O. Box V
Juneau, Alaska 99811

Re: Hollis Electrification

Dear Senator Eliason:

The recent cold snap has pointed out the importance of a reliable and cost effective supply of electrical energy. Yet there are many communities in rural Alaska without electricity at all.

We are in the process of developing an electric system for the community of Hollis. We have spent a lot of time and money to get this project to this point. We have received all the necessary approvals needed to begin construction this Spring. As I pointed out in my letter to you dated January 18, 1989, we currently do not have a funding source for this project. I understand that legislation has been or will be introduced that will allow the Alaska Power Authority to sell bonds in order to fund a loan program for projects such as this. We believe this to be a good long term solution for the problem and ask you to support that legislation.

However, we are ready to begin construction this spring, which would allow the Hollis Electrification Project to be completed by October, 1989. What we need is a immediate solution to our funding problem. We are not requesting a grant. We would like a loan at a fair interest rate. The APA has suggested 9% for a term of 10 to 20 years. Conventional lenders are not interested in making loans of this nature and when they are the cost of the funds is prohibitive.

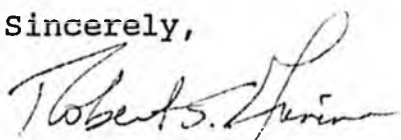
Some how, some way, there's got to be a way of getting this project, that will provide reliable and cost effective electricity to a remote rural community, funded and completed during 1989. I ask your assistance in this regard.

I have enclosed copies of a Petition that is being circulated on Prince of Wales Island. This project has wide support from a large number of Alaskan's living in the area. The petitioners total approximately 200 at this point. I appreciate the support you have given us thus far and the efforts of Laura Fleming on your behalf.

If you need additional information or have questions, please feel free to contact me.

Thank you.

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert S. Grimm".

Robert S. Grimm
President

cc Hollis Community Council
Robert E. LeResche-APA
Greg Mickelson- AP&T

enc.

PETITION

We the undersigned request the Governor and the Legislature to make an appropriation of \$350,000 to the Alaska Power Authority Loan programs to allow the electrification of the Hollis area. The area is currently without central station power, which is serious hardship upon the residents. This is not a request for a grant. It is a request that the loan programs created by the Legislature, specifically for this type project be modestly funded to allow construction of this basic utility service. The loan would be repaid plus interest to the State of Alaska. An appropriation is needed this year to allow construction during 1989. This project is included in the APA's FY90 Loans budget.

Thank you for your consideration.

<u>Name</u>	<u>Address</u>	<u>Phone</u>
Arlene Casle	Box 32, Healyburg AK	285-3044
Patricia Gardner	Box 1, Carc, AK	826-3288
Ray Pearce	10 Box 15, Hollis	
Barlene Kuff	Box 36, Hollis	
Victoria Juzgala	Box 124, Klawock AK	
Mrs. Mrs. William Cox	Box 213, Klawock AK	
Mare Chumovic	PO Box 435, TNB, AK 99919	828-3384H
Doris Hollins	P.O. Box 431, TNB, AK 99919	828-3943
Kenneth Rallis	PO Box 431, TNB, AK 99919	828-3943
Daryl Sellards	PO Box 169, Klawock	255-2382
Ded Sellards	PO Box 169, Klawock AK	99925
Norm Wagner	P.O. Box 483, THORNE BAY, AK	99919
Bob Dait	Box 113, Effron, AK	99950
Carl Wate	" " " " "	99950

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<u>Name</u>	<u>Address</u>	<u>Phone</u>
Neil Sandberg	Box 293 Craig	826-3472
Ralph Merrill	Box 220 Craig	826-3866
Al Donnet	Box 80 Klawock AK	
Jack DeWitt	Gen Delia Kbrock AK	
James Bennett	303 Spruce St. KTN	225-5585
Pete Rice	Box 69 Craig	826-3600
Raymond K. Tice	Box 69 Klawock AK	
Michael J. Smith	Box 1500 Craig	826-3120
Kandy Carney	Box 308 Craig	826-3080
William E. Jones	PO Box 22 Klawock	755-2227
Joe Rallins	P.O. Box 458 CRAIG	826-3911
James S. Williams	Box 164 Klawock	
Ron W. Altman	Box 36 Hollis	
Matthews Cook	Box 22 Hydaburg	

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<u>Name</u>	<u>Address</u>	<u>Phone</u>
D. J. Gilbois	Box 307 Craig	826 3 58
Stephen Shawver	Stebrock	755 2 329
Mike Tilt	Box 229 Craig	826-3 01
Albert Maloy	Box 236 Craig	826-3 257
Harold Schuman	Box 42 Craig	826-33 64
Wanda Pico	Craig	826-36 00
Fred Hamilton Jr.		826-32 29
Mary Lee Perkins	Craig	826-3374
Ray M. [unclear]		826-3027
Ken Jimmy	Craig	826 3130
Edna Pounce	Craig	None
James P. [unclear]	Craig	826-3073
[unclear]	Craig	
Richard J. [unclear]	Craig	826-3521
David [unclear]	Hollis	None
Martha Wehler	"	"
Hollis Public Library	"	"
[unclear]		826-3521
Burt [unclear]		826-3472
David R. [unclear]		826-3152
Chas [unclear]		755-2329
Gary W. [unclear]		755 7329
Bruce N. [unclear]		826-3351
Joe Warner		_____
Charles Thorpe		826-3024
Rose Jacob		826-3585
Jim Jacob		826-3585
Fritz LACOUR		826-3585
Donna LACOUR		826-3585

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<u>Name</u>	<u>Address</u>	<u>Phone</u>
Richard L. Young	20752 ShennSee (Gen Del Craig)	
Mark Gillespie		Gen. Del. Craig
Leon Kelly	P.O. Box 333 Craig AK	
John Childer	Box 19153 Thorne Bay AK	828-3909
Janice Enright	" " "	" "
Larry Lemons	Craig AK	826-3140
Don Kraine	Klawock AK	
Alfred Dennis	Box 71 Craig 99921	
Larry Lowrey	Craig 99921	
Arnold R. Cottrell	Craig 99921	
H Paul Warren	Craig 99921	826 8197
Charles Nichols	" " 99921	826-3332
Bruce Minksen	Craig 99921	826 3893
Hollis Bill Downie	Craig 99921	825 3340
Juan Williams	Klawock 99925	755-2348
Don Howell	Craig 99921	826-3742
Paul Sharp	HYD 99922	825-3442
Sal Wilkin	Box 127 KLA AK 99925	755-2303
Ken Keyser	PO BOX 403 CRAIG 99921	826 2536
Jim Bernhard	Box 33 HYDABURG	285-3202
Steven Bernhard	Box 33 Id. Id. AK	285-3202
ROBERT WETHERELL	PO Box 500 CRAIG AK 99921	826-3338
Dale Lehman	PO Box 863 Walepuss Ketchikan AK 99950	
David L. Grant	Box 89 Hyd Alaska 99922	
Agonithia Yates	Box 156 Craig, Ak.	9902
John A. Thorne	Box 130 Thorne Bay AK.	99919
Donald J. Staples	Box 130 THORNS BAY	828 3346
Michael S. Walker	Gen. Del. CRAIG 99921	

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<u>Name</u>	<u>Address</u>	<u>Phone</u>
James A. Gault	Box 19425 Thane Bay	828-3368
Lewis O Johnson	Gen Po Craig	
J.R. Thomas	P.O. BOX 306 CRAIG AK 99921	
J. Starnard	Box 121 CRAIG 99921	
J. Costales	Box 374 CRAIG 99921	826-5800
Harlan Bruy	Box 92 Klawock AK 99925	
B. Cliff Duffla	Box 29 CRAIG AK 99925	
Ernie Nelson	Box 225 Klawock	
Christine Vandeyne	Box 121 Klawock AK 99925	
Phil Hyatt	GEN D. CRAIG 99921	
Robert Owest	P.O. Box 232 CRAIG AK 99921	
Rose E. Kato	Box 35 Kluw. AK 99925	
Leonard Kato	Bx 35 Kluw. AK 99925	
Quone Duke Hobart	Box 84 Craig AK 826-3800	
Jack Meyers	San Pedro Craig AK	
Lorena Macasart	PO Box 2 Klawock AK 99925	
Albert P Macasart	PO Box 2 Klawock AK 99925	
Justine Macasart	PO Box 2 Klawock AK 99925	
Paul C. Johnson	Box 58 Klawock 755-2381	
Joe Warner	PO Box 280 Craig AK	
Tom Wray	Klawock AK	
Mr. Wood	(016) Klawock AK	
Robert Johnson	Craig	
Mary E. Gregg	Craig AK 755-2378 Box 444	
Walter Gregg		
James Mackie	P.O.B 162 CRAIG AK	
James Mackie	P.O 295 Craig AK	
Dennis Strawn	PO Box 314 Craig AK	
Terrence J. Hall	PO Box 86 Craig AK 99921	

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<u>Name</u>	<u>Address</u>	<u>Phone</u>
Jay Mickelson	Box 209 CRAIG	826-3400
B. J. J.	Box 144 CRAIG	826-3348
Maureen Rudolph	Box 144 CRAIG	826-3635
Bob Bashon	Box 193 CRAIG	826-3348
Russ Williams	Box 208 Klawock (Spruce Circle Harris River Valley)	755-2348
Karrie Sadler	Box 75 CRAIG	826-3273
Roger Sadler	Box 75 CRAIG (HARRIS RIVER SUBDIVISION)	826-3271(WK)
Charles L. Thompson	Box 341 CRAIG	(826-3475)
Charles J. Beck	Box 328 Thorne Bay	828-3913
Deborah Hill	Box 48 CRAIG AK	826-3533
Henry McNeill	Box 13 Klawock AK	755-2374
Constance McNeill	Box 13 Klawock	755-2374
Yvonne Jackson	Box 26 Klawock	755-2922
William J. Woodruff	Box 9430 THORNE BAY	828-3377

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Thank you for your consideration.

620

<u>Name</u>	<u>Address</u>	<u>Phone</u>
Fred Lund	PO Box 155 Klavock	7552287
Henry Mc	Sen Del Klavock	
Erin Deaton	Nankati	
Dr. Akley	Box 17 Hollis	
Nelly Akley	Box 17 Hollis	
Robert K. Hansen	P.O. Box 19248 Thorne Bay	
Gayle M. Gault	Craig AK 99921	
Ross M. Gault	Box 1600 Craig AK 99921	
Paul Mata	Box 183 Craig AK 99921	
John Wayne	Box 141 Craig AK 99921	
Gandra Mickelson	Box 209 Craig AK 99921	
Ernie Wear	Box 125 Klavock AK 99921	
Bonnie Z. North	Craig AK 99921	
Philip Walters	Box 309 Craig AK 99921	
Tony Martin	PO Box 217 Klavock 99921	

ALASKA STATE LEGISLATURE - SENATE

SENATOR RICHARD I. ELIASON

RULES COMMITTEE, CHAIRMAN
LABOR & COMMERCE COMMITTEE, VICE CHAIRMAN
LEGISLATIVE COUNCIL
RESOURCES COMMITTEE
FISHERIES SUBCOMMITTEE, CHAIRMAN



P.O. BOX 143
SITKA, ALASKA 99835

P.O. BOX V
JUNEAU, ALASKA 99811
(907) 485-4016

906-285-1733

September 22, 1988

Mr. Robert S. Grimm, President
Alaska Power and Telephone Company
P. O. Box 222
Port Townsend, Washington 98368

Dear Mr. Grimm:

Thank you for your telephone call and for your recent letter concerning AP&T's efforts to secure financing to construct an electrical system to supply power to the community of Hollis.

I certainly support a loan being made to AP&T for this purpose, however I am sure you understand that I am not in a position to make a commitment that funds will be available. I am committed to the concept of making state money available on a loan basis to facilitate electrical power being supplied to rural Alaska, and I will work together with APA in an effort to obtain the moneys to fund projects of this kind.

According to Brent Petrie of APA, some of the projects which have been in progress during the current construction season will be in the process of being closed out in October and November. In December APA will reassess its capital budget situation to determine whether sufficient savings have been incurred to enable the agency to re-direct some of the funds to other projects. I hope that AP&T is he able to obtain funding in this way before the next construction season begins, thus obviating the need for an additional appropriation to the power project loan fund.

In addition, APA is looking at possibilities for re-structuring its loan program in order to better meet the state's energy needs. I will be following developments in this area with great interest, as the issue of providing affordable power to rural Alaska is of great concern to the majority of my constituents. There will likely be proposals

Mr. Robert S. Grimm
Sept. 22, 1988
page two

on the table for consideration by the legislature during the next legislative session, which convenes in January.

Please keep me informed of developments at your end, and I shall do my best to be of assistance.

Sincerely,

A handwritten signature in cursive script, appearing to read "Dick", written in dark ink.

Senator Dick Eliason

ALASKA POWER & TELEPHONE COMPANY

P O BOX 222 • 702 WATER STREET
PORT TOWNSEND, WASHINGTON 98368
(206) 385 1733

January 18, 1989

Senator Eliason
State of Alaska
P.O. Box V
Juneau, Alaska 99811

Re: Hollis Electrification

Dear Senator:

Alaska Power & Telephone Company is the utility providing the communities of Craig and Hydaburg with power & telephone services. In addition, we supply Tlingit & Haida Regional Electrical Authority (THREA) wholesale power at Klawock. We are currently developing the electrical and telephone systems for the community of Hollis. The Alaska Public Utilities Commission has added the Hollis area to our authorized service area. This would have allowed us to construct the systems and begin operations during 1989. However we no longer have a source of financing for the project.

We were planning on borrowing the funds necessary to construct the electric system from the Alaska Power Authority. We recently received correspondence which indicates APA no longer has funds available to loan us. We only need \$350,000 to construct the electric system. We were relying on APA to provide us financing and view this as a serious set back. This project is included in the APA's FY90 Loans Budget.

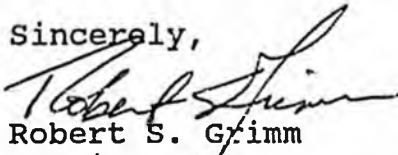
We have the support of the local community organization to construct these systems and were hoping and promising to construct the systems during 1989. I have been unable to find conventional sources of funds that are affordable. This points out the need for some type of loan fund administered by the APA. I understand APA staff plans to re-introduce legislation for the 1989 session which, if adopted, would create an alternative to the present loan programs. The new program would lend money raised through the issuance of revenue bonds for power projects such as Hollis. I think this is needed badly. Power projects in rural Alaska are not attractive to conventional lenders and result in higher rates for electrical power in those areas.

I would like your assistance in seeing if there is a way to fund or if committed but unused funds are available from the APA to make construction of this project feasible during 1989. We are not requesting a grant, we will repay the APA plus interest.

I have enclosed copies of a Petition that is being circulated on Prince of Wales Island. The electrification of the Hollis area has the support of a large number of citizens on the Island. Although the Petition does not specifically endorse the proposed legislation that has been introduced that would allow the APA to sell bonds to fund loan programs for projects such as Hollis, I think it is clear that the petitioners are in favor of a loan program for basic utility projects which are badly needed yet unattractive to conventional lenders.

If you need additional information or have questions, please feel free to contact me.

Sincerely,



Robert S. Grimm
President

cc Hollis Community Council
Robert E. LeResche-APA
Greg Mickelson-AP&T

PETITION

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Thank you for your consideration.

Name Address Phone

Henry J. Julian Box 33 Hollis 99958

Ray Halvorsen P.O. Box 278 Craig, Alaska 99921 ^{LOT 47 HARRIS RIVER}

Calvin W. Jensen Box 22 Hollis, AK

Robert J. Cahoon Box 133 Klawock Alaska 99925

John Thomas Lot 30 HARRIS RIVER subdiv.

Lewis M. Hunt Box 16 Hollis, Alaska 99950

Paul Chase Box 1 Hollis AK 99950

Johnny Laine Box 20 Hollis AK 99950

John Rommen Box 21 Hollis, AK 99950

Mike Mawer Box 21 Hollis AK 99950

Marty Sharp Box 8 Hollis AK 99950

Alvin Rommen Box 21 Hollis, AK 99950

Theresa Foushard Box 448 Craig AK 99921