1138 SRES SB 294

PUBLIC INVOLVEMENT AND COORDINATION

The objective of public participation is to further involve the public in the project feasibility study, in order to insure that the study responds to public views and preferences to the maximum extent possible. As used here. the term "public" includes other Federal, State, and local government entities and officials; public and private organizations; and individuals interested or potentially interested in the Susitna project.

SUMMARY OF PREVIOUS PUBLIC INVOLVEMENT

In conjunction with the 1976 Corps of Engineers feasibility study, numerous comments were received at public meetings and from written statements on the report findings and reccommendations. Over 65 agencies, organizations, and individuals have provided written comments or oral testimony. In general, comments focused on the need for additional studies before a final decision on construction of a project of such magnitude. The Chief of Engineers has responded to all comments received during review of his draft report and companion Environmental Impact Statement and agreed that additional studies are required before a recommendation can be made for construction. The activities outlined in this plan of study reflect public comments and concerns expressed on the 1976 feasibility report.

Comments of Governor Jay Hammond expressed in his letter of November 17, 1976, to the Chief of Engineers are quoted as follows:

> "I concur in the recommendation by the Board of Engineers report that further study effort is needed for a project of this magnitude. I agree that additional detailed studies, including those addressed by my task force, will be required to determine the significant impacts associated with the magnitude and complexity of the project. Our task force recommendations will be supplied to the District Engineer.

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FISH AND WILDLIFE

Both resident and anadromous fish inhabit the Susitna Basin. Salmon are known to spawn in many of the sloughs and tributaries of the Susitna River below Devil Canyon; however, surveys indicate that salmon may be unable to ascend the turbulent Devil Canyon and thusly be prevented from migrating into the Upper Susitna River Basin. Grayling, rainbow trout, lake trout, Dolly Varden, whitefish, and burbot comprise the principal resident fish populations.

Mammals and birds found in the Upper Susitna Basin are representative of wildlife species common to interior Alaska. Important game species consist of moose, caribou, and Dall sheep. Wolves, wolverine, bear, and smaller fur bearers inhabit the basin. Birds are predominantly seasonal, and include waterfowl, raptors, and passerine species. The peregrine falcon is the only rare or endangered species presently known to frequent or inhabit the basin.

"The information obtained from the District Engineer concerning studies proposed in the next stage coincides well with the environmental, socio-economic and technical studies identified by the State Task Force during review of the Draft Environmental Impact Statement. As these detailed studies are addressed, coordination should be maintained with the State's designee to assure that assessments are answering those points raised in the task force report and to insure that the information developed will be adequate on which to base future State recommendations."

INTERAGENCY COORDINATION

Coordination will be carried out on a continuing basis with Federal, State, and local agencies having interest in the study. Should the planning for Susitna hydropower proceed in the joint State-Federal mode, an extremely close working relationship is envisioned between the Corps of Engineers and the State of Alaska. To ease the coordination problems inherent in a planning program of this magnitude, a single point of contact would be established for the State and a single point for the Corps of Engineers. These would be the Alaska Power Authority on the one hand, and the Alaska District on the other. This State agency would coordinate State reviews of study progress, and formulate feedback into a consolidated State position. The Alaska District would be responsible for and would coordinate all study activities, thus serving as the point of interface between the State and those engaged in accomplishing the project feasibility analysis. Included in this group would be various Corps of Engineers elements, other Federal agencies, private consultants, and State agencies, such as the Department of Fish and Game, that will provide special technical services.

In addition to the ongoing coordination with agencies at all levels of government, there will be an opportunity for formal review and comment after distribution of the draft Project Feasibility Analysis Report and accompanying draft supplemental Environmental Impact Statement. The substance of all comments received will be incorporated in the final report and impact statement supplement.

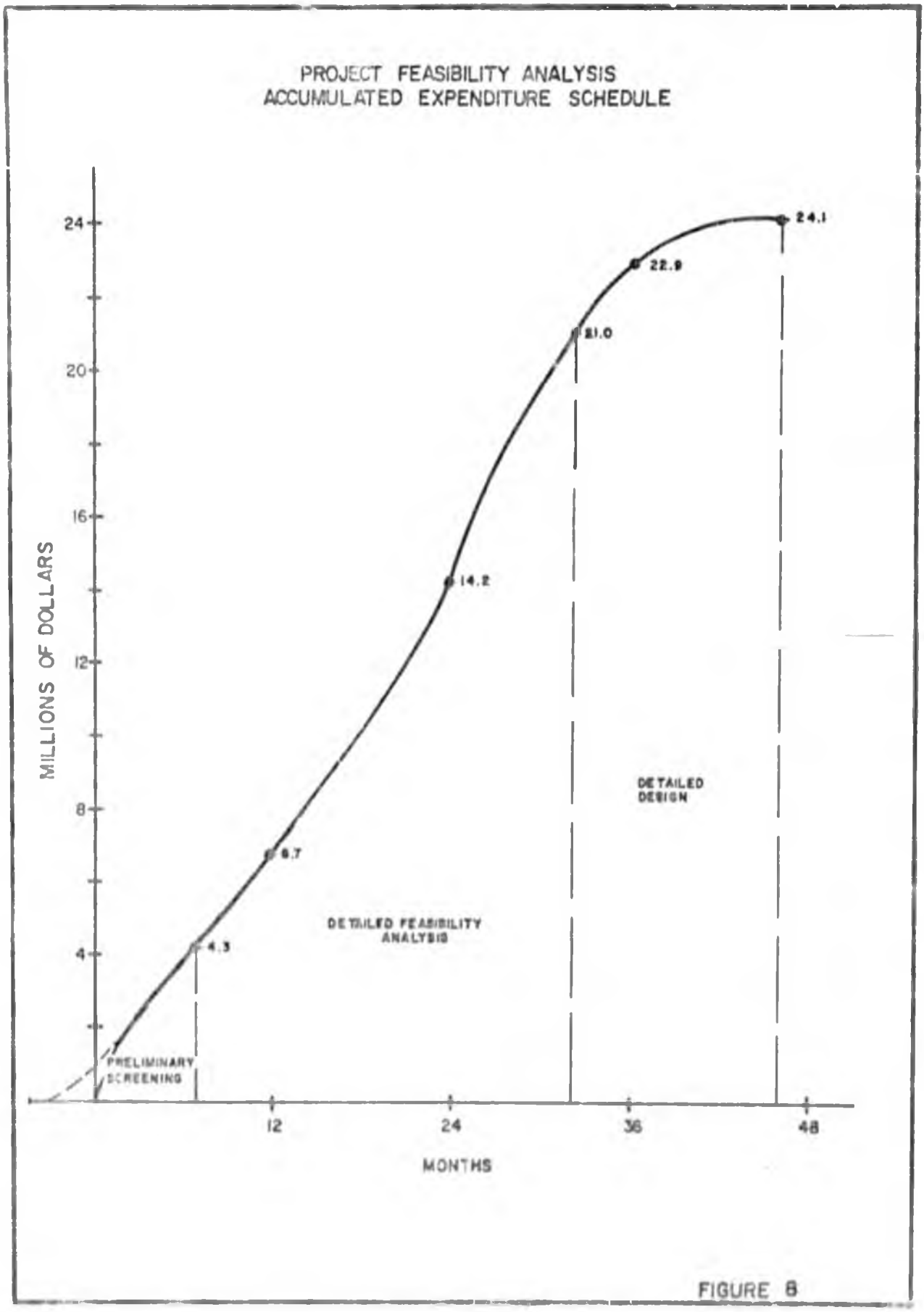
PROJECT FEASIBILITY ANALYSIS
ACCUMULATED EXPENDITURE SCHEDULE
MILLIONS OF DOLLARS
24
20
16
12
8
4
24.1
22.9
21.0
14.2
6.7
4.3
PRELIMINARY SCREENING
DETAILED FEASIBILITY ANALYSIS
DETAILED DESIGN
12
24
36
48
MONTHS

FIGURE 8

DESCRIPTION OF PROGRAM ACTIVITIES

This section contains descriptive summaries and cost estimates for each of some 201 separate activities grouped into 14 major categories. These activities and costs include all items required for the preliminary screening, for the detailed feasibility studies, and for the detailed design activities associated with the initial dam and powerhouse along with transmission lines and access road. A listing of the major categories and cost subtotals follows:

CATEGORY	ACTIVITIES	ESTIMATED COST (in $1000)
Survey	SY-1 thru SY-7	$ 1,130
Hydrology	HY-1 thru HY-27	1,295
Environmental Water Quality	EN-1 thru EN-4	330
Economic Studies	EC-1 thru EC-7	84
Recreation	R-1 thru R-4	56
Plan Formulation	PF-1 thru PF-15	124
Power Studies	PS-1 thru PS-4	198
Power Market Studies	PM-1 thru PM-13	547
Foundations and Materials	FM-1 thru FM-26	9,770
Design	D-1 thru D-39	4,001
Real Estate	RE-1 thru RE-5	59
Cultural Resources	C-1 thru C-2	110
Field Camp	FC-1 thru FC-2	1,625
Biological Studies	B-1 thru B-21	4,263
Reports, Reviews, and Public Participation	RRP-1 thru RRP-26	450
TOTAL COST		$24,092

Per Cheryl 2/24/80 From Anchorage Hearings

SB 294 suggestions:

William Wood, Mayor, City of Fairbanks

add to purpose of project that it include other communities as well as the "entire railbelt area"

Vince O'Reilly, Mayor City of Kenai

other financing options should be added such as it shall be financed by any other appropriate source either private or government

Dave Hutchens

page 2, section (5) ~~OR~~ add to the information that the legislature should provide should include the interim recommendation of the Akers-American feasability study

MIKE GRAVEL
ALASKA

United States Senate

WASHINGTON, D.C. 20510

May 25, 1977

Honorable Jalmar M. Kerttula
Alaska Senate
Pouch V
Juneau, Alaska 99811

Dear Jay:

Most of Alaska's electric power is generated by fossil fuels. As a result of the growing scarcity of our non-renewable energy sources the cost of electricity in Alaska will continue to increase. If we hope to sustain economic growth while maintaining our environment we must look to renewable sources for the generation of electricity.

I have enclosed for your information an update on the hydroelectric development of the Susitna River. This project is capable of supplying a significant portion of our electric needs at low rates. I feel that this project is very important for the future of Alaska and hope that we can all work together to bring low cost electricity to our state.

If you have any questions about the project or would like to comment on any aspect of the development please feel free to contact me.

Sincerely,

Mike Gravel

RUSSELL B. LONG, LA., CHAIRMAN

HERMAN E. TALMADGE, GA.
ABRAHAM RIBICOFF, CONN.
HARRY F. BYRD, JR., VA.
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WILLIAM V. ROTH, JR., DEL.
PAUL LAXALT, NEV.
JOHN C. DANFORTH, MO.

MICHAEL STERN, STAFF DIRECTOR
GORDON S. GILMAN, CHIEF MINORITY COUNSEL

United States Senate

COMMITTEE ON FINANCE
WASHINGTON, D.C. 20510

May 27, 1977

I believe you have already received a letter intended to accompany my recent update on the Susitna Power Project.

The Report itself was inadvertantly omitted, and it is enclosed here. Please accept my apologies.

Sincerely,

Mike Gravel

THE SUSITNA POWER PROJECT

A Report to Alaskans

by

Senator Mike Gravel

Chairman, Water Resources Subcommittee
Committee on Environment and Public Works

May 23, 1977

INTRODUCTION

The Susitna Power Project holds the promise of plenty even in the midst of plenty for the state of Alaska.

Even as the state reaps the revenues of its North Slope oil, citizens of Alaska can be enjoying an energy supply which, unlike petroleum, will be environmentally clean, increasingly cheap as the years go by, and virtually inexhaustible. While we export oil to the Lower 48, we can ourselves take advantage of one of Alaska's great renewable resources: water power.

The project, which involves the construction of two large dams on the Susitna River, about halfway between Anchorage and Fairbanks, can supply more than 60 per cent of the power needs projected for the railbelt area by 1990. As proposed, it will involve a new method of financing which can bring about construction in record time -- a feat which saves money in interest costs -- while having more financial, engineering and environmental safeguards than other dam projects.

The dams can belong to the state rather than the federal government. And through price equalization, they can help bring what will be some of the hemisphere's lowest-cost electricity not only to the railbelt area (now with 75 per cent of the state's population), but throughout all of Alaska.

BACKGROUND

Alaska's water resource is truly vast. One third of the freshwater runoff of the entire nation is found in Alaska. The Yukon River is North America's third largest. More than half the hydropower potential remaining in America is in our state.

Studies have been conducted over the last 25 years to identify viable hydropower sites in the state, especially in the relatively populous railbelt area, which encompasses the communities on the Fairbanks-Anchorage-Seward rail line.

The Bureau of Reclamation first brought attention to the possibilities of the Susitna in a 1953 report. Another Bureau study was released in 1961, recommending the construction of a dam on the Susitna at Devil Canyon. This recommendation was not pursued, and two events intervened to delay further consideration of a Susitna hydroelectric project.

The first was the abortive Rampart Dam proposal. Sen. Ernest Gruening, who held the same position I now hold on the Public Works Committee, proposed, with the Army Corps of Engineers,

a huge dam at the Yukon's Rampart Canyon 100 miles northwest of Fairbanks. A heated national debate arose over the environmental liabilities of the Rampart proposal, and a subsequent cost/benefit analysis showed the project to be economically undesirable.

The Rampart proposal was dismissed just as a second water crisis arose: the 1967 flood at Fairbanks. For the next several years, the need for flood control drew attention away from the question of hydroelectric development in the state.

In 1972, however, the Senate Public Works Committee ordered the Corps of Engineers to renew the study of power options, including hydroelectric potential, for the railbelt. By the time I became chairman of the Water Resources Subcommittee in 1973, the Corps was reporting that preliminary data pointed to the Susitna at the Devil Canyon site. Its location, its high power potential, the stabilizing effect it could have on the energy systems of the railbelt area and the fact that it would reduce the need for new fossil fuel plants in Alaska: all these factors were in its favor. I acquired accelerated funding for the study, and last year the Corps finalized its recommendation.

The Corps suggested to the Congress a $1.5 billion project composed of a 635-foot concrete dam at Devil Canyon, 14.5 miles east of the Alaska Railroad at Gold Creek, with four 194-megawatt generating units; and an 810-foot earthfill dam at the Watana site, 31 miles upstream from Devil Canyon, with three 264-megawatt units.

The Watana Dam would be built first. Together the dams would generate an average 6.91 billion kilowatt hours per year. According to the Corps, demand for electricity in the railbelt area, presently about 2 billion kilowatt hours annually, will reach 5.5 billion by 1980 and 15 billion by 2000.

Watana would be on line in 1986, Devil Canyon in 1990. They would comprise the largest project in Corps history -- in fact, the largest hydroelectric development in North America.

FINANCING -- THE OLD WAY

At first glance, the prospects for a dam project on the Susitna would seem very bright.

The site is particularly well-suited to hydroelectric development. Environmentalists had cited it during the Rampart

controversy as a preferable alternative because it would do relatively little harm to fish and wildlife habitat. And as chairman of the Senate subcommittee, I was in a position to support the project.

But in my committee work, I had learned that the prospects were in fact not bright for any hydroelectric project, no matter how promising the project might be. Furthermore, the prospects were declining year by year.

The traditional method of financing a federal hydroelectric project is through Congress's dual procedure of authorization (basically, permission to act) and appropriation (making money available for the action). These two distinct functions must be completed for each step in the making of the dam.

The initial surveys, a plan of study for Phase I, Phase I itself (involving advanced engineering and design, a final environmental impact statement and cost/benefit economic analysis), and the actual construction: all of these, must be separately authorized, and money than appropriated. Furthermore, although authorization is needed only once for each phase of the project, the money is appropriated only as needed on a yearly basis. This means that, during the long planning and conceptual phase, Phase I, and during the construction phase, appropriations must be made again and again, year after year, for a single project.

All of this is time-consuming in itself. But more than that, the appropriations process is a political, and hence a relatively capricious, one. It is subject to all the winds of the American political process, including the popularity or unpopularity of dams and federal projects in general. These funds must compete with all other appropriations.

Engineers may know the right amount of money to request year by year in order to complete a project on an optimun schedule. But members of Congress like to think of themselves as hard-nosed on the subject of federal spending, and members of appropriations committees are often likely to trim the requests that come before them.

The result of this process is predictable. In the case of federal water projects they are never finished on schedule. They drag on, sometimes for several decades, and costs go up.

A few examples are instructive:

The Harry S. Truman Dam and Reservoir in Missouri is a multi-purpose project which was authorized in 1954. Construction money was first appropriated in 1965. Total project cost at that time was estimated to be $129.5 million, and completion was scheduled for 1971. Now, in fiscal year 1977, the cost estimate has climbed 219 per cent to $413 million. The project is 51 per cent done, and is scheduled for completion in December 1980, 26 years from original authorization.

The Tennessee-Tombigbee waterway in Alabama and Mississippi will provide a connecting waterway system considered to be national in scope. It was authorized in 1946 at an estimated $120 million. Construction funds were first appropriated in 1971. The estimated total cost at that time was $361.3 million. The 1977 cost estimate for this project is $1.5 billion. It is 6 per cent complete and the estimated completion date is March 1986, 40 years from original authorization.

The Lower Granite Lock and Dam in Washington, part of the Lower Snake River Multiple Purpose Project, was authorized in 1945 at an estimated cost of $82 million. Construction was initiated in 1965. The project is now 9% per cent complete and the total estimated cost is $310 million. Date of completion is now scheduled for September 1979, 34 years from original authorization.

It has taken an average of 18 years from the time of authorization to first construction monies. Construction when initiated has been prolonged an average of five years, or a third longer than engineering schedules would require.

It should be pointed out that the Corps of Engineers suffers the criticism for cost overruns when in fact most overruns are a product of erratic cash flows necessitated by federal budget constraints.

It is also worth pointing out that the named above projects lie within the home states of some of the Senate's most powerful members: John McClellan, James Eastland, John Stennis, Warren Magnuson and Scoop Jackson. If these men have not succeeded better in advancing projects essential to their states, I can't be very sanguine about the chances for the Susitna project under the Congressional appropriation process.

The fact is that federal funding for water projects has been declining for years, even though the nation's hydroelectric capacity could be doubled. It could provide non-polluting, renewable energy and, in effect, help conserve petroleum. I myself would favor an aggressive national hydroelectric policy.

But the conclusion is inescapable that in the competition for federal dollars, the priority given to water projects is slipping lower each year. The total Corps of Engineers program is currently being funded at a rate less than half that of ten years ago. The current budget includes no new construction starts and very few new survey starts.

Ten years ago, nearly 75 per cent of the Corps' appropriation was for construction; 14 per cent was for operation and maintenance. Today construction accounts for only 58 per cent of the Corps' budget; operations and maintenance account for 27 per cent.

Funding was terminated this year for 21 ongoing Corps projects. And my prediction to the legislature last year that a change in Administrations would not mean a change in this policy has been borne out: one of President Carter's first actions was to threaten water projects underway in all parts of the country.

Already, then, it seems an inopportune time to propose a new project, the largest ever, for the Corps of Engineers. But there is yet another strike against the Susitna proposal, one which makes adequate funding for the project appear virtually impossible.

THE IMAGE OF ALASKA

Alaska's energy wealth, in particular its pipeline wealth, is no secret in Washington. In fact, stories of pipeline salaries seem to make a more vivid impression on national legislators than do the much more widespread instances of high costs for basic materials and services.

Alaska experienced a boom while most of the country underwent a recession. No matter that the blessings of a boom are very mixed. A Congressman who hears of a single 17-year-old Alaskan making a $50,000 salary as a surveyor becomes suddenly unsympathetic to the true, pervasive problems of our state.

Throughout its history as a state, Alaskans approached the Congress with the explanation that "things are different here" and "things are harder, and they cost more." This is all true, and Congress has responded: as recently as 1974, Alaska received more than twice as much in federal dollars as we paid in taxes. In highway construction and in federal land revenues, we enjoy a higher share of U. S. money than any other state.

In 1974, in fact, the government spent more per capita in Alaska than in any other state. Only in Washington, D. C. was more federal money spent per person.

In recent years, it has become apparent that our welcome is wearing thin. Alaska is to become the wealthiest state in the union. Why, a congressman asks himself, can't we pay our own way?

This situation is especially applicable to the Susitna proposal. The Corps estimates ten years for construction under optimum funding. At an estimated cost of $1.5 billion, this averages out to $150 million per year. That is 12 per cent of the total Corps construction budget for the entire country in 1977.

If that budgetary level were to remain constant over the next decade, we would have one project using, for ten years running, some 12 per cent of the total construction funds for all 50 states. And this would be for the benefit of little more than one-tenth of one per cent of our nation's population.

One thing was clear: it wasn't going to happen that way.

FINANCING -- A NEW APPROACH

How, then, could the Susitna project be b ought about? How could we even fund the $20 million Phase I w.rk, without which we could not be positive of the feasibility and the desirability of the project?

At lunch one day with Maj. Gen. Ernest Graves, chief of the Corps' Civil Works division, I found myself asking a familiar question: "Why not pay for it ourselves!"

The state could sell revenue bonds to pay the Corps to study and eventually to build the project. We would still have the advantage of federal guarantees during construction. But when the dam was finished, it would be the property of the state of Alaska, not the federal government.

Perhaps most important, if the state sold revenue bonds to pay for construction, we could be sure that the money would be available when it was needed. That would mean optimum scheduling, which would lower the cost of the dam and get power on line quickly.

I came to Alaska in February to discuss this plan with state officials, utility executives and all interested parties. The concept was well-received.

I then presented the plan to the legislature. In its refined form, it looked like this:

Through Congressional legislation, a $25 million revolving fund would be established. The money in the fund would be used to guarantee state bonds issued to pay for Phase I work on hydroelectric projects. If it was determined in Phase I that the dam should not be built, the federal government would pay off the state's bonds. The state in other words loses nothing if the project proves to be ill-advised, either because of reasons of engineering, environme t or economics.

If it was decided to go ahead with the project, the state would issue new bonds which would, 1) pay off the Phase I bonds, thus reimbursing the government for the Corps' work; and 2) pay for the construction of the dam, either by the Corps or by other private contractor. The bonds would be repaid through the sale of electricity from the project.

An Alaska Power Authority would also have to be created to handle the bond issues and run the project. State Reps. Jim Duncan and Red Swanson had already introduced legislation creating such an authority before I addressed the legislature, and this was approved a short time later.

I introduced the Hydroelectric Power Development Act in 1976 to create the revolving fund, and it was reported by the Public Works Committee in September as part of the Water Resources Act.

(In an ironic twist, the House-Senate conference committee refused to believe that the $25 million bond guarantee fund was simply that. They altered the title and the authorization so the bill became the Alaska Hydroelectric Power Development Act, making Alaska the only state eligible for the benefits of the revolving fund.)

After the bill was passed and signed into law last fall, I organized meetings between the Corps, bond attorneys and state officials. Two more needs were identified: 1) the Corps needed $100,000 to complete a Plan of Study for the Phase I work; and 2) clean-up language was needed in the authorizing bill to make clear the liability for litiginous cost overruns.

The state agreed to put up the $100,000. To have that money authorized and appropriated by the Congress would have delayed the project a year.

The clean-up language is part of this year's omnibus water bill, now reported to the Senate by the Environment and Public Works Committee.

In a word, the detailed Phase I study, meant to enable the Corps to give a firm recommendation for or against the Susitna project, is on its way. What remains to be done is to secure the passage of the clean-up language; finish the Plan of Study and pay for it; appropriate the first $6 million of the $25 million revolving fund, needed to guarantee the state's bonds; secure a resolution from the state legislature authorizing the sale of the bonds, and sell the bonds. The Corps says that if it begins next spring, Phase I recommendations can be completed by 1980.

One other facet remains. My original legislation provided for thorough independent critique of each of the segments of the Corps' Phase I report: engineering and design, environmental impact statement, and cost/benefit analysis. This provision was inadvertantly omitted by the House-Senate conferees, and I was unable to have it reinstated in this year's omnibus bill. It is my hope that the state power authority would provide for such an independent critique of the Corps' work.

ADVANTAGES

The Hydroelectric Power Development Act was originally conceived out of necessity: we simply needed an alternative to the traditional financing method, because it was clear the Susitna project could not be financed that way. As it was developed and refined, however, we recognized a number of unexpected advantages that come from the alternative financing method.

A great hydroelectric project could be completed in ten years, not 30 or 40. Not only did this mean power on line more quickly, but it meant lower construction costs. Even the higher cost of Wall Street bonds, as opposed to federal money, would be more than counterbalanced by the savings effected by an optimum construction schedule.

At the end of construction, the dam would be owned by the state. This would give the state great flexibility to provide low-cost power throughout Alaska. This is because when the construction bonds are paid, the huge power output from the project would be extremely low-cost, the operating and maintenance costs of hydro projects being very small and there being no fuel costs. The state, through its power authority, could equalize electricity rates throughout Alaska so that all residents would share in the benefit of state ownership.

Even in spite of its eventual ownership, however, the state's risk in minimized. The experience of the Corps in dam building is unassailable. The thorough Phase I study assures a reliable go or no-go decision -- and if the decision is no-go, the state does not pay the Phase I costs.

Finally, the procedure offers more discipline for safety. A traditional project undergoes the scrutiny of the Corps and the Congress. Projects under the Hydroelectric Development Act would undergo not only this scrutiny, but also that of the state power authority, the state legislature, the national bond market -- and hopefully a qualified independent source to critique the Corps' work.

ALASKA POWER AUTHORITY

333 WEST 4th AVENUE - SUITE 31 - ANCHORAGE, ALASKA 99501

Phone: (907) 277-7641
(907) 276-2715

April 30, 1980

Honorable Bill Sumner
Alaska State Senate
Pouch V
Juneau, Alaska 99811

Dear Senator Sumner:

It has been brought to my attention that there is misunderstanding concerning funding needs for the Susitna Hydropower studies. FY '81 requirements remain unchanged from those submitted by the Governor: $7.5 million in the supplemental budget request, and $3.3 million in the normal capital budget request for a total of $10.8 million. This level of funding is the minimum needed to allow the Power Authority to remain on its "critical path" of 30 months. The program additions recommended by Arlon Tussing (costing an additional $1.4 million) could be incorporated into this 30 month program if the Legislature desired.

There has been an exhaustive effort made to initiate this very complex program. Thus, in the event the project is found to be feasible in roughly the February 1981 time frame, should prior actions have been taken by this Legislature that would preclude or restrict funds that would normally have been expended in parallel with next year's legislative decisions on FY '82 Susitna appropriations, the entire program would be in serious jeopardy of grinding to a halt.

The termination of logistics, geotechnical and biological data collection contracts, as well as prime contractor, sub-contractor, Power Authority staff, and Native agreements would occur as a result of nonavailability of program funds. Should this occur, it would be virtually impossible to reinitiate this level of support in a time frame to salvage our existing program even in the event the Legislature did concur to proceed with the remainder of the study program. In all probability, the FY '82 summer field season and program continuity would be lost.

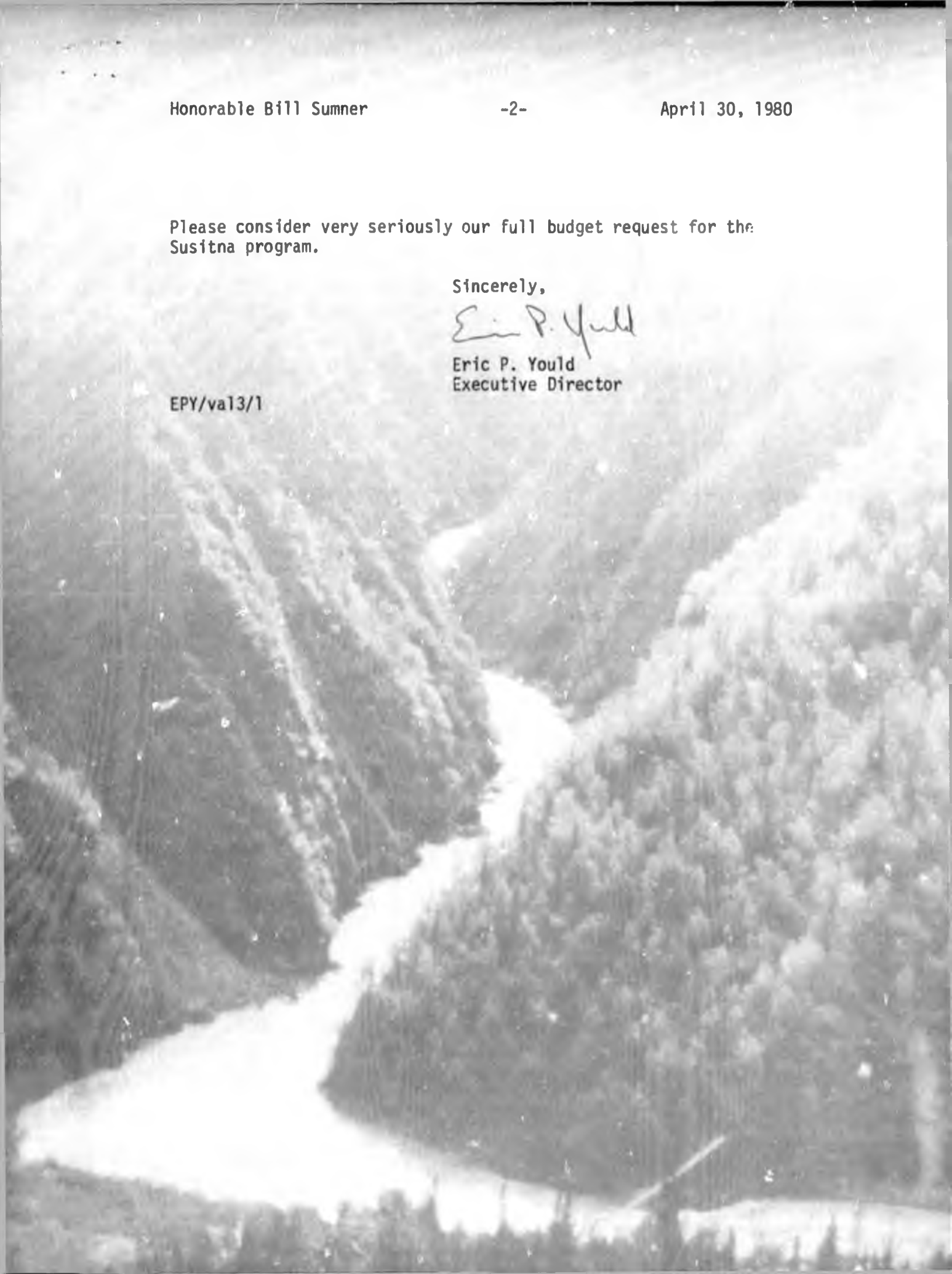
Please consider very seriously our full budget request for the Susitna program.

Sincerely,

Eric P. Yould

Eric P. Yould
Executive Director

EPY/val3/1



ALASKA POWER AUTHORITY

333 WEST 4th AVENUE - SUITE 31 - ANCHORAGE, ALASKA 99501

Phone: (907) 277-7641
(907) 276-2715

March 12, 1980

The Honorable Bill Sumner
Chairman, Senate Resources Committee
Alaska State Legislature
2216 Culver Place
Anchorage, Alaska 99503

Dear Senator Sumner:

In February, Eric Yould, Executive Director of the Alaska Power Authority, sent you a copy of the plan of study for the Susitna Hydroelectric Project and invited you to attend community meetings at which you will receive more information and have the opportunity to influence the manner in which the work within the plan of study is to be accomplished.

The first round of community meetings will be held April 14, 15, 16, and 17, a few weeks later than originally scheduled. Hopefully, the change in schedule will give you more time to review the plan of study and prepare your questions and comments. The meetings will be held:

April 14:	Fairbanks	7:00 p.m.	Traveler's Inn Gold Room
April 15:	Talkeetna	7:00 p.m.	Talkeetna Elementary School
April 16:	Wasilla	7:00 p.m.	Wasilla Junior High School
April 17:	Anchorage	7:00 p.m.	Bartlett High School Yellow Cafeteria (near visitor parking lot) North Muldoon Road (enter Muldoon and Glenn Highway interchange)

We expect this first series of meetings to be informative and dynamic. ACRES, the consultant conducting the plan of study, will present a slide show outlining various apects of the feasibility study. Information summarizing current knowledge of alternatives to the Susitna Hydroelectric Project will also be presented. We will explain the Public Participation Program and the "Action Lists", the primary method for receiving public comment throughout the 30 month period of the plan of study.

After you have been given information, you will have time to ask questions and make comments. Some discussion will take place in small groups where there will be opportunity to share ideas. A written record of the comments of each group will be considered as part of the official record of the meeting. Since the format of this meeting does not allow time for testimony, those wishing to testify may present their comments in writing or tape record their remarks on recorders provided at the end of the meeting. Action List forms will be provided at the meeting; comments

filled out on Action List forms will be reviewed by ACRES and responded to in writing.

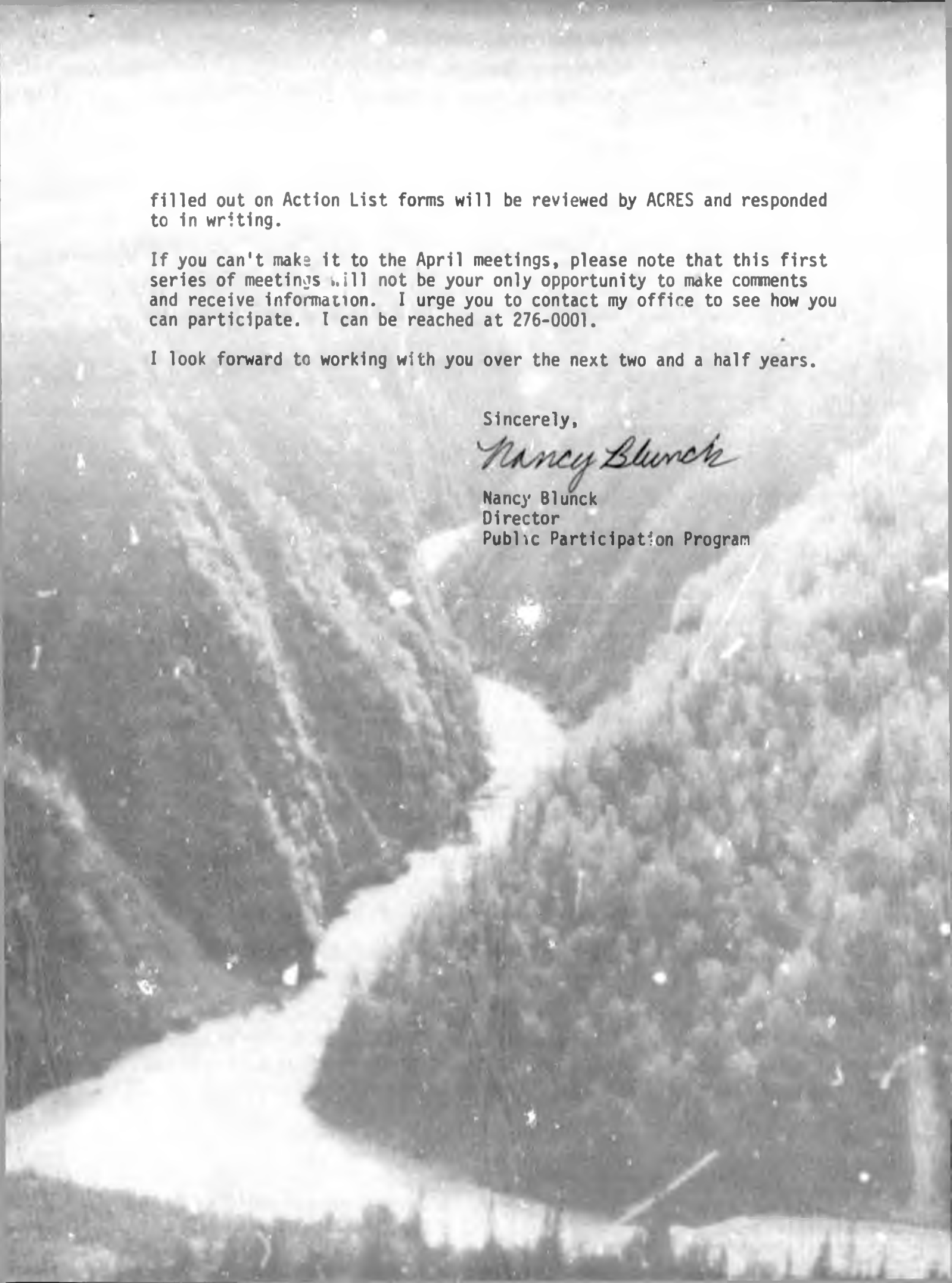
If you can't make it to the April meetings, please note that this first series of meetings will not be your only opportunity to make comments and receive information. I urge you to contact my office to see how you can participate. I can be reached at 276-0001.

I look forward to working with you over the next two and a half years.

Sincerely,

Nancy Blunck

Nancy Blunck
Director
Public Participation Program



ALASKA POWER AUTHORITY

SUSITNA HYDROELECTRIC PROJECT

AGENDA Community Meetings April 14, 15, 16 and 17, 1980

WELCOME	-	5 Minutes	Power Authority
DESCRIBE PLAN OF STUDY	-	25 Minutes	Acres
DESCRIBE ENERGY SOURCES FOR THE RAILBELT	-	15 Minutes	Power Authority
QUESTIONS AND ANSWERS	-	20 Minutes	Power Authority and Acres
TABLE TOP DISCUSSION BY CITIZENS	-	20 Minutes	Power Authority
DESCRIBE PUBLIC PARTICIPATION PROGRAM	-	15 Minutes	Power Authority
DESCRIBE ACTION LISTS	-	10 Minutes	Power Authority
SHORT REPORT ON TABLE TOP DISCUSSION RESULTS	-	20 Minutes	Power Authority and Acres
PERMITS	-	5 Minutes	Acres and CIRI/H&N
CLOSING	-	5 Minutes	Power Authority

After the meeting officially ends, persons are invited to:

1. Submit written testimony.
2. Record verbal testimony.
3. Fill out action forms and turn in that night.
4. Ask questions of Power Authority staff, Acres, or their sub-contractors.

COMMUNITY MEETING -- DATES, TIMES, AND PLACES

April 14:	Fairbanks	7:00 p.m.	Traveler's Inn Gold Room
April 15:	Talkeetna	7:00 p.m.	Talkeetna Elementary School
April 16:	Wasilla	7:00 p.m.	Wasilla Junior High School
April 17:	Anchorage	7:00 p.m.	Bartlett High School Yellow Cafeteria (near visitor parking lot); North Muldoon Road (enter from the Muldoon and Glenn Highway interchange)

ALASKA POWER AUTHORITY

SUSITNA HYDROELECTRIC PROJECT

AGENDA Community Meetings April 14, 15, 16 and 17, 1980

WELCOME	- 5 Minutes	Power Authority
DESCRIBE PLAN OF STUDY	- 25 Minutes	Acres
DESCRIBE ENERGY SOURCES FOR THE RAILBELT	- 15 Minutes	Power Authority
QUESTIONS AND ANSWERS	- 20 Minutes	Power Authority and Acres
TABLE TOP DISCUSSION BY CITIZENS	- 20 Minutes	Power Authority
DESCRIBE PUBLIC PARTICIPATION PROGRAM	- 15 Minutes	Power Authority
DESCRIBE ACTION LISTS	- 10 Minutes	Power Authority
SHORT REPORT ON TABLE TOP DISCUSSION RESULTS	- 20 Minutes	Power Authority and Acres
PERMITS	- 5 Minutes	Acres and CIRI/H&N
CLOSING	- 5 Minutes	Power Authority

After the meeting officially ends, persons are invited to:

1. Submit written testimony.
2. Record verbal testimony.
3. Fill out action forms and turn in that night.
4. Ask questions of Power Authority staff, Acres, or their sub-contractors.

COMMUNITY MEETING -- DATES, TIMES, AND PLACES

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Xns - file in Susitna file

DURING SESSION:
POUCH V
JUNEAU, ALASKA 99811
(907) 465-3701

OUT OF SESSION:
1018 WEST 6TH AVENUE
SUITE 418
ANCHORAGE, ALASKA 99501
(907) 272-4841

BILL SUMNER
Alaska State Senator
DISTRICT 7-E

COMMITTEES:
RESOURCES
CHAIRMAN
FINANCE
RULES
COMMITTEE ON COMMITTEES
JOINT INTERIM COMMITTEE
ON GAS PIPELINE FINANCING

April 16, 1980

Eve Dischner
Susitna Power Now
Post Office Box 981
Anchorage, Alaska 99510

Dear Ms. Dischner:

First, I want to thank you for all the great work you did on making the Senate Resources Committee hearing on the Susitna project such a success. Your efforts contributed immensely to the valuable testimony heard that day and again, thank you.

Now, for the even better news -- included in the supplemental capital budget is a $7 million appropriation for Susitna. I'm confident the monies will survive the scrutiny of the free conference committee and the project will make another move toward becoming a reality.

I hope you'll continue to keep in touch -- and keep up the good work!

Sincerely,

BILL SUMNER, Chairman
Senate Resources Committee

BS/cf

Abstract of
SENATE RESOURCES COMMITTEE
HEARING
on

SENATE BILL 294
"An Act relating to the Susitna River hydroelectric project"

Friday, February 16, 1980

Court House
303 K Street, Room 422
10 a.m.

The hearing was called to order by Senator Jay Kerttula. Also present on the panel were Senators Pat Rodey, Mike Colletta and Ed Dankworth.

The following individuals offered testimony on Senate Bill 294:

EARL MILLER

Benefits of the Susitna project are conducive to attracting industry and an abundance of energy will be a good economic base. Believes it is an excellent project and supports it 100%, along with SB 385 (special appropriation to the Alaska Power Authority for a transmission line).

DR. WILLIAM WOOD, Mayor, City of Fairbanks

Urges prompt action on SB 294. Also believes that the intertie established by SB 385 is one of the top pieces of legislation that will bring the greatest benefit to Alaskans. SUGGESTION: also include in the purpose of the project, other communities as well as the "entire railbelt area"; would like the passage of this piece of legislation to be a binding commitment that when the legislature adopts the Phase 1 construction plan, it mandates issuance of all permits on a timely basis.

CHUCK SMITH, Matanuska-Susitn. Borough

Urged action now on the project and requested prompt funding by the state.

VINCE O'REILLY, Mayor, City of Kenai

Urged prompt, full bringing-on-stream of the project and that the state take advantage of inflation by working out a financing plan. SUGGESTION: page 3, lines 22 - 24 states that financing shall be by appropriations from the general fund. He suggests that "or by any other appropriate source, either private or governmental" be added. (Written comments also included in record).

DOROTHY JONES, Assembly Member, Matanuska-Susitna Borough

Urged prompt passage of both SB 294 and SB 385.

LEE WAREHAM, Co-Chairman, Susitna Power Now

Urged that both projects be undertaken as quickly as possible. It is important to note that these projects may not decrease energy costs, but they will stabilize energy costs into the next century. Potential of hydroelectic power is the replacement of 15,200,000 barrels per year.

STEVE LEVI, Resource Development Council

Urged that action be taken on the two bills now.

MIKE GRAVEL, United States Senator

It is critical that the legislature go ahead with the initial funding of the project because if it doesn't, nothing will happen. Such action will be indicative of the state's firm, long-term committment to the project. At the federal level, it looks like efforts will be successful in getting tax exempt bond status for hydroelectric projects which will mean approximately $400 million the first 10 years. SUGGESTION: establishment of a state revolving fund that the Alaska Power Authority could borrow from for hydroelectric projects.

JOHN CARLSON, Mayor, North Star Borough

Urged prompt action not only because of the inflation free benefits for future energy, but also because of the employment opportunities the project will create at a time when jobs are so badly needed. (Written comments also submitted).

ART KENNEDY

Encouraged action on the Susitna project as well as exploration and development of other hydroelectic projects in the state.

IKE WALDROP, Business Manager, I.B.E.W.

Urged Susitna as a replacement for the state's reliance on fossil fuels.

MALCOLM CHEEK, General Manager, Matanuska Electric Association

Stressed that it is important that efforts are made to acquire competitive financing with a sensitivity to front-end costs so that the cost to consumers doesn't

skyrocket.

WILLARD JOHNSON, Mayor Pro-Tempore, City of Palmer

Presented a resolution by the Palmer City Council urging prompt implementation of the project. (Written comments were also submitted).

ERIC YOULD, Director, Alaska Power Authority

Previously the state had considered Susitna a federal project and four months ago the state decided that it would be a private sector project by the state. Project studies are now underway which are necessary in order to be licensed by FERC. An engineering firm has been contracted with for the field studies. That firm has sub-contracted with Alaskan firms and as a result, Alaskans are already benefiting by being put to work on the project's studies.

JEFF WELTSON, Fairbanks Environmental Center

Commented that there are other sources of energy to develop other than hydroelectric that would minimize impact on life-styles. Concerned that passage of the bill gives a go-ahead on the project, even though the feasability studies have not been completed. Does not believe there is any need for the intertie in the next 10 years and that it is a back door approach to getting the Susitna project underway. Urged, instead, funding of Golden Valley Electric Association's use of waste heat from pump stations as well as studying other possible hydroelectric sites.

RON LARSEN, Mayor, Matanuska-Susitna Borough

Urged prompt action in getting the project underway.

BUD DYE, Resource Development Council

Susitna is supported by over 80% of the Resource Development Council's membership and should be a top priority for action. Also urged support of the Bradley Lake Project. The safest investment the state can make is to take the money made from oil and put it into a project such as hyrd-oelectric power.

MIKE MIKKEL, Council Member, City of Fairbanks

Believes the project can be completed without harm to the environment -- just as we are seeing with the Trans Alaska Pipeline

GEORGE SULLIVAN, Mayor, Municipality of Anchorage

Urged prompt action on both the project and its funding. Because the Fuel Use Act of 1978 disallows the burning of gas in future facilities, Anchorage's low cost electricity will not be forever and asks that Anchorage be added to those cities benefiting from the project.

TOM STAHR, General Manager, Anchorage Municipal Light and Power

An early decision on the project's go-ahead is essential -- because the Fuel Use Act of 1978 disallows burning gas, a utility can get permission from the federal government to use gas on a termporary basis -- if they can PLAN on Susitna.

DAVID MC DONALD, Business-Manager, Laborers Union

The state must recognize that large amounts of money which our fossil fuels are bringing should be diverted to developing hydroelectric power. An excess of power will result in an economic attractiveness for new businesses, resulting in jobs. While the project may not now have any economic savings to the state, it is important for the legislature to address its other responsiblities.

DAVE HUTCHENS, Alaska Rural Village Electric Cooperatives

The Alaska Rural Village Electric Cooperative has 35,000 consumers in its area that would be affected by Susitna. Urges prompt action on both SB 294 and the intertie. Commented that while there may be other sources of energy, Susitna is probably the best and there is no reason the state should settle for any other than the best. SUGGESTION: page 2, lines 7 - 9 should include the interim recommendations of the feasability study underway. On financing, urged flexibility for options be written into the bill.

RODERICK MC DONNEL, Alaska Support Industry Alliance

The membership of the Alaska Support Industry Alliance endorses the Susitna project as a reflection of responsible development.

WRITTEN COMMENTS

The following individuals submitted written comments:

-- James F. Palin, Copper Valley Electric Association

-- Leon T. Brown, Jr., Vice President, Brown's Electric Supply Company

-- Robert Martin, Jr., P.E., General Manager, Tlingit and Haida Regional Electrical Authority

-- Roger Connolly

-- Austin G. Ward

-- Edward A. Merdes, Attorney-at-Law

-- R. L. Hufman, General Manager, Golden Valley Electric Association

-- H. Glenzer, Jr., Manager, Associated General Contractors

-- Dick Norman, General Manager, Pictures, Inc.

-- Ted Smith, Alaska Fuel Service

THOSE ATTENDING HEARING

Mr. Tom Alexander
3136 Tamworth Circle
Anchorage, Alaska 99504

Mr. Kevin Armstrong
4225 Spenard Road #99
Anchorage, Alaska 99503

Mr. Chuck Becker
Economic Development Office
Municipality of Anchorage
Pouch 6-650
Anchorage, Alaska 99502

Ms. Peggy Brewer
SR Box 675
Chugiak, Alaska 99567

Mr. Thomas Brown
I.B.E.W.
Box 31X
Anchorage, Alaska 99507

Mr. and Mrs. Richard Burg
4429 San Roberto
Anchorage, Alaska 99504

Ms. Ruth Burnett
1901 Crosson
Fairbanks, Alaska 99701

Mr. Bob Capps
Post Office Box 2415
Anchorage, Alaska 99510

Mr. John A. Carlson
520 Fifth Avenue
Fairbanks, Alaska 99701

Mr. Malcolm Cheek
MEA
Post Office Box 1148
Palmer, Alaska 99645

THOSE ATTENDING HEARING

Mr. James Clay
Post Office Box 1661
Palmer, Alaska 99645

Mr. Roger Connolly
2803 McRae Road
Anchorage, Alaska 99503

Mr. Paul A. Dunham
Machinists, Local 601
825 East 8th
Anchorage, Alaska 99501

Mr. Bud Dye
2301 Loussac
Anchorage, Alaska 99503

Mr. George F. Fuhry
I.B.E.W., Local 1547
3200 Greenland
Anchorage, Alaska 99503

Ms. Liz Gilbert
Box 4-2825
Anchorage, Alaska 99509

Mr. Willard Johnson
Post Office Box 84
Palmer, Alaska 99645

Ms. Dorothy A. Jones
Post Office Box 109
Talkeetna, Alaska 99676

Mr. Dick Kleop
IUOE, Local 302
2510 Arctic Boulevard
Anchorage, Alaska 99503

Mr. Ron Larson, Mayor
Matanuska-Susitna Borough
Box B
Palmer, Alaska 99645

THOSE ATTENDING HEARING

Mr. Allan G. Laudert
I.B.E.W., Local 1547
5205 East 26th #5
Anchorage, Alaska 99503

Mr. Steve Levi
Resource Development Council
Post Office Box 516
Anchorage, Alaska 99510

Mr. Eugene E. Lundstrom
4316 Conifer Lane
Juneau, Alaska 99803

Mr. Scott Matthews
SR 60818
Fairbanks, Alaska 99707

Mr. David A. McDonald
Post Office Box 899
Anchorage, Alaska 99510

Mr. Jack McLean
3542 North Point Drive
Anchorage, Alaska 99502

Mr. Mike Mikell
Post Office Box 813
Fairbanks, Alaska 99707

Mr. and Mrs. Pat Miller
3115 Tanworth Court
Anchorage, Alaska 99504

Mr. Earl M. Miller
3500 Hiland Drive
Anchorage, Alaska 99504

Mr. George S. Oliver
8411 East 12th Court
Anchorage, Alaska 99504

THOSE ATTENDING HEARING

Mr. Phil O'Neill
Box 6
Sutton, Alaska 99647

Mr. Vincent O'Reilly
Post Office Box 580
Kenai, Alaska 99611

Mr. Ken Peavyhouse
FAA-AAL-4C
Box 84
Anchorage, Alaska 99513

Mr. Bob Piazza
I.B.E.W., Local 1547
2702 Denali
Anchorage, Alaska 99503

Mr. Chuck Smith
Post Office Box 1385
Wasilla, Alaska 99645

Mr. Patrick J. Smutz
HRDI
213 West 6th
Anchorage, Alaska 99501

Mr. John Spencer
Municipality of Anchorage
Pouch 6-650
Anchorage, Alaska 99502

Mr. and Mrs. T. R. Stahr
6967 Laser Drive
Anchorage, Alaska 99504

Mr. Philip J. Stutzer
1576 Karluk Street
Anchorage, Alaska 99501

Mayor George M. Sullivan
Municipality of Anchorage
1345 West 12th
Anchorage, Alaska 99501

THOSE ATTENDING HEARING

Ms. Ann Thompson
23[illegible]2 Lincoln
Anchorage, Alaska 99503

Mr. Richard Tweet
2009 Belair Drive
Anchorage, Alaska 99503

Mr [illegible] Waldrop, Jr.
I.B.E.W., Local 1547
2702 Denali
Anchorage, Alaska 99503

Mr. Bob Walker
SR 2859
Wasilla, Alaska 99645

Mr. Dave Walsh
510 L Street
Anchorage, Alaska 99501

Mr. A. G. Ward
106 Charles Steet
Fairbanks, Alaska 99701

Mr. Lee Wareham
200 Gaffney Road
Fairbanks, Alaska 99701

Mr. James R. Webb
4318 Checkmate Drive
Anchorage, Alaska 99504

Mr. Jeff Weltzin
218 Driveway
Fairbanks, Alaska 99701

Dr. William R. Wood, Mayor
City of Fairbanks
619 Eleventh Avenue
Fairbanks, Alaska 99701

THOSE ATTENDING HEARING

Mr. Ernie Worthington
SRA Box 2050
Anchorage, Alaska 99507

349-6069
6212 Old Seward Hwy.
Anchorage, AK. 99502

BROWN'S
ELECTRICAL SUPPLY CO.

279-2450
3001 Mt. View Dr.
Anchorage, AK. 99504

February 14, 1980

Bill Sumner
Alaska State Senator
Pouch V
Juneau, AK. 98111

Dear Mr. Sumner,

I appreciate you keeping me informed on the happenings of Alaska's future, but as I won't be able to attend meeting I would like to say concerning SB 294. The only thing I can say is that it is about time we looked into using Hydro Power, a source of energy that will replenish itself.

Sincerely,

Leon T. Brown Jr. V.P.
Brown's Electric Supply Co.,Inc.

DURING SESSION:
POUCH V
JUNEAU, ALASKA 99811
(907) 465-3701

OUT OF SESSION:
1016 WEST 6TH AVENUE
SUITE 418
ANCHORAGE, ALASKA 99501
(907) 272-4541

BILL SUMNER

Alaska State Senator

DISTRICT 7-E

COMMITTEES:
RESOURCES
CHAIRMAN
FINANCE
RULES
COMMITTEE ON COMMITTEES
JOINT INTERIM COMMITTEE
ON GAS PIPELINE FINANCING

February 8, 1980

James F. Palin
Copper Valley Electric
Association, Inc.
Post Office Box 45
Glennallen, Alaska 99588

Dear Mr. Palin:

The Senate Resources Committee will be focusing on two issues vital to the growth of Alaska's economy at hearings next week in Anchorage.

On Friday, February 15th, the committee invites public testimony of SCR 41 which establishes guidelines for a state policy of economic development. On Saturday, the 16th, comments will be taken on SB 294, directing the Alaska Power Authority to begin work on the Susitna hydroelectric project.

Both hearings will begin at 10 a.m. in the Court Building, 303 K Street, room 422 and your input will be most welcome. If you're unable to join us and want to comment, written testimony will be included in each hearing's record.

I hope to see you then.

Sincerely,

Bill

BILL SUMNER
Chairman

BS/cf

SENATOR —
I'M UNABLE TO ATTEND — BUT LET'S GET GOING WITH THE SUSITNA PROJECT.
THANK YOU

RECEIVED FEB 11 1980

2/11/80

THE ALASKA CHAPTER
ASSOCIATED GENERAL CONTRACTORS
OF AMERICA, INC.

SKILL
RESPONSIBILITY
INTEGRITY

BOX 4-2500 • ANCHORAGE, ALASKA 99509
TELEPHONE (907) 276-5354

3201 SPENARD ROAD
ANCHORAGE
H. GLENZER, JR.
MANAGER

TO: Senate Resources Committee

The A.G.C. urges that construction begin on the Susitna hydroelectric project as soon as possible. Existing energy demands, the proposed Anchorage - Fairbanks power transmission interconnect project, and the Alaska economy mandate the immediate commencement of construction.

The A.G.C. also encourages utilization of the Alaska labor force and construction industry to the greatest extent possible

H. Glenzer, Jr.

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

February 14, 1980

State Senate Resource Committee
ATTN: Senator Bill Sumner, Chairman
Pouch V
Juneau, AK 99811

Gentlemen:

Expeditious development of our vast hydroelectric resources is vital to Alaska's energy future. Construction of the Upper Susitna project would be a major step in securing a viable future for three-quarters of the State's population. The long term benefits to be derived from this project will far outweigh those realized from the Alyeska Pipeline and the yet to come Gasline in combination. Continued reliance on non-renewable resource fuels is a blueprint to disaster.

S.B. 294 is worthy of support from all Alaskans. The author, Senator Kertulla, is to be commended.

Sincerely,

Bob Hufman

R. L. Hufman
General Manager

FAIRBANKS OFFICE
Edward A. Merdes
Grace Berg Schaible
Howard Staley
Dennis E. Cook
Barbara L. Schuhmann
Robert B. Groseclose
Charles D. Silvey, Jr.
Michael C. Geraghty

LAW OFFICES OF
MERDES, SCHAIBLE, STALEY & DeLISIO, Inc.
A PROFESSIONAL CORPORATION
300 Barnette Street — Post Office Box 810
FAIRBANKS, ALASKA 99707
Tel. (907) 452-1855/Cable Address—MERFAIR

ANCHORAGE OFFICE
Stephen S. DeLisio
Alan Sherry
Henry J. Camarot
Mark A. Sandberg
Randolph W. Hunter
Joseph M. Moran
Patricia L. Zobel
Walter J. Szrudlo

February 13, 1980

The Honorable William Sumner
Senator, State of Alaska
Pouch V
Juneau, Alaska 99811

The Honorable Jalmar M. Kerttula
Senator, State of Alaska
Pouch V
Juneau, Alaska 99811

Re: Support of Senate Bill 294
Susitna Dam Project

Dear Senators Sumner and Kerttula:

The undersigned along with a broad cross section of other like-minded Alaskans over the past 20 or so years has vigorously supported hydro projects such as Taiya, Rampart, Woodchopper and Bradley Lake, and now vigorously support the Susitna project.

The Susitna project with its de minimus environmental harm would provide a source of inflation proof low cost power and is desperately needed in the railbelt area. From both an Alaskan family and business viewpoint it is imperative the project be undertaken as soon as the necessary environmental and engineering studies are completed. Frankly, I see the project as one of the few positive economic benefits to the largest group of Alaskan citizens for the longest period of time. Since it would be funded by the State, construction could commence many years earlier than if federally financed and built by the Corp. With the incredibly rapidly accelerating cost of fossil fuels and highest unemployment in the nation, it appears to be not only prudent but compelling that construction commence at the earliest possible time.

Respectfully submitted,

Edward A. Merdes

EAM/gj

FEBRUARY 16, 1980

The Honorable WILLIAM SUMNER
SENATOR, STATE OF ALASKA

THE HONORABLE JALMAR M. KERTTULA
SENATOR, STATE OF ALASKA

RE: SENATE BILL #294 4385

SENATOR SUMNER AND SENATOR KERTTULA, I THANK YOU FOR THIS OPPORTUNITYTO TESTIFY IN FAVOR OF THE SUSITNA POWER PROJECT. I AM AUSTIN G. WARD, A 28 YEAR RESIDENT OF THE STATE OF ALASKA, ALSO THE PRESIDENT OF ALASKA ENERGY FOR AMERICA, INC, AND A MEMBER OF THE EXECUTIVE BOARD OF THE SUSITNA POWER NOW GROUP. BOTH OF THESE ORGANIZATIONS ARE BROAD BASED IN MEMBERSHIP SCOPE, BOTH WANT TO FURTHER VIABLE ENERGY PROJECTS, AND THE MEMBERSHIP INCLUDES WORKING MEN AND WOMEN, LABOR LEADERS, BUSINESS AND PROFFESSIONAL PERSONS, AND IN FACT INCLUDE ALL FACETS OF THE ALASKAN COMMUNITY. TO THINK THAT SUSITNA DAM WOULD NOT BE BUILT IS AND WOULD BE CONSIDERED GROSS NEGLIGENCE ON THE PART OF THE STATE OF ALASKA. IF THERE EVER HAS BEEN A NEED FOR A RENEWABLE ENERGY SOURCE, THAT TIME IS NOW. OUR NATION, OUR STATE, AND OUR CITIES ARE PAYING FAR TO MUCH IN DOLLARS FOR A NON RENEWABLE ENERGY SOURCE THAT IN THE NEAR FUTURE WILL DRY UP. THIS USE OF FOSSIL FUELS, WHEN YOU HAVE AT HAND RENEWABLE ENERGY SEEMS CRIMINAL. FOSSIL FUELS SHOULD BE PUT TO USE ONLY WHERE THERE IS NO ALTERNATIVE. SUSITNA POWER PROJECT IS A PLUS IN THAT ONCE COMPLETED IT WOULD BE VIRTUALLY INFLATION PROOF. ALSO, ENVIRORMENTALLY SOUND, WITH LITTLE DAMAGE TO THE AREA, BUT GREAT POTENTIAL IN THE RETURNS TO THE PEOPLE OF ALASKA IN THE SAVINGS OF FOSSIL FUELS. IT WOULD ALSO SAVE THE RAILBELT AREA MILLIONS IN NON EQUIPMENT PURCHASES FOR ENERGY, SINCE WITH THE SUSITNA POWER, THERE WOULD BE NO NEED TO PURCHASE ENERGY EQUIPMENT TO TAKE CARE OF THE GROWTH IN POPULATION. AS A FAMILY MAN, AS PRESIDENT OF ALASKA ENERGY FOR AMERICA, AND AS A MEMBER OF SUSITNA POWER NOW, WE ALL OFFER OUR FULL SUPPORT TO THE SUSITNA POWER PROJECT. THANK YOU.

RESPECTFULLY SUBMITTED,/

Austin G. Ward

AUSTIN G. WARD, 106 CHARLES ST., FAIRBANKS, ALASKA, 99701

tlingit & haida regional electrical authority

811 West 12th Street • Juneau, Alaska • (907) 586-6966

February 13, 1980

The Honorable Bill Sumner
Chairman, Senate Resources Committee
The State Senate
Pouch V
Juneau, Alaska 99811

Dear Senator Sumner:

Thank you for your invitation to testify on SB 294. I regret I cannot be present for the hearing but I would like a few comments to be entered in the record.

First, while I feel very strongly that the Susitna Project is desirable and necessary project for the State of Alaska, I do not feel that SB 294, and the appropriation bill SB 295, are necessarily the right and proper means to accomplish that project.

It is my understanding that preliminary studies are presently underway and that one of the items to be considered are various options for financing the project with advantages and disadvantages of the various options. I feel it will be premature to commit such a large amount of general funds when there may be better options available.

If the studies indicate that general funds are the best means to finance the project, and adequate general funds are available in the future, I would be happy to lend my full support. Until then I must express my opposition to passage of SB 294 and 295.

Sincerely,

Robert Martin, Jr., P.E.
General Manager

RM:cmg

BELL & HOWELL
Associated Film Distribution
Columbia Pictures
WALT DISNEY
MGM
United Artists
UNIVERSAL PICTURES

Pictures Inc.
Alaska 16mm. Distributor of Hollywood's Finest Films
811 W. 8th Avenue
Anchorage,
Alaska 99501
Phone: 279-1515

February 11, 1980

Senator Bill Sumner
Chairman
Senate Resource Committee
Alaska State Legislature
Pouch "V"
State Capitol
Juneau, Alaska 99811

Dear Senator Sumner:

Thank you very much for your letter of February 7th. Unfortunately, I am unable to testify on either February 15th or 16th. Therefore, I would like to have this letter submitted on SB 294 to begin work on the Susitna hydroelectric project.

I feel that the Susitna hydroelectric project is one which is overdue for the State of Alaska. Having been raised in the Northwest where the production of power was one of the prime interests of our state and federal government, it was possible to have electricity at a very low cost which attracted not only industry, but also individuals to live in the Northwest. With Alaskan costs as high as they are, I think one of the prime things we can do to help keep people in Alaska is to reduce the cost of electricity by using hydroelectric power. Since inflation is continuing to rise, I think the importance of this project and the need to have it done immediately, cannot be over stressed.

Sincerely,

Dick Norman
General Manager

DN:md

2/19/80

Senator Sumner,

I just recieved your invitation to testify before the Committees governing both SCR 41 & SB 294. I'm sorry the invitation did not arrive in time for me to at least give written testimony in those areas. I guess it just shows our Postal Service & or Airways are not very predictable during at least winter months.

I certainly hope there was response to both areas since both are vital to Alaskans development in a manner that is orderly & advantageous to Alaskans.

I would have to bow to the knowledge of the Senate & House of this state on the best movement for economic development since my views would be very limited in scope.

On SB 294, as in our past discussions on Hydroelectric power - I am a dedicated proponant of this type of electrical proponant & encourage you & all legislators to do the utmost to see that Hydro power is the basis for electricity throughout the state.

If I can be of any help to you in this capacity please do not hesitate to get in touch with me.

Sincerely

Ted Smith

Theodore H. Smith

AK Rel Service

TESTIMONY PRESENTED BY
MAYOR JOHN A. CARLSON
FAIRBANKS NORTH STAR BOROUGH
FOR SENATE BILL 294
(SUSITNA PROJECT BASIC AUTHORIZATION)
FEBRUARY 16, 1980

MR. CHAIRMAN:

MY NAME IS JOHN A. CARLSON AND I AM MAYOR OF THE FAIRBANKS NORTH STAR BOROUGH.

I APPRECIATE THE OPPORTUNITY TO TESTIFY BEFORE YOU ON SENATE BILL 294, SINCE THE AVAILABILITY AND COST OF ELECTRIC POWER TO RESIDENTS OF INTERIOR ALASKA HAVE BECOME A CRITICAL, IF NOT LIMITING, FACTOR IN THE AREA'S SOCIAL WELL-BEING AND ECONOMIC DEVELOPMENT.

THE COST OF ELECTRIC POWER HAS TRADITIONALLY BEEN HIGH, BOTH IN THE INTERIOR AND IN ALASKA AS A WHOLE. HOWEVER, ELECTRIC POWER RATES IN FAIRBANKS RUN TWO TO THREE TIMES HIGHER THAN IN ANCHORAGE AND AS MUCH AS TEN TIMES HIGHER THAN IN SEATTLE. AS I MENTIONED EARLIER, THE COST OF ELECTRIC POWER TO INTERIOR ALASKA RESIDENTS HAS NOW BECOME PROBABLY THE SINGLE MOST CRITICAL FACTOR LIMITING THEIR ABILITY TO DEVELOP A HIGHER STANDARD OF LIVING AND CREATING A MORE DIVERSIFIED ECONOMY FOR THEMSELVES.

I THINK WHAT THE FEDERAL GOVERNMENT WAS ABLE TO ACCOMPLISH IN THE PACIFIC NORTHWEST FOR HYDROELECTRIC DEVELOPMENT DURING THE 1930'S AND 1940'S SHOULD BE AN EXAMPLE TO ALASKA.

AS A RESULT OF EXTENSIVE DAM CONSTRUCTION FOR THE GENERATION OF HYDOELECTRIC POWER ALONG THE COLUMBIA RIVER, A MAJOR REGION OF THE UNITED STATES NOW ENJOYS INEXPENSIVE AND ABUNDANT ELECTRIC POWER.

I WILL GIVE YOU ONE BRIEF EXAMPLE OF THIS. BETWEEN 1973 AND 1979, ELECTRIC POWER RATES IN THE FAIRBANKS MUNICIPAL UTILITIES SYSTEM INCREASED 67%. IN THE SAME PERIOD GOLDEN VALLEY ELECTRIC ASSOCIATION RATES INCREASED 72%, WHEREAS THE RATE .NCREASES FOR URBAN AND SUBURBAN A..CHORAGE WERE 40% AND 49% RESPECTIVELY. IN A PERIOD OF RAPIDLY INCREASED COSTS FOR FOSSIL FUELS, WE UNDERSTAND THE REASON AND PAINFUL NECESSITY FOR THESE RATE INCREASES. HOWEVER, IN THE SAME SIX-YEAR PERIOD, USING WATER-GENERATED POWER, SEATTLE CITY LIGHT ELECTRIC RATES INCREASED ONLY 1%.

GE..TLEMEN, I THINK THIS EXAMPLE SPEAKS FOR ITSELF. ONCE THE INITIAL, AND ADMITTEDLY THE VERY MAJOR CAPITAL COSTS ASSOCIATED WITH HYDROELECTRIC DAM CONSTRUCTION HAVE BEEN MADE, HYDROELECTRIC POWER IS BASICALLY AN INFLATION FREE SOURCE OF ENERGY IN AN ERA OF DOUBLE DIGIT INFLATION AND DIMINISHING FOSSIL FUEL SUPPLIES.

IN ADDITION TO SUSITNA SUPPLYING A MAJOR PORTION OF INTERIOR AND SOUTHCENTRAL ALASKA'S ENERGY REQUIREMENTS, THE CONSTRUCTION OF THIS PROJECT WOULD PROVIDE A MAJOR ECONOMIC BOOST TO ALASKA'S RESIDENTS AT A TIME IN WHICH UNEMPLOYMENT IS HIGH AND THE ECONOMY IS STAGNATING.

Up until now, one of the major drawbacks facing Alaska's desire to develop its vast hydroelectric resources has been the lack of capital to make the initial large scale investment in dam construction and site development. Now that Alaska is benefiting from skyrocketing oil revenues, we presently have the money on hand to create our own hydroelectric power system, independent of federal government control. The lead time is so great and our own power needs are so urgent that we must move now, and we must move as quickly as possible. I strongly urge that the Legislature support Senate Bill 294 as the basic vehicle necessary to develop our hydroelectric potential. It cannot come a moment too soon, and it will provide a benefit beyond our lifetimes to generations of new Alaskans.

CITY OF PALMER, ALASKA

RESOLUTION NO. 434

A RESOLUTION SUPPORTING SUSITNA POWER NOW.

The City of Palmer Resolves:

The City of Palmer supports the program of Susitna Power Now and Senate Bill 294, and Councilmen Willard Johnson and James Ekstedt are authorized to represent the City's position hereon.

Passed and Approved by the City of Palmer, Alaska this 12th day of February, 1980.

Jack E. Mazy

JACK E. MAZY, MAYOR

William E. Curtis

WILLIAM E. CURTIS, CITY CLERK

CITY OF KENAI

"Oil Capital of Alaska"

P. O. BOX 580 KENAI, ALASKA 99611
TELEPHONE 283 - 7535

February 5, 1980

Honorable Jay Hammond
Governor, State of Alaska
Pouch A
Juneau, AK 99811

Dear Governor:

First how enjoyable the dinner Thursday at which we all relaxed. In view of the heavy burdens you carry, it was encouraging to see the fortitude, wisdom and confidence you are bringing to bear on matters.

Please do keep in your budget considerations, the 10% of income tax provision for the municipal assistance fund under Sec. 43.20.016. The 10% flow through, State to municipalities, has an equal validity with the relationship of the petroleum industry and the State tax structure. The funds flowing in full would offer real property tax relief, would fill many municipal needs and would meet many of the criteria you are trying to establish for fair distribution of tax revenues.

If I may, Governor, may I offer some thoughts for your consideration concernin the money situation facing the State.

We should perhaps set this in proper perspective. What we are talking about is economics and finance, not civil rights, education goals, abortion, public safety, etc.

Within the perspective of economics and finance, for the moneys flowing to the State above operating expenses, we should set as an objective the preservation for present and future inhabitants of the potency and flexibility of capitol. With this objective, we can select a path to get there. Most of the Western world nations are caught in an inflation cycle, certainly the United States economy is so caught. This leads to a course of action somewhat brutal in its implementation but necessary if we are to preserve potency and flexibility of capitol over a ten to fifteen year period.

We should expend the moneys, above expenses, only when they can be invested in an equity position. Investments should be made in hydroelectric projects, capital improvement projects, and direct return to citizens such as energy credits.

TO: Honorable Jay Hammond February 5, 1980

If we have to be involved in loans programs, we should borrow money to provide such funds. The inflation caused dollars depreciation makes issued debt an advantage to us, as the future dollars we use for repayment will be cheaper as they come from an inflation influenced economy.

Hopefully the above gives us the following criteria for determining how revenues available above operating expenses should be allocated.

1. Invest this equity money in equity positions, i.e.: hydropower situations, natural gas line, capital improvement programs, energy credits, etc.

2. Do not loan it as we then subject it to inflation erosion open payback. If we have to loan it, borrow from external sources to reloan.

3. Income tax sources, to some degree, should stay in effect as this gives us a foothold to tax the inflation dollar stream.

Governor, excuse the length but I do wish and know you share the wish that we act in accordance with prudent criteria and a plan of wisdom.

Sincerely,

Vince

Vincent O'Reilly
Mayor

CITY OF KENAI
VOR:jw

Saturday, Feb. 16

TESTIMONY, Senate Bill 294, Susitna River Hydroelectric

Willard H. Johnson
P.O. Box 84
Palmer, Alaska 99645

Registered Professional Engineer
Retired, General Manager of Matanuska Electric Association(20 years Service
Representing, as Mayor Pro Tem, the City of Palmer

First, I want to present the City of Palmer Resolution No. 434, which was adopted by the Palmer City Council on Feb. 12, 1980. It expresses support for the Upper Susitna Hydroelectric Development and Senate Bill 294.

Palmer believes that the Upper Susitna Project should be developed with all deliberate speed. Palmer also believes that the State of Alaska should, through the Alaska Power Authority, finance and direct the project's construction. For the long range benefit of Alaskans, we can think of no better way to invest Royalty Oil Income. Money from a non-renewable resource invested in a renewable resource such as hydroelectric energy, that will provide so many benefits continuing long after many of Alaska's oil deposits are depleted, makes awfully good sense.

An area may have developable land, water, a transportation system, investment capital and other resources, but it is not going to thrive and prosper without an adequate and reliable supply of electric power. Alaska has this potential and in the Railbelt area we are blessed with the Upper Susitna.

I doubt if many of us fully realize the kind and magnitude of the benefits that will flow to the railbelt people when Susitna power goes on the line. Spinoff benefits will go to all of Alaska's people and to the Lower 48.

I remember as a boy in Eastern Washington State, the vast stretches of sagebrush, blowing sand and the desolate land. There were little villages with dirt streets, unpainted houses and little work for men to do. Later, as a young engineer, after the great Columbia River projects came on the line, I remember the vast productive fields of corn, sugar beets and alfalfa where before there was only desert. Attractive and comfortable homes replaced the old shacks, and towns were modernized. Commercial activities thrived. People had jobs.

Most of the early Columbia River Hydro projects were federally planned, financed and constructed. It took 20 years and a lot of effort by western people to move Congress to approve the great Coulee Dam. We think the State of Alaska deserves something better than that. So we urge that SB 294 be passed, and that the Susitna project be completed and operated by the State.

THANK YOU

Willard H. Johnson

Steam Generation has switched from coal To Natural Gas and now is supposed to switch back To coal at Great cost ~~cost~~ Lets use hydro once and for all Time

Other industry has been adversely affected by high power costs — at one time we had a small lumber operation in the ~~Sa~~ Mad Sew area — This utilized birch that now has gone by its prim as useable lumber — This was due to Too high cost of power —

I am in favor of both Bills S.B. # 294, # 385 and any other bills that will get This projed on the way To completion. Tax relief in the form of cheaper Electricty Roger Connolly

International Union of Operating Engineers

AFFILIATED WITH AFL-CIO

LOCAL 302 AND BRANCHES A, B, C AND D

FRANK T. POLSAK, *Business Manager*

JACK J. WILSON, *President*

ROD J. FRASER, *Financial Secretary*

Branch Offices:
WENATCHEE, WASHINGTON
YAKIMA, WASHINGTON
ANCHORAGE, ALASKA
FAIRBANKS, ALASKA
JUNEAU, ALASKA

WESTERN AVE. AND CLAY ST.
SEATTLE, WASHINGTON 98121
TELEPHONE: 622-6180

February 29, 1980

Senator Sumner
Capitol Building Rm. 125
Pouch V
Juneau, Alaska 99811

RE: Susitna Power Project
SB 294

Sir:

The International Union of Operating Engineers, Local 302 (Alaska), which presently is composed of over 4000 members, has determined that the Susitna Power Project would be in the best interests of all of the people within our State. We would like the Legislature to not only know that we support the project tut we also wish all practical speed in efforts to get it under construction.

Sincerely,

Roderick J Fraser

Roderick J. Fraser
Financial Secretary
I.U.O.E., Local 302

RJF/jch
cc: Susitna Power Now, Inc.

TELEGRAM

20302

1980 MAR 4 PM 1 15

12027 NL FAIRBANKS ALASKA 58 03-04 1037A AST

PMS SENATOR BILL SUMNER 465-4791

SENATE RESOURCES COMMITTEE

264

JUN

MAYOR AND CITY COUNCIL OF THE CITY OF FAIRBANKS SUPPORT AND RECCOMMEND PASSAGE OF SENATE BILL 294. DEVELOPMENT OF SUSITNA POWER PROJECT WILL BE OF GREAT BENEFIT TO INTERIOR ALASKA

C DROZ CITY MANAGER

TELEGRAM

ALASCOM, INC.
PHONE: 586-6442
JUNEAU, AK 99802

1990 MAR 4 PM 7 09

12026 FAIRBANKS ALASKA 134 03-04 410P AST

PMS SENATOR BILL SUMNER

CHAIRMAN SENATE RESOURCES COMMITTEE

291

JUN

I WOULD LIKE TO REEMPHASIZE MY SUPPORT FOR SENATE BILL 294. AS I TESTIFIED IN ANCHORAGE LAST MONTH, THE COST OF ELECTRIC POWER TO INTERIOR ALASKA RESIDENTS HAS NOW BECOME THE SINGLE MOST CRITICAL FACTOR LIMITING THEIR EFFORTS FOR A HIGHER STANDARD OF LIVING AND MORE DIVERSIFIED ECONOMY. THE DEVELOPMENT OF HYDROELECTRIC POWER DURING THE 1930S AND 40S IN THE PACIFIC NORTHWEST HAS NOW RESULTED IN STABLE, AND VIRTUALLY INFLATION FREE, ENERGY SUPPLIES TO RESIDENTS OF THAT REGION. WE HAVE THE OPPORTUNITY TO CREATE SIMILAR BENEFITS FOR RESIDENTS OF INTERIOR AND SOUTHCENTRAL ALASKA IN THE NEXT TWO DECADES.

ADDITIONALLY ALASKA NOW HAS AVAILABLE THE SURPLUS CAPITAL NECESSARY TO DEVELOP THE SUSITNA HYDROELECTRIC PROJECT OURSELVES. I RESPECTFULLY URGE THE SENATE NATURAL RESOURCES COMMITTEE TO GIVE FAVORABLE AND EXPEDITIOUS CONSIDERATION TO THIS AND SUPPORTING LEGISLATION.

JOHN CARLSON BOROUGH MAYOR

TELEGRAM

ALASCOM, INC.
PHONE: [illegible]-6442
[illegible], AK 99502

1980 MAR 4 PM 7 56

02247 POM TDA PALMER ALASKA 15 03-04 0415P AST

PMS SEN BILL SUMNER

JUNEAU

MATANUSKA VALLEY LIONS CLUB WHOLEHEARTEDLY SUPPORT SB294 AND

ARE HOPING IT PASSES SOON.

GEORGE BEACOM PRESIDENT

KAISER ENGINEERS

KAISER ENGINEERS INC.
KAISER CENTER - 300 LAKE HILL DRIVE
OAKLAND, CALIFORNIA 94611

June 14, 1977

Alaska Power Authority
c/o Department of Commerce and
Economic Development
Office of the Commissioner
McKay Building
Anchorage, Alaska

Dear Commissioner Hubbard:

Further to our presentation of June 3, 1977, to the Alaska Power Authority, we would like to clarify some of the points in our plan for implementation of Susitna River development, in order to get the project under way expeditiously.

Three years have elapsed since Kaiser Engineers presented its conceptual plan for development of the Upper Susitna River and outlined the project best suited for initial development. In the intervening period considerable effort has been made by the Corps of Engineers to explore other ways of developing the river. These other ways included concepts and elements of projects which had been developed before and which were rearranged and presented as alternatives. They did nothing to bring nearer the date of initial power generation, but in fact, set it back further. No doubt, it would be possible to develop more schemes and more alternatives on the basis of what has gone before; however, we believe that nothing is to be gained, but much is to be lost in time and money by more study of alternatives. We believe that our development plan is the right plan and that it can and should be implemented now.

There is much work to be done - by the Alaska Power Authority, by Kaiser Engineers and by the financial consultants, Stone and Youngberg. There are legal and financial matters to be resolved, project optimization to be defined, and environmental impacts to be evaluated and accounted for in project design.

Environmental impact is the issue which presents the major time constraint in implementation of the project. It is estimated that the preparation of an effective environmental report will require about one year because it is preferable to make field studies and gather information applicable to all four seasons of the year. Current experience of the Federal Power Commission shows that approval of hydroelectric projects on environmental grounds requires about two years after report submittal.

We believe that the best interests of the project will be served by engaging independent specialists to undertake environmental studies under our overall management. These studies would be carried out in close cooperation with federal and state agencies which have already gathered considerable information or which have responsibility in natural resource management; among these would be the State Department of Fish and Game which confirms that the study can be completed over four seasons providing the department is authorized and given the budget to hire additional staffs or otherwise be reimbursed for expediting the services which at the present time are scheduled and budgeted for a two to three year period. We propose to engage the services of Environmental Services Limited of Anchorage, and EDAW to perform base line studies, and of local experts such as Mr. W. Workman, archeologist at the University of Alaska, and Dr. R. Forbes, seismology consultant, and others who are familiar with the environment and ecology of Alaska

In regard to environmental impact, it is to be noted that the upper end of the Susitna I reservoir would inundate a much smaller area of the Caribou habitat between Watana and Kosina Creeks than any project built at Watana.

The major engineering task to be undertaken in the first phase of Kaiser Engineers' implementation plan is optimization and outline design. Optimization means that we will seek that degree and timing of development which will meet projected power demands in the Railbelt area at the least overall cost. Cost includes monetary, financial and social. Optimization does not necessarily mean that every last kilowatt of power will be squeezed out of the Upper Susitna River regardless of the consequences. Optimization cannot and will not be limited to the first project to be developed, but requires firming up the locations and conceptual designs of future projects.

Outline design will be based upon more accurate mapping and more detailed geologic information. On the ground observations of the Susitna I damsite have convinced us of the suitability of the rock for foundations and for construction of a rockfill dam. At this stage of development, tangible evidence must be provided. We propose to employ local firms such as R. and M. Consultants of Anchorage or Shannon and Wilson of Fairbanks to carry out subsurface exploration programs. These would include geoseismic surveys and core drilling to provide the degree of information required for this phase of project development. This work will be concentrated at the Susitna I site; however, a certain amount of investigation is necessary before the suitability of sites for future projects can be confirmed, before a selection can reasonably be made of the types of dams best suited for safety and economy at those sites, and before the overall development concept can be optimized.

When the final definition of the initial project is achieved by optimization, the engineering task will narrow down to staging. A determination will be made as to the rate at which power available from this

project can be economically absorbed into the existing power systems. This will include not only load growth, but also consideration of retirement of older generating equipment and the conservation of fossil fuels for other use. If power from existing generating plants can be economically replaced by Susitna I, the complete project will be recommended for construction at one time; otherwise, an economic staged development will be proposed. Almost any design of project can be built in several stages; it is common practice in basic powerhouse design to provide for the later addition of generating units. There is no special trick involved in building most dams in two stages, if desirable, to minimize first cost. This can readily be done at Susitna I with the proposed rockfill dam, on the basis of existing technology.

The work to be undertaken by Kaiser Engineers in the first phase of the implementation plan will be in the detail and to the degree required to:

1. Demonstrate the economic viability of development
2. Provide the basis of project financing
3. File application for project licensing by the Federal Power Commission.

It is not strictly necessary to apply to the Federal Power Commission for a Preliminary Permit; it may be desirable to do so, however, as a very simple means of protecting the State's interest pending filing of license application.

We have discussed the timing of our implementation plan with representatives of the State of Alaska Department of Fish and Game, environmental specialists and staff of the Federal Power Commission, and others. We have been reassured that the schedule for completion of the environmental report in one year and the issue of the F.P.C. license two years later is feasible and practical.

We suggest that the remaining months of this year be used effectively to get the project off the ground. Provided work is commenced before the beginning of August, a good start can be made on environmental studies; mapping and geoseismic exploration can be completed before the weather closes in, in October. Engineering and further environmental study can be carried out during winter and spring; in May and June, environmental studies can be completed, site drilling to confirm seismic exploration can be completed and the application for project licensing can be submitted to the Federal Power Commission at the end of July 1978. First power can be delivered in late 1984 or early 1985.

If the Alaska Power Authority engages the services of Kaiser Engineers to carry out the first phase of the proposed implementation plan, our first task would be to gather and review all of the data gathered, used or prepared by the U.S.B.R., the Corps of Engineers and other state or Federal agencies or departments in connection with the Upper Susitna River. After review and evaluation of this data, we will be able to

determine what information can be used directly in further work, what information must be augmented and what further information must still be gathered. On this basis we shall be able to prepare realistic estimates of the cost of Kaiser Engineers' services, services of environmental experts and consultants, and services of contractors required for mapping, geoseismic surveys and other subsurface exploration, all as applicable to the first phase implementation plan. Kaiser Engineers' bills reimbursable expenses at cost; the services of all consultants and subcontractors are considered as reimbursable expenses.

If you have any questions concerning implementation of the project, please let us know.

For your further information, we are enclosing three brief memoranda. The first is in connection with the selection of dam type in areas of potentially severe earthquake activity; the second describes Environmental Management services performed by Kaiser Engineers; and the third is a general description of Project Management and Control Systems utilized by Kaiser Engineers.

Very truly yours,

A. J. Chan
Manager
Hydroelectric Department

AJC:ars

Enclosures

SELECTION OF DAM TYPE IN AREAS OF POTENTIALLY SEVERE EARTHQUAKE ACTIVITY

Kaiser Engineers and members of its present staff have designed or built dams in many parts of the world, including the specially seismically active areas in California and the Pacific Northwest. Wherever we design for, we account for the seismicity potential of the area in the selection of the type of dam and in its design.

Experience records of a wide range of seismic occurrences show that serious adverse effects of earthquakes have been severe cracking in concrete gravity dams, abutment damage in concrete arch dams and liquefaction of fines in fill dams. The Pacoima arch dam in southern California presents a good example of earthquake effect on abutments. The February 1971 San Fernando earthquake caused abutment damage to the degree that after careful studies, the dam was breached and abandoned. While the record may show that even concrete arch dams have been designed for an 8.5 Richter scale earthquake in reasonable proximity to such dams, we have no record that such an earthquake has, in fact, occurred near such designed arch dams.

A critical design which has not been tested by full scale prototype cannot be claimed as fully effective before the full scale test condition occurs. It is one thing to apply static test loads to a model structure, but it is something else to apply complex dynamic loads not only to the model structure, but also to the foundation. Whereas the quality of the dam and its constituent materials is subject to a high degree of control, by analysis, design and construction, no such control can be achieved over the foundation, and in arch dams, it is generally the abutment which fails first. Abutment failure in an arch dam inevitably means dam failure and experience shows that such failure is very fast and very complete. The whole question of arch dam construction in seismically active zones is under especially close scrutiny today, particularly where the ratio of crest length to height is high.

The dam proposed for construction at Susitna I is a rockfill with a concrete face. Rockfill dams by their very nature are most resistant of all dams to damage by earthquake forces. The dam does not crack because it is not one solid piece; it is free to adjust, either to movement of the abutments or of its own. It can deflect safely to a degree which would mean dramatic failure to an arch dam of the same height range. Of all rockfill types, the concrete face type is most resistant to damage because the dam itself is built primarily of rock materials which are not subject to liquefaction since the embankment is dry. The concrete face can crack, but leakage is controlled by the immediate underlying zone of selected low permeability dense filter, and by designed high permeability of the rock mass under the downstream half of the base of the dam and in the downstream toe. In fact, a design criterion in the rock zoning of the concrete face dam is that it will safely withstand the leakage that would occur even without the concrete face. Such a dam may require repair of the concrete

face after a very high intensity earthquake, but failure due to the most severe seismic event is not considered credible.

Arch dams can be economical and efficient, and with their abutments can resist seismic forces to some unknown degree, but the overall safety and economy of dam construction must be based on the concept of the right dam at the right place. Where there are clear economic and safe alternatives there is nothing to justify the risk of adopting an arch design in an area of potentially high seismicity.

The above views are those of Kaiser Engineers in collaboration with their general dam consultant, J. Barry Cooke. Similar views on inherent seismic resistance of rockfill dams are held by such authorities as Dr. H. Bolton Seed, Dr. James L. Sherrard, and Dr. Don U. Deere.

ENVIRONMENTAL MANAGEMENT

Environmental matters are an integral and vital economic element in all our engineering projects. In the past few years we have been developing working relationships with some of our major industrial clients supplying a service which we call Environmental Management. This memorandum discusses the concept, the product, and its implications to both KE and its clients.

It is important to understand what KE means by the term Environmental Management. It is the service which addresses, identifies and handles the environmental issues related to a project. It includes project work functions, conceptual engineering, permit processing and resolving regulatory agency requirements. Today, it is an essential part of a successful engineering business.

Environmental Management involves planning, organizing and performing environmental project activities within a defined scope of work, schedule and budget. It requires close contact with the client, working with the engineering project staff, and liaison in cooperation with government agencies which have regulatory influence or authority on the project.

Planning Stage

In most instances, even before preliminary engineering is initiated, planning for the requisite environmental activities is often required and always desirable. Our larger clients, Anaconda, ANG, SCE, etc., usually have an environmental staff within their organizations and may do this phase of the work themselves. In other instances, especially where a client is entering a new field, they are not as well staffed and we can supply needed services.

It is during the initial planning stage that we can work effectively with a client to help plan their environmental program, review available data and identify the environmental requirements for a project. If appropriate, scientists or environmental consultants can be recruited to perform baseline studies.

Baseline Studies

Baseline studies are usually initiated shortly before or with the start of project feasibility studies. In the main, baseline studies involve field investigations concerning preliminary site evaluations, hydrology, meteorology, vegetation, wildlife, archaeology and demographic data accumulation. In the past few years, a large body of information has become available in published environmental reports.

Baseline studies are usually made by the client or by outside consultants. Our Environmental Management role includes monitoring, evaluating and, in some instances, directing the preparation of the baseline studies. Performance controls are prepared to measure rates of progress, quality and cost of the baseline studies against planned goals. Initial contact with regulatory agencies occurs at this stage as does the preliminary engineering feasibility studies of the project itself.

Environmental Assessment

Major environmental activity occurs during the preliminary engineering phase of a project after baseline studies have been made. At this time, environmental assessment and trade-off studies are prepared which, to a large extent, can influence the timing and cost of a project. Also, during this time, site selection studies are completed, regulatory and reclamation requirements are defined and environmental assessments are made based on the field studies and the preliminary project engineering. Potential impacts as a result of the project are identified and are evaluated to identify possible alternative courses of action. Contact with regulatory agencies and the project engineering staff is necessarily frequent both to acquaint the agencies with the nature and possible impacts of the project and to convey the requirements of the regulatory agencies to the engineering staff.

Agency Reviews

Regular reviews are required because of continuing changes in federal and state regulations including the Clean Air Act, the Clean Water Act, the Toxic Substances Act, OSHA, and new energy utilization requirements.

Detail Design

Environmental Management functions continue through detail design including:

- o preparation and/or review of environmental impact reports
- o selection of basis for design for environmental controls
- o review of environmental controls
- o participation in public presentations of the project in connection with its environmental significance
- o meeting with regulatory agencies
- o processing and obtaining of permits for construction and operation.

The attached flow sheet, Environmental Management, identifies activities addressed through Environmental Management. The functions of Environmental Management are:

A. Planning and scoping the environmental activities of a project.

B. Data assimilation including base studies, preliminary engineering, liaison and contact with regulatory agencies.

C. Preparation of environmental assessments including identification of the environmental control concepts, identification of regulatory requirements, identification of impacts, site selection, and development of reclamation plans.

D. Development of design bases for environmental control requirements, processing of permits, definition of regulatory requirements and the selection of process control methods.

E. Preparation of functional and bid specifications, bid evaluations and equipment selections.

F. Start-up assistance and preparation of manuals.

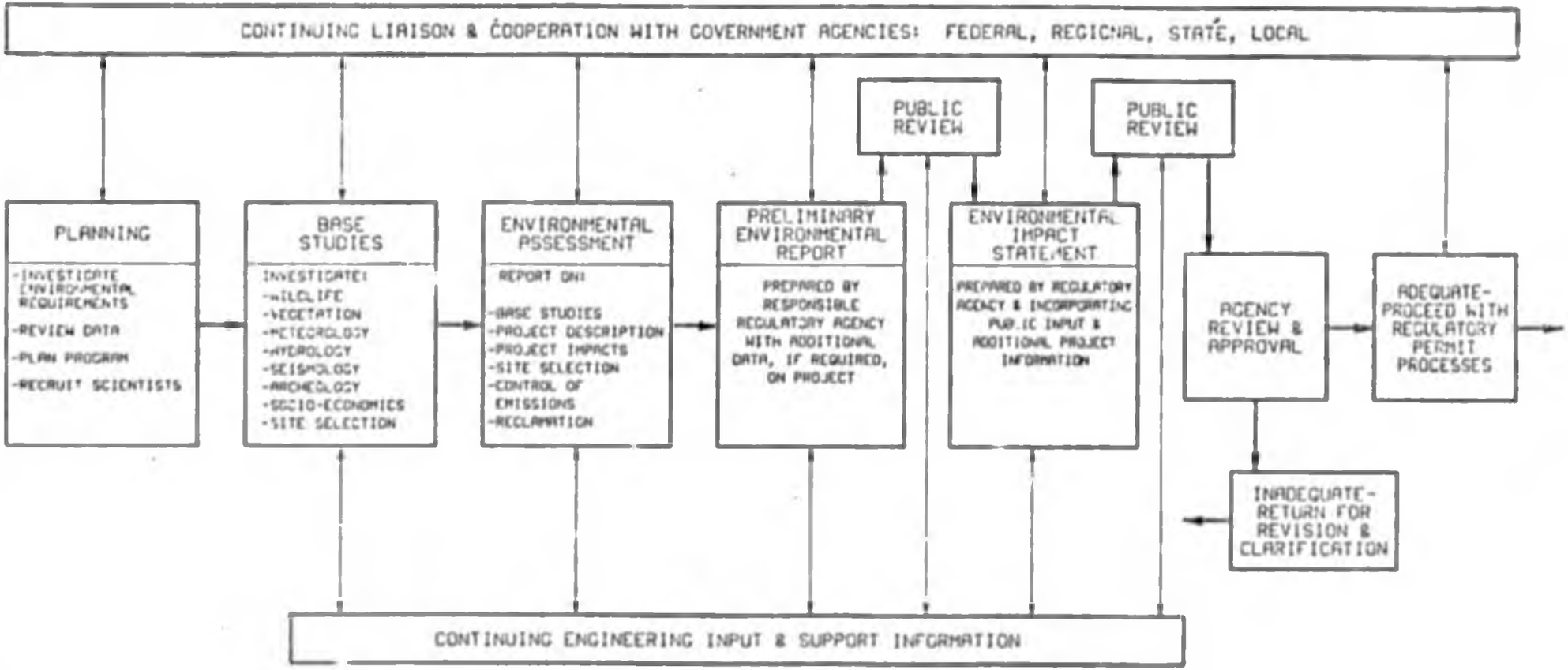
Advantage to Client

A major advantage to using the Environmental Management approach for a client is in the early identification and resolution of environmental issues which might otherwise delay the project or lead to unacceptably high costs. The implementation of the Environmental Management concept to major projects at an early date can result in substantial savings in time and cost and may make the difference between a feasible or non-feasible project.

Presenting the Environmental Management Concept

As each project may involve a different client relationship, the Environmental Management concept should be presented in a similar vein. Participation in planning with the client before the baseline studies have been initiated is highly desirable, particularly when a client is entering a new type of activity or business. A good example where we have been successful is with American Natural Gas coal gasification project. We participated in the planning phase, identified environmental baseline requirements, evaluated proposed consultants to make the baseline studies and monitored their performance as to its technical competence. One recommended step (not adopted by the client to his regret) was to establish a performance goal for the consultant to measure progress against cost of work. The client chose to do this himself and it was not done. A better approach would have been to have NE assume responsibility for the baseline studies to include cost control as well as technical performance.

ENVIRONMENTAL MANAGEMENT



PROJECT MANAGEMENT AND CONTROL SYSTEMS

Kaiser Engineers recognizes that an effective management and control system is an important function in the effective integration of all project activities leading to the successful execution of a project.

As a result of the extensive and diversified experience in the field of engineering and construction, Kaiser Engineers has developed the necessary organization, techniques and procedures to successfully plan, monitor, control and manage a project.

Over the past 20 years Kaiser Engineers has developed and operated a computerized system of Project Control that truly characterizes our basic approach to management of a project.

The control system using a central file includes programs for:

a. planning and scheduling all elements of the project

b. measurement of progress and performance

c. monitoring and tracking procurement activities

d. estimating, recording and forecasting cost, manhours, and quantity

Based on experience we find there are three phases that are common to all construction projects, Preliminary Design, Detail Design phase and Construction phase.

We believe that through careful and realistic planning in the initial phases and continuing monitoring, analyzing and managing in the later phases we can effectively control cost and schedule to meet the targets established. We are confident that our management procedures and techniques do meet these requirements.

Kaiser Engineers is also organized to provide direct lines of responsibility for corporate and project management to ensure a quick and comprehensive response to the individual needs of the project.

The management control and reporting systems we offer provide a systematic and practical approach to the management of this project. It is effective primarily, because of the experience and talents of the people that are involved as a team, knowing and understanding how to utilize these tools in a practical manner.

National Hydropower Study
Alaska Region

With the need to find and assess alternate sources of energy, Congress directed the Corps of Engineers to conduct a study of potential hydroelectric power development throughout the country. The objectives of the National Hydropower Study are to:

- Assess the demand for electricity and define the need for hydropower.
- Define the physical limits to increasing hydropower production.
- Determine the feasible and acceptable increases in hydropower generation.
- Analyze existing policies affecting hydropower development and use.
- Assess potential environmental and socio-economic impacts
- In the study report to Congress, identify specific potential hydropower projects which warrant detailed study and make recommendations regarding needed policy changes.

SUMMARY OF FINDINGS

Demand for Electricity

According to projections by the Alaska Power Administration, the demand for electrical energy in Alaska will have increased from 3,066 million kilowatt hours in 1979 to 15,000 million kilowatt hours in the year 2000, an increase of nearly five times the present use. The demand is expected to increase in each of the six major subregions of the State. However, the greatest increase is expected in the more heavily populated areas of the State, specifically the Southcentral Railbelt region which includes the Anchorage-Cook Inlet and the Fairbanks areas and the Southeast Subregion.

Present Sources of Electricity

As of 1979, the existing electrical generating capability of power plants in Alaska was about 1,867 megawatts. The majority of electricity generated in the State was produced from energy supplied by fossil fuel. Natural gas was by far the major fuel, accounting for 56 percent of the year's output. Next came oil (18 percent), coal (10 percent), hydropower (10 percent) and others (6 percent).

Most of the electrical energy in Alaska is supplied by combustion turbines (65.2 percent), followed by internal combustion plants (19.2 percent), steam turbines (5.6 percent) and hydropower (10.1 percent). The combustion turbine is the predominant source of power in the more heavily populated Southcentral Subregion, whereas hydropower plants and steam turbines are the predominant sources of power in the Southeast and Yukon Subregions, respectively. The diesel fueled turbine is the primary source of electrical energy for the isolated bush villages of Alaska.

Until recently, the availability of low cost natural gas, particularly in the Anchorage area, accounted for the predominant use of combustion turbines. In addition, the Alaskan climate is conducive to the operation of combustion turbines.

There are more than 40 hydroelectric installations in Alaska. Most of the plants are small (less than 50 MW) and only of local community significance. Only 14 plants are large enough and in such locations to have an impact on the future power supply of the State. Twelve of these plants serve individual cities in the Southeast Subregion. The other two plants are in Southcentral Alaska and are part of the interconnected system serving the Anchorage-Cook Inlet area.

Screening Process

During the National Hydropower Study, the potential for additional hydropower generation was evaluated at 61 existing water resource project sites and 634 undeveloped sites within the State of Alaska. By means of a 4-stage screening process, the number of sites demonstrating potential economic feasibility and environmental acceptability was reduced 59. A summary of the screening process displayed by major subregions of the State and the principal objectives of each screening stage is presented in Table 1.

Evaluation

In keeping with the objectives of the National Hydropower Study, the potential of hydropower in Alaska to meet the future electrical energy needs was determined from a regionalized assessment of economic and environmental factors.

Generally, a project was considered economically feasible if the total average cost of the additional power capable of being produced by the project did not exceed 50 mils (5 cents) per kilowatt hour. In some instances, however, local considerations indicated that a project might be feasible with even higher costs. As shown in Table 1 (third screening) 21 existing projects and 144 undeveloped sites in Alaska are identified as having potential economic feasibility for the development of additional hydropower.

To determine what portion of the economically feasible hydropower projects might be acceptable for development, environmental, social and institutional impacts and marketability constraints were evaluated. Although specific criteria could not always be followed in making this determination, projects which would result in major adverse environmental or social impacts, including elimination of terrestrial and aquatic wildlife habitat and major dislocations of villages and transportation systems, were identified as being unacceptable for development. Also, projects whose development would violate present land use restrictions such as, wild and scenic rivers, national parks and wildlife refuges, or opposed by significant portions of the public were considered to be unacceptable.

Some of the undeveloped sites, although identified as having a substantial potential for producing additional hydropower, were eliminated for marketability reasons, in particular those projects located in the vast undeveloped regions of Alaska.

The results of the hydropower study indicate that 59 projects, including 10 existing sites and 49 undeveloped sites, were acceptable for development and warranted further, more detailed study. Detailed information on each of these sites is presented in Tables 2, 3, and 4. The map attached to Table 2 shows the general location of the sites. If these 59 sites were developed, they could produce as much as 3.56 million kilowatts of power and 15,432 million kilowatt hours of energy.

Table 5 provides a comparison by geographical subregion of the estimated electrical requirements for the year 2000 with the hydropower potential. A further comparison with the marketable hydropower potential, as determined by the Alaska Power Administration, would indicate that the development of these projects could meet the majority of the electrical needs for the Southcentral, Southeast, and Yukon Subregion .

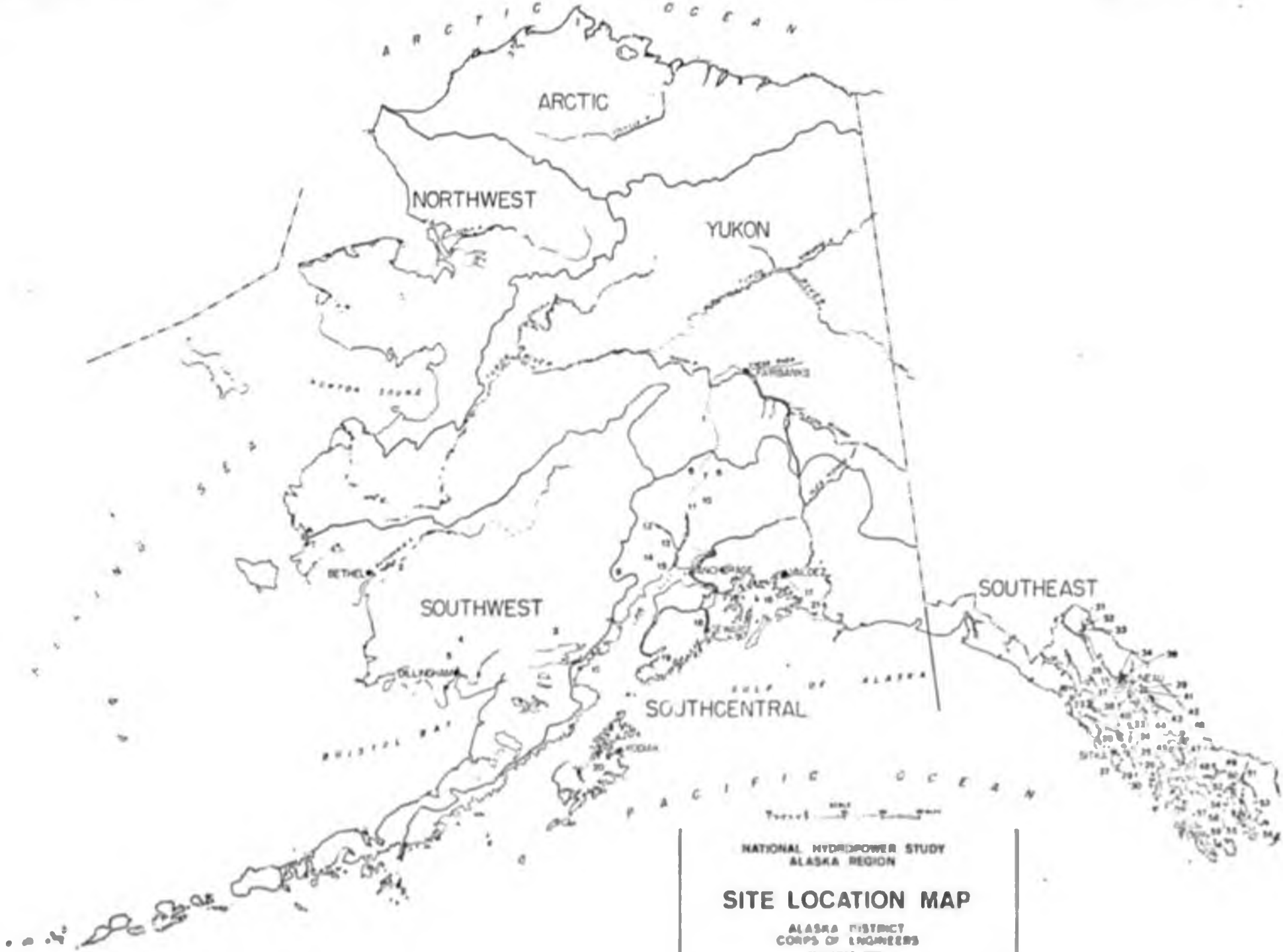

ARCTIC OCEAN
ARCTIC
NORTHWEST
YUKON
SOUTHWEST
SOUTHCENTRAL
SOUTHEAST
PACIFIC OCEAN
NATIONAL HYDROPOWER STUDY
ALASKA REGION
SITE LOCATION MAP
ALASKA DISTRICT
CORPS OF ENGINEERS

Table 1
SUMMARY OF NATIONAL HYDROPOWER STUDY SCREENING RESULTS, ALASKA

OWER AREA / REGION	STAGE 1						STAGE 2			STAGE 3					
	Initial Inventory 1/			First Screening 2/			Second Screening 3/			Third Screening 4/			Fourth Screening 5/		
	Existing Projects	Undev. Sites	Total	Existing Projects	Undev. Sites	Total	Existing Projects	Undev. Sites	Total	Existing Projects	Undev. Sites	Total	Existing Projects	Undev. Sites	Tota
RCTIC	0	5	5	0	5	5	0	3	3	0	2	2	0	0	0
ORTHWEST	0	27	27	0	16	16	0	7	7	0	6	6	0	0	0
JKON	3	56	59	3	51	54	0	27	27	0	20	20	0	1	1
OUTHWEST	2	38	40	2	28	30	0	8	8	0	8	8	0	4	4
OUTHCENTRAL	14	196	215	12	138	150	9	43	52	3	40	43	0	16	16
OUTHEAST	42	312	349	40	189	229	30	114	144	14	70	84	10	28	38
LASKA TOTAL	61	634	695	57	427	484	39	202	241	17	146	163	10	49	59

/ Objective: Inventory all existing dams and previously identified undeveloped sites.
/ Objective: Identify total physical hydropower potential.
/ Objective: Identify physical hydropower potential showing possible economic feasibility.
/ Objective: Identify economically feasible hydropower potential.
/ Objective: Assess noneconomic factors (environmental, social, institutional) and identify feasible hydropower projects tha ere identified for detailed study.

TABLE 2
NATIONAL HYDROPOWER STUDY
POTENTIAL HYDROPOWER SITES IDENTIFIED FOR DETAILED STUDY IN ALASKA

Map Index Number	Project Name	Site Ident Number	Name of Stream	Latitude	Longitude	Owner	Additional Capacity Potential (kW)	Additional Energy Potential (Mwh)	Average Cost of Energy (mills/kWh
	Yukon								
1.	Browne	AK6NPA0427	Nenana River	64 11.0	149 15.0	undeveloped	200,000	566,000	48.99
	Southwest								
2.	Kisaralik	AK6NPA0012	Kisaralik River	60 26.4	160 5.5	undeveloped	30,000	131,000	56.72
3.	Tazimina	AK6NPA0032	Tazimina	59 58.0	154 33.0	undeveloped	51,000	224,000	17.00
4.	Grant Lake	AK7NPA0018	Wood River	59 45.1	158 32.0	undeveloped	2,700	12,700	145.87
5.	Lake Elva	AK7NPA0155	Elva Creek	59 37.9	157 0.0	undeveloped	1,000	8,000	29.58
	Southcentral Railbelt								
6.	Chulitna	AK6NPA0181	Chulitna River	63 4.9	149 45.0	undeveloped	34,000	166,000	45.07
7.	Devil Canyon	AK6NPA0188	Susitna River	62 48.9	149 18.9	undeveloped	766,000	3,410,000	11.53
8.	Watana	AK6NPA0222	Susitna River	62 48.9	148 30.9	undeveloped	792,000	3,480,000	17.97
9.	Chakachamna	AK7NPA0106	Chakachamna	61 13.0	152 22.0	undeveloped	366,000	1,300,000	12.30

TABLE 2
NATIONAL HYDROPOWER STUDY
POTENTIAL HYDROPOWER SITES IDENTIFIED FOR DETAILED STUDY IN ALASKA (cont)

Map Index Number	Project Name	Site Ident Number	Name of Stream	Latitude	Longitude	Owner	Additional Capacity Potential (kW)	Additional Energy Potential (Mwh)	Average Cost of Energy (mills/kwh)
10.	Talkeetna	AK6NPA0216	Talkeetna River	62 28.0	149 22.0	undeveloped	90,000	406,400	23.32
11.	Keetna	AK6NPA0197	Talkeetna River	62 26.5	149 41.6	undeveloped	74,000	324,000	30.38
12.	Skwentna	AK6NPA0211	Skwentna River	61 51.9	152 7.0	undeveloped	98,000	490,000	30.02
13.	Yentna	AK6NPA0224	Yentna River	61 36.9	150 32.0	undeveloped	219,000	960,000	38.47
14.	Beluga Upper	AK6NPA0175	Beluga River	61 15.9	151 15.0	undeveloped	48,000	210,000	53.06
15.	Coffee	AK6NPA0108	Beluga River	61 12.0	151 10.0	undeveloped	37,000	160,000	50.41
16.	Solomon Gulch	AK7NPA0384	Solomon Gulch	61 30.9	146 15.9	undeveloped	12,000	65,000	25.57
17.	Allison Creek	AK7NPA0041	Allison Creek	61 7.1	146 10.2	undeveloped	8,000	180,000	46.50
18.	Snow	AK7NPA0283	Snow River	60 17.9	149 18.0	undeveloped	63,000	278,000	31.24
19.	Bradley Lake	AK7NPA0103	Bradley Creek	59 45.0	150 51.0	undeveloped	94,000	410,000	18.40
20.	Terror Lake	AK7NPA0166	Terror River	57 40.0	153 6.0	undeveloped	20,000	139,000	19.94
21.	Power Creek	AK7NPA0039	Power Creek	60 36.0	145 34.0	undeveloped	7,000	26,000	87.04
	Southeast								
22.	Pelican Creek	AK1NPA0346	Pelican Creek	57 34.7	136 7.8	Pelican Utility Co	1,000	1,700	75.57

TABLE 2
NATIONAL HYDROPOWER STUDY
POTENTIAL HYDROPOWER SITES IDENTIFIED FOR DETAILED STUDY IN ALASKA (cont)

Map Index Number	Project Name	Site Ident Number	Name of Stream	Latitude	Longitude	Owner	Additional Capacity Potential (kW)	Additional Energy Potential (Mwh)	Average Cost of Energy (mills/kwh)
23.	Kasnyku Lake	AK7NPA0335	Kasnyku Falls	57 11.0	134 49.9	undeveloped	7,000	30,000	41.63
24.	Takatz Creek	AK7NPA0311	Takatz Creek	57 6.9	134 51.0	undeveloped	20,000	97,000	34.48
25.	Carbon Lake	AK7NPA0321	unnamed	57 1.9	134 28.1	undeveloped	10,000	49,000	58.16
26.	Milk Lake	AK7NPA0294	Milk Creek	56 58.0	134 47.0	undeveloped	7,000	33,000	39.10
27.	Diana Lake	AK7NPA0325	unnamed	56 53.0	135 3.0	undeveloped	8,000	35,000	35.65
28.	Green Lake	AK7NPA0332	Vodopad River	56 95.3	135 11.6	undeveloped	16,000	64,000	48.47
29.	Maksoutof	AK7NPA0291	Maksoutof	56 30.0	134 57.9	undeveloped	24,000	117,000	23.47
30.	Borodino Lake	AK7NPA0319	B.P. Walter	56 22.3	134 42.9	undeveloped	5,000	24,300	44.51
31.	Goat Lake	AK7NPA0357	Pitch Fork	59 31.3	135 11.0	undeveloped	10,000	46,000	33.80
32.	Dewey Lake	AK1NPA0359	Dewey Creek	59 26.4	135 18.9	Alaska Power & Tele Co	1,000	1,300	83.39
33.	Dayebas Creek	AK4NPA0078	Dayebas Creek	59 17.2	135 2.0	undeveloped	5,000	18,200	65.95
34.	Gold Creek	AKHNPA0099	Gold Creek	58 17.9	134 23.9	Alaska Elec Light & Power Co.	2,000	9,000	34.90

TABLE 2
NATIONAL HYDROPOWER STUDY
POTENTIAL HYDROPOWER SITES IDENTIFIED FOR DETAILED STUDY IN ALASKA (cont)

Map Index Number	Project Name	Site Ident Number	Name of Stream	Latitude	Longitude	Owner	Additional Capacity Potential (kW)	Additional Energy Potential (MWh)	Average Cost of Energy (mills/kWh)
[illegible].	Treadwell Ditch	AKMNPA0086	Treadwell	58 15.5	134 22.3	Alaska Treadwell	2,500	10,000	25.70
36.	Annex	AK[illegible]NPA0098	Annex Creek	58 19.5	134 7.6	A.J. Ind.	1,800	3,000	57.18
37.	Lake Dorothy	AK5NPA0096	Dorothy Creek	58 14.0	134 3.0	undeveloped	34,000	150,000	15.24
38.	Speel Division	AK6NPA0082	Speel River	58 5.9	133 42.9	undeveloped	63,000	275,000	32.84
39.	Snettisham	AKJNPA0102	Long Lake	58 5.9	133 48.0	Alaska Power Administration	27,000	168,500	14.17
40.	Crater Lake	AK7NPA0356	Crater Creek	58 8.0	133 45.7	undeveloped	12,000	41,500	45.65
41.	Tease	AK7NPA0084	Tease Creek	58 5.9	133 40.2	undeveloped	16,000	70,000	29.42
42.	Upper Sweetheart	AK7NPA0143	Sweetheart	57 59.7	133 30.6	undeveloped	7,000	31,000	42.94
43.	Sweetheart	AK7NPA0083	Sweetheart	57 56.6	133 38.[illegible]	undeveloped	29,000	127,000	38.19
44.	Scenery Creek	AK7NPA0401	Scenery Creek	57 4.9	132 41.9	undeveloped	15,000	67,000	34.04
45.	Falls Lake	AK7NPA0417	Cascade Creek	57 1.1	132 45.1	undeveloped	44,000	190,000	18.20
46.	Thomas Bay	AK7NPA0310	Cascade Creek	57 3.3	132 45.2	undeveloped	50,000	217,000	18.47
47.	Ruth Lake	AK7NPA0400	Delt Creek	56 59.0	132 45.0	undeveloped	13,000	63,000	45.61