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#44:33

STATE OF ALASKA

THE LEGISLATURE

BUDGET AND AUDIT COMMITTEE

FINANCE DIVISION
POUCH WF–STATE CAPITOL
JUNEAU, ALASKA 99811
PHONE: (907) 465-3795

April 23, 1980

Brian - Miller did this to provide some detail to the APA + Div. of B+M on what the legislature is looking for in the way of information. —

M E M O R A N D U M

TO: J. H. Hogan, Director
Legislative Finance Division

FROM: Wallace Miller, President
Miller & Associates, Inc.

SUBJECT: Capital Projects Analysis - Hydroelectric Projects

The FY 1980 Supplemental Capital Budget and the FY 1981 Capital Budget contain requests for several hydroelectric projects. It is also my understanding that the Division of Budget and Management will be assigned the responsibility to evaluate the financial aspects of these proposed projects. In order to have sufficient information to evaluate proposed hydroelectric projects the Division of Budget and Management and, in turn, the Legislature should be provided with the following financial information on hydroelectric projects.

The following financial information is divided into two categories. The first category, which is entitled Cost Benefit Analysis, will provide comparative financial information and an analysis of secondary benefits which could result from the selection of a particular type of energy development.

The second category, entitled Financial Analysis, reflects the need for a different kind of financial information than that contained in the cost benefit analysis section. Whereas the cost benefit analysis section contains cost benefit ratios and economic impact assessments for a realistic array of alternative means for providing energy, the financial analysis section is more sharply focused on return on investment type of considerations.

C st Benefit Analysis Section

The information contained in this section should include:

1. A time-phased schedule showing the peak demand for power to be satisfied in terms of KWH.

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2. A time-phased schedule showing the average demand for power.

3. A description of each selected alternative means which could be used to provide the power.

4. The total project cost, including capital and annual maintenance and operating cost, for the useful life of the project for each alternative. (A common factor for the cost of money should be used at this stage to avoid biasing the comparison and differences can be taken into account in Step 9 below)

5. The amount of installed power (KW) and annual energy (KWH) which each alternative could produce.

6. Direct cost benefit ratios, expressed in both constant and current dollars, for each alternative considered.

7. A description of secondary benefits associated with each alternative considered.

8. Cost benefit ratios which include both direct costs and imputted values for secondary benefits.

9. Cost benefit ratios which include direct costs and secondary benefits and the effect of existing laws or programs which affect the economic choice of one form of energy over another. (For example, the availability of low interest rates for one form of energy production but not for other forms of energy production)

10. A net energy balance reflecting how each alternative would change actual or projected energy consumption patterns.

Financial Analysis Section

The information contained in this section about a specific hydroelectric project should include:

1. A time-phased schedule showing the peak demand for power to be satisfied in terms of KWH.

2. A time-phased schedule showing the average demand for power.

3. The total project capital and annual maintenance and operating costs. Interest rates should be those terms which are anticipated to be available at the time the project would be in construction. The cost of transmission lines, interties and other distribution elements should be explicitly shown.

4. The amount of installed power and annual energy which the hydroelectric facility will produce.

5. A proposed financing plan (i.e., the use of revenue bonds, a proposed rate structure and any subsidies if the proposed rates are not full cost recovery rates.

6. A return on investment analysis expressed in both current and constant dollars.

7. A listing of the potential secondary economic benefits which would result from the proposed project.

.1 Purpose. The purpose of this chapter is to establish a standard formula applicable to all Interior power agencies for fixing the interest rates for repayment purposes on new Federal power projects and system transmission facilities for which the administrative discretion to establish such rates is vested in the Secretary of the Interior. The resulting rates will more closely reflect the current interest costs of money borrowed by the Federal Government than the rates which have been utilized in recent years.

.2 Prior Directives. The provisions of this directive were formerly contained in Secretary's Order 2929 dated January 29, 1970.

.3 Authority. This directive is issued pursuant to the authority of the Secretary of the Interior under section 9(c) of the Reclamation Project Act of 1939, 53 Stat. 1194, 43 U.S.C. 485h(c); section 5 of the Flood Control Act of 1944, 58 Stat. 890, 16 U.S.C. 825s; sections 6 and 7 of the Bonneville Project Act, 50 Stat. 734, 735, as amended, 16 U.S.C. 832d, e; Reorganization Plan No. 3 of 1950, 64 Stat. 1262; and Section 2 of the Act of June 14, 1966, Public Law 89-448, 80 Stat. 200, as amended.

.4 Definitions. For the purpose of this directive:

A. The term "Federal power project" means any reservoir project of the Department of the Interior or the Department of the Army which includes the generation of electric power as one of its purposes, or any unit or separable power feature thereof, which is treated as a separate entity for repayment purposes, including transmission, substation and other appurtenant facilities.

B. The term "system transmission facilities" means transmission lines, substations and appurtenant facilities which are treated for repayment purposes as a separate entity not a part of a Federal power project.

C. The terms "new Federal power project" and "new system transmission facilities" mean a Federal power project or system transmission facilities the construction of which is initiated after January 29, 1970.

.5 Interest rate formula.

A. Except as otherwise provided by law, the interest rate to be used for computing interest during construction and interest on the unpaid balance of the costs of new Federal power projects and new system transmission facilities which are properly allocated to commercial power development, shall be the applicable rate, as hereinafter provided, during the fiscal year in which funds are first appropriated to initiate construction of such projects or facilities.

B. Each fiscal year, the Assistant Secretary - Energy and Minerals shall request the Secretary of the Treasury to inform him of the computations made as of July 1 in accordance with 730 DM 3.5C for the preceding fiscal year. If the yield rate so computed does not differ from the applicable interest rate used by Interior for the previous fiscal year by more than 1/2 percent, the applicable rate to be used by Interior shall be equal to the yield rate. If the yield rate differs from the applicable interest rate used by Interior for the previous fiscal year by more than 1/2 percent, the applicable rate to be used by Interior shall be the applicable rate used in the previous fiscal year increased or decreased by 1/2 percent toward the yield rate.

C. For the purposes of this paragraph the yield rate is the average yield during the preceding fiscal year on interest-bearing marketable securities of the United States which, at the time the computation is made, have terms of 15 years or more remaining to maturity. The average yield shall be computed as the average during the fiscal year of the daily bid prices. Where the average rate so computed is not a multiple of one-eighth of 1 percent, the rate of interest shall be the multiple of one-eighth of 1 percent nearest to such average rate.

D. The Assistant Secretary - Energy and Minerals shall annually advise the power agencies of the applicable interest rate for the current fiscal year.

DEPARTMENT OF THE TREASURY
WASHINGTON, D.C. 20220

FISCAL ASSISTANT SECRETARY

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Dear Ms. Davenport:

This is in response to your request of July 10, 1978, to inform you of the interest rate determined in accordance with the formula set forth in Part 730 DM 3.5C of the Department of the Interior's Manual, for use during the fiscal year 1980. Part 730 DM 3.5C of the Manual provides as follows:

> "C. For the purposes of this paragraph, the yield rate is the average yield during the preceding fiscal year on interest-bearing marketable securities of the United States which, at the time the computation is made, have terms of 15 years or more remaining to maturity. The average yield shall be computed as the average during the fiscal year of the daily bid prices. Where the average rate so computed is not a multiple of one-eighth of 1 percent, the rate of interest shall be the multiple of one-eighth of 1 percent nearest to such average rate."

The interest rate determined in accordance with the above-quoted formula is 8.230% which adjusted to the nearest 1/8th of 1% is 8-1/4%.

This is the same rate certified to the Water Resources Council determined in accordance with a similar formula set forth in Section 704.39(a) of the Council's Rules and Regulations (33 F.R. 19170).

Very truly yours,

Paul H. Taylor

Paul H. Taylor

Ms. Joan M. Davenport
Assistant Secretary
of the Interior
United States Department
of the Interior
Washington, D. C. 20240

Original sponsors: Haugen, Anderson, Barnes, et al

Offered: 4/21/80
Referred: Finance

IN THE HOUSE BY THE RESOURCES COMMITTEE

CS FOR HOUSE BILL NO. 754

IN THE LEGISLATURE OF THE STATE OF ALASKA

ELEVENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act relating to power projects of the Alaska Power Authority, and repealing the water resources revolving loan fund; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 44.56.080(13) is amended to read:

(13) to perform reconnaissance studies, <u>feasibility studies, and engineering and design</u> with respect to power projects;

* Sec. 2. AS 44.56.080 is amended by adding a new paragraph to read:

(16) to recommend to the legislature

(A) the issuance of general obligation bonds of the state to finance the construction of a power project if the authority first determines that the project cannot be financed by revenue bonds of the authority at reasonable rates of interest;

(B) the pledge of the credit of the state to guarantee repayment of all or any portion of revenue bonds issued to assist in construction of power projects;

(C) an appropriation from the general fund

(i) for debt service on bonds or other project purposes; or

(ii) to reduce the amount of debt financing for the project;

(D) an appropriation to the power project fund for a power project;

(E) an appropriation of a part of the income of the

renewable resources investment fund for a power project;

(F) development of a project under financing arrangements with other entities using leveraged leases or other financing methods.

* Sec. 3. AS 44.56.170(a) is amended to read:

(a) There is established as a separate fund the power project [REVOLVING] fund which shall be [ADMINISTERED BY THE AUTHORITY AS A TRUST FUND SEPARATE AND] distinct from any other money or funds of the authority, and which <u>includes only</u> [SHALL BE COMPOSED OF APPROPRIATED] <u>money appropriated by the legislature</u> [FUNDS AND INTEREST EARNED ON LOANS BY THE FUND].

* Sec. 4. AS 44.56.170(b) is repealed and re-enacted to read:

(b) The authority may make loans from the fund

(1) to electric utilities, regional electric authorities, cities, boroughs, regional and village corporations, village councils, and nonprofit marketing cooperatives to pay the costs of

(A) reconnaissance studies, feasibility studies, license and permit applications, preconstruction engineering, and design of any power projects;

(B) constructing, equipping, modifying, improving, and expanding small-scale power production facilities, conservation facilities, bulk fuel storage facilities, and transmission and distribution facilities, limited to fossil fuel, wind power, tidal, geothermal, hydroelectric, or solar energy production, transmission and distribution, and waste energy conservation facilities; and

(C) reconnaissance studies, preconstruction engineering, design, construction, equipping, modification, and expansion of potable water supply including surface storage and groundwater sources and transmission of water from surface storage to existing

distribution systems;

(2) to a person for a power project if

(A) the loan is entered into under a leveraged lease financing arrangement;

(B) the party which will be responsible for the project is an electric utility, regional electric authority, city, borough, regional or village corporation, village council, or nonprofit marketing cooperative; and

(C) the person demonstrates to the authority that the financing arrangement for the project will reduce project financing costs below costs of comparable public power projects.

* Sec. 5. AS 44.56.170(e) is amended to read:

(e) Repayment of the loans shall be secured in <u>any</u> [SUCH] manner <u>which</u> [AS] the authority determines is feasible to assure prompt repayment under a loan agreement entered into with the borrower. <u>The authority may make an unsecured loan to a borrower regulated by the Alaska Public Utilities Commission under AS 42.06 if the borrower has a substantial history of repaying long-term loans and the capacity to repay the loan.</u> [THE AUTHORITY MAY FORGIVE REPAYMENTS OF LOANS MADE FOR RECONNAISSANCE STUDIES IF THE STUDY SHOWS THAT A PROJECT IS NOT FEASIBLE.] Under a loan agreement, repayment may be deferred for 10 years or until the project for which the loan is made has achieved earnings from its operations sufficient to pay the loan, whichever is earlier.

* Sec. 6. AS 44.56.170(f) is repealed and re-enacted to read:

(f) Hydroelectric projects are subject to the limitations on interest and specific restrictions set out after each:

(1) Projects for which loans are outstanding from the water resources revolving loan fund (AS 45.86) on July 13, 1978, may receive additional financing from the power project fund; the additional financ-

ing

(A) shall be granted for a term not exceeding 50 years;

(B) shall be granted at an interest rate of not less than three or more than five percent a year on the unpaid balance;

(C) shall require repayment of loan principal and interest to begin on the earlier of

(i) the date of the start of commercial operation of the project; or

(ii) 10 years from the date the loan is granted.

(2) Loans for hydroelectric projects

(A) shall be granted for a term not to exceed 50 years; and

(B) shall be granted at an interest rate of three percent.

* Sec. 7. AS 44.56.170 is amended by adding new subsections to read:

(g) Loan repayments and interest earned by loans shall be deposited in the state general fund.

(h) The legislature may forgive the repayment of a loan made for a reconnaissance study when, on the basis of that study or a feasibility study, the authority finds that a project is not feasible.

* Sec. 8. AS 44.56 is amended by adding new sections in article 5 to read:

Sec. 44.56.177. RECONNAISSANCE STUDY. (a) To identify power project alternatives for a community, the authority shall complete a reconnaissance study for each proposed new project.

(b) A reconnaissance study shall

(1) survey all power sources available to the community and adjacent area and evaluate the relative social and economic merits of using alternative sources of power;

(2) include an assessment of the effect of the development of alternative sources on the environment so as to assure that there is no adverse effect to the environment of a magnitude which is sufficient to make the project inadvisable;

(3) include public comment from residents of the community and adjacent area.

(c) The authority shall adopt regulations defining

(1) the techniques which it shall apply to determine that the information required by (b) of this section is obtained; and

(2) standard criteria and measures to accommodate comparative analysis among alternative power sources.

Sec. 44.56.179. REVIEW OF RECONNAISSANCE STUDY BY DIVISION OF BUDGET AND MANAGEMENT. (a) The division of budget and management shall review reconnaissance studies for proposed projects of the authority.

(b) The review shall examine the reconnaissance study for compliance with the requirements of AS 44.56.177(b) and (c). The division may approve or disapprove the reconnaissance study. If the division of budget and management disapproves of the study, it shall return the reconnaissance study to the authority together with a comprehensive statement of the reasons for its disapproval. The authority may amend the portions of the reconnaissance study which the division of budget and management has identified as deficient to comply with the requirements of AS 44.56.177(b) and (c), and resubmit the reconnaissance study to the division of budget and management for its reconsideration.

(c) For purposes of this section, a project is approved if it has not been disapproved by the division of budget and management within 30 days of submission of the reconnaissance study for the project to it by the authority.

Sec. 44.56.181. FEASIBILITY STUDY AND FINANCE PLAN. (a) Unless

the reconnaissance study has been disapproved by the division of budget and management under AS 44.56.179, the authority shall complete a feasibility study and plan of finance for each proposed project.

(b) A feasibility study shall include

(1) information about the proposed project, including but not limited to total project construction costs, total project operating costs, the timing and amount of anticipated returns from the completed project, a benefit-to-cost ratio, the potential effect of the project on the environment of the area which will be served by the project when completed, and the availability of alternative government financing;

(2) a statement of all assumptions which affect the economic feasibility of the project, including but not limited to the discount rate and interest rate of amounts of money used for the project, anticipated fuel prices, an escalation rate, state and local electric load growth, and estimates of indirect costs and benefits; and

(3) a comparative analysis of all reasonable alternatives to construction of the proposed project.

(c) The plan of finance shall include recommendations of the most appropriate means to finance a project, including, but not limited to,

(1) the issuance of revenue bonds of the authority;

(2) the issuance of

(A) general obligation bonds of the state; or

(B) revenue bonds of the authority which are guaranteed or partially guaranteed by the state;

(3) an appropriation from the general fund

(A) to pay debt service on bonds or for other project purposes; or

(B) to reduce the amount of debt financing for the project;

(4) a loan from the general fund;

(5) financing arrangements with other entities using leveraged leases or other financing methods;

(6) assistance from any federal agency, including, but not limited to, the Rural Electrification Administration;

(7) a loan from the power project fund (AS 44.56.170(a)), or from the renewable resources investment fund (AS 37.11.050); or

(8) any combination of financing arrangements authorized by this subsection.

(d) The authority shall adopt regulations defining

(1) the techniques which it shall apply to determine that the information required by (b) and (c) of this section is obtained; and

(2) standard criteria and measures to accommodate comparative analysis among alternative financing arrangements.

Sec. 44.56.183. REVIEW OF FEASIBILITY STUDIES BY DIVISION OF BUDGET AND MANAGEMENT. (a) The division of budget and management in the Office of the Governor shall review feasibility studies for projects of the authority for compliance with the provisions of AS 44.56.181(b).

(b) In its review of a project under this section, the division of budget and management may obtain an independent evaluation of the feasibility studies to determine compliance with the provisions of AS 44.56.-181(b).

(c) When the division of budget and management has completed a review of the feasibility study for a project under (a) and (b) of this section, it shall submit a report to the governor. The report shall examine the feasibility study for compliance with the requirements of AS 44.56.181(b). The report of the division of budget and management shall include a recommendation for approval or disapproval of the project based on the division's examination of the feasibility study for

compliance with the requirements of AS 44.56.181(b).

(d) The report for a proposed project required by (c) of this section shall be prepared and submitted not later than 60 days after the feasibility study and plan of finance for the proposed project have been received by the division of budget and management.

Sec. 44.56.185. SUBMISSION TO THE LEGISLATURE. (a) The authority shall submit a feasibility study and plan of finance for a proposed new project to the legislature. When the feasibility study and plan of finance are submitted to the legislature under this section, they shall be accompanied by the report of the division of budget and management prepared under AS 44.56.183.

(b) The authority may not proceed with the engineering or design phase of a project for which legislative approval is required until the legislature approves a proposed new project. The legislature may approve a proposed new project only by enacting legislation authorizing that project.

Sec. 44.56.187. APPLICABILITY OF SECTIONS. The provisions of AS 44.56.177 - 44.56.185 apply only to a proposed new project which

(1) generates more than 1.5 megawatts of power;

(2) requires an appropriation of more than $1,000,000 from the state general fund, from the power project fund, or from the renewable resources investment fund; or

(3) is based on a plan of financing which requires the issuance of general obligation bonds or other pledge of the credit of the state.

Sec. 44.56.189. PROJECT CONSTRUCTION. (a) If the new project is to be designed, acquired and constructed by the authority, it shall be designed, acquired and constructed as a public work of the state. For the purpose of this section a new project does not include (1) an addi-

tion or modification to an existing project if the total cost of the addition or modification does not exceed $1,000,000; (2) repair or reconstruction of a project; or (3) design, acquisition or construction necessary to complete a project for which bonds have been issued. An addition, modification, repair, reconstruction, design, acquisition or construction for the purpose of completing a project may be undertaken by the authority without any of the approvals necessary for a new project.

(b) The authority may not issue bonds except after 60 days notification of its intent to issue bonds given to the governor and to the legislature, if the legislature is in session, or to the Legislative Budget and Audit Committee, if the legislature is not in session.

Sec. 44.56.195. OPERATION OF POWER PROJECTS. When a power project is operated by the authority, revenues earned by the authority which exceed (1) operating and maintenance expenses of the project and (2) the interest on and amortization charges sufficient to retire bonds of the authority issued for the project, and reserves for them, shall be transmitted to the commissioner of revenue for deposit in the state general fund.

* Sec. 9. AS 44.56.230(7) is repealed and re-enacted to read:

(7) "reconnaissance study" means a study conducted for the purpose of assessing the present and future power needs of an area under AS 44.56.177;

* Sec. 10. AS 44.56.230 is amended by adding new paragraphs to read:

(8) "feasibility study" means a study conducted for the purpose of establishing the economic, environmental, and social practicality of completing a proposed power project under AS 44.56.181;

(9) "small-scale power production facility" means a facility which, by design, is to produce less than 25 megawatts of power.

* Sec. 11. AS 44.56.180 and AS 45.86 are repealed.

* Sec. 12. TRANSITION: CURRENT PROJECTS OF THE AUTHORITY. On the effective date of this Act, unless a proposed project is exempt under AS 44.56.187 added by sec. 8 of this Act,

(1) if the division of budget and management determines that the Alaska Power Authority has completed a reconnaissance study as that term was defined by AS 44.56.230(7) before re-enactment of AS 44.56.230(7) by sec. 9 of this Act, the project for which the reconnaissance study was done is exempt from the provisions of AS 44.56.177 and 44.56.179, added by sec. 8 of this Act; the Alaska Power Authority shall proceed with preparation of a feasibility study and plan of finance under AS 44.56.181 added by sec. 8 of this Act;

(2) if the division of budget and management determines that the Alaska Power Authority has completed both a reconnaissance study under AS 44.56.080(13) and a statement under AS 44.56.180(c),

(A) and that statement has been approved by the legislature under AS 44.56.180(c), the Alaska Power Authority may proceed with that project under AS 44.56.189 added by sec. 8 of this Act;

(B) and that statement has not been approved by the legislature under AS 44.56.180(c), the statement which the Alaska Power Authority has prepared constitutes a feasibility study and plan of finance for purposes of AS 44.56.181; the division of budget and management may not review the statement for compliance with the requirements of AS 44.56.183 added by sec. 8 of this Act before the statement is submitted under AS 44.56.185, added by sec. 8 of this Act, to the governor and legislature.

* Sec. 13. (a) The balance of the water resources revolving loan fund lapses into the general fund on the effective date of this Act.

(b) The principal and interest due on obligations created by loans made

by the water resources revolving loan fund shall be repaid to the commissioner of commerce and economic development, and shall be transmitted by him to the commissioner of revenue for deposit in the state general fund.

* Sec. 14. This Act takes effect July 1, 1980.

B. Each fiscal year, the Assistant Secretary - Energy and Minerals shall request the Secretary of the Treasury to inform him of the computations made as of July 1 in accordance with 730 DM 3.5C for the preceding fiscal year. If the yield rate so computed does not differ from the applicable interest rate used by Interior for the previous fiscal year by more than 1/2 percent, the applicable rate to be used by Interior shall be equal to the yield rate. If the yield rate differs from the applicable interest rate used by Interior for the previous fiscal year by more than 1/2 percent, the applicable rate to be used by Interior shall be the applicable rate used in the previous fiscal year increased or decreased by 1/2 percent toward the yield rate.

C. For the purposes of this paragraph the yield rate is the average yield during the preceding fiscal year on interest-bearing marketable securities of the United States which, at the time the computation is made, have terms of 15 years or more remaining to maturity. The average yield shall be computed as the average during the fiscal year of the daily bid prices. Where the average rate so computed is not a multiple of one-eighth of 1 percent, the rate of interest shall be the multiple of one-eighth of 1 percent nearest to such average rate.

D. The Assistant Secretary - Energy and Minerals shall annually advise the power agencies of the applicable interest rate for the current fiscal year.

~~avg of long-est~~

or 6.5%/ 15% of PF earnings

Same rate as debt in the project or, if no other debt, ~~[illegible]~~ on long-term rates

obligation secured thereby, the title evidence, and all other documents and other papers pertaining to the mortgage loan;

(14) "permitted encumbrances" means liens, encumbrances, reservations and other imperfections of title as shall not materially impair the use or value of the premises or as to which appropriate steps have been taken to secure the interest of the Corporation;

(15) "planned unit development (PUD)" means a real estate development which consists of separately owned lots with contiguous or noncontiguous areas or facilities usually owned by an owner's association in which the owners of the lots have a stock or membership interest which cannot be severed from the ownership of an individual unit. Title to the real estate under the dwelling units is held by the individual lot owners and not by the owner's association. The owner's association usually has title to and administers the common areas, and levies monthly charges against lot owners for common area expenses; and

(16) "remote, underdeveloped or blighted" area, for purposes of AS 18.56.088(c)(1), is defined as all areas of the state situate outside the boundaries of the Municipality of Anchorage, the Fairbanks North Star Borough, the City and Borough of Juneau, and the Ketchikan Gateway Borough. The area within the Municipality of Anchorage may be referred to as category "C," the area within the Fairbanks North Star Borough, the City and Borough of Juneau, and the Ketchikan Gateway Borough may be referred to as category "B," and all other areas of the State may be referred to as category "A." The aforesaid political subdivisions each contain a population of 10,000 or more according to the latest estimate for state revenue sharing prepared by the Department of Community and Regional Affairs. (Eff. 11/29/78, Reg. 68; am 5/31/79, Reg. 70)

Authority: AS 18.56.088
AS 18.56.090
AS 18.56.210

3 AAC
3 AAC

CHAPTER 94.
ALASKA POWER AUTHORITY

Article
1. Notice to Public (3 AAC 94.010–3 AAC 94.020)
2. Actions Other Than Loans (3 AAC 94.050)
3. Power Project Revolving Fund (3 AAC 94.070–3 AAC 94.110)
4. General Provisions (3 AAC 94.900)

ARTICLE 1.
NOTICE TO PUBLIC

Section
10. Scope of regulations
20. Public notice of meetings

3 AAC 94.010. SCOPE OF REGULA... This chapter applies to actions under... the Alaska Power Authority concerning... project, as defined in AS 44.56.230(4)... applications for loans from the powe... revolving fund. (Eff. 4/13/79, Reg. 70)

Authority: AS 44...
AS 44...

3 AAC 94.020. PUBLIC NOTI... MEETINGS. Public notice of all ... meetings must be given by publica... newspaper of general circulation not ... two weeks and not less than five days be... meeting. The notice must be designed to ... public notice of the meeting and of the ... topics to be discussed and considered ... meeting, and must include a proposed ... the meeting. (Eff. 4/13/79, Reg. 70)

Authority: AS 44...
AS 44...

ARTICLE 2.
ACTIONS OTHER THAN LOA...

Section
50. Steps preceding certain actions ...

3 AAC 94.050. STEPS PREC... CERTAIN ACTIONS. (a) This section ap... authority action other than actions con... under secs. 70 – 110 of this chapter whi... result in construction, acquisition, finan... operation of a power project, including ... limited to entering into an agreement ...

final action on a resolution ... issue of bonds.

... taking action covered by this ... authority will consider whether

... project is an eligible project as ... AS 44.56.230(3) and (4);

... project conforms with the long-term ... power development plan;

... project meets the needs of the area to ... by the project and will benefit the area ... power to the consumer at the ... cost;

... project is feasible from an engineering ... economic standpoint; and

... alternative to the project exists which ... in development of power at a ... by a different method or by an ... than the authority which could ... be expected to provide, within a time ... comparable to the project, comparable ... power at a lower cost to the ... and which meets the criteria set forth ... of this subsection.

... taking action covered by this ... authority will adopt a written ... which

... that, in the opinion of the ..., the general prosperity and economic ... of the people of Alaska will be enhanced ... power project; and

... the findings of the authority with ... each factor in (b) of this section. (Eff. ... Reg. 70)

Authority: AS 44.56.070
AS 44.56.080
AS 44.56.100

ARTICLE 3.
PROJECT REVOLVING FUND

Section
... application
... by executive director
... by authority
... of loans
... of records and facilities

3 AAC 94.070. LOAN APPLICATION. (a) An application for a loan from the power project revolving fund must at the time of filing

(1) state the legal name of the applicant and the legal authority under which it was created and other information that will demonstrate that the applicant is an eligible borrower under AS 44.56.170;

(2) include a certified copy of the resolution or other official action by the governing body of the applicant authorizing the application for a loan;

(3) state the name, title, and address of the official correspondent or representative of the applicant for purposes of the application;

(4) state the names and titles of the principal officers, including the chief executive officer or general manager, of the applicant;

(5) state the name and address of the engineer, legal counsel, financial advisor or consultant, and any management, engineering, design, economic, or other advisors or consultants which the applicant may have for the project;

(6) state the total amount of loan requested;

(7) provide a general description of the use to which the loan funds will be applied, including but not limited to

(A) location;

(B) a comprehensive statement clearly demonstrating public need for the project and the project's eligibility under AS 44.56.170;

(C) the proposed allocation of loan funds to each purpose or to each phase of a project;

(8) provide information from which the authority may determine

(A) in the case of a construction project, that the project is feasible from an engineering and an economic standpoint; and

(B) that the applicant has the financial ability, including, where necessary, the

authority to charge and collect rates, fees or rentals or, in the case of a municipality, to levy taxes to generate sufficient revenue to repay the loan;

(9) state the status of any proceedings undertaken by the applicant to obtain permits, certificates or other authorizations from any federal, state or legal agency necessary to begin, complete, and operate the project;

(10) provide financial statements of the applicant and any other party or parties acting as guarantor of the loan, unless otherwise required by resolution of the authority; these financial statements must include, where possible, balance sheets and profit and loss statements and must be certified by an independent certified public accountant; and

(11) in the case of an investor-owned electric utility, provide a business history of any person or entity owning or controlling 10 percent or more of the applicant's stock or business.

(b) An applicant must, in addition to the application, provide in timely fashion other information which may be requested by the executive director of the authority.

(c) Applications must be submitted to the Executive Director, Alaska Power Authority, 333 West Fourth Avenue, Suite 31, Anchorage, Alaska 99501. (Eff. 4/13/79, Reg. 70)

Authority: AS 44.56.080
AS 44.56.170

3 AAC 94.080. REVIEW BY EXECUTIVE DIRECTOR. (a) Upon receipt of a complete application and other information which has been requested or required, the executive director shall review the application.

(b) The executive director, after reviewing the application, shall make a recommendation which includes

(1) written comments analyzing whether

(A) in the case of a power project, the project conforms with the long-term electrical power development plan;

(B) the project meets the needs of the area to be served by the project

benefit the area;

(C) in the case of a construction

the project is feasible from an engineering

an economic standpoint;

(D) in the case of a construction

any alternative to the project existing

would result in development of power

potable water at a different site

different method, or by an entity other

the authority which could reasonably

expected to provide, within a time

comparable to the project, comparable

volumes of power or potable water at

cost to the consumer and which

criteria set forth in (A) – (C)

subsection; and

(E) the applicant has applied for

been awarded necessary permits

certificates;

(2) a list of subjects to be analyzed

final work product of any studies

undertaken by the applicant;

(3) a statement setting out proposed

terms and conditions; and

(4) other comments which the executive

director, in his discretion, considers appropriate

(c) The recommendation of the executive

director must be transmitted to the

for action within 90 days after a complete

application has been filed. (Eff. 4/13/79

70)

Authority: AS 44.56

AS 44.56

3 AAC 94.090. ACTION BY AUTHORITY

The authority will, in its discretion, request

additional information during its consideration

of an application and postpone action pending

receipt of that information.

(b) The authority will, in its discretion, take

a completed application under advisement for a

reasonable period of time.

(c) The authority will consider each

application which has been transmitted to it

[illegible] other than applications for loans for [illegible] or feasibility studies and will [illegible] whether

[illegible] the project is an eligible project under AS [illegible] and the borrower is an eligible [illegible] under AS 44.56.170;

[illegible] in the case of a power project, the project [illegible] with the long-term electrical power [illegible] plan;

[illegible] the project is feasible from an engineering [illegible] economic standpoint;

[illegible] alternative to the project exists which [illegible] result in development of power or [illegible] water at a different site, by a different [illegible] by an entity other than the applicant [illegible] which reasonably be expected to provide, [illegible] a time schedule comparable to the [illegible], comparable volumes of power or [illegible] under at a lower cost to the consumer [illegible] which meets the criteria set forth in (1) – [illegible] of this subsection;

[illegible] needs of and benefits to the area to [illegible] served by the project are greater than the [illegible] of and benefits offered to other areas of [illegible] by a project for which sponsors may [illegible] loan funds from the authority if that [illegible] can be made based on [illegible] then existing; and

[illegible] the applicant has or will have sufficient [illegible] from all sources to repay the loan.

[illegible] The authority will consider each [illegible] for a loan for reconnaissance or [illegible] studies which has been transmitted to [illegible] and must determine whether the [illegible] is an eligible borrower under AS [illegible] and has or will have sufficient [illegible] from all sources to repay the loan in [illegible] amount.

[illegible] The final decision of the authority to [illegible] or disapprove an application for a loan [illegible] is in the form of a written resolution which [illegible] the findings required by this section [illegible] which the executive director shall transmit [illegible].

[illegible] If the authority approves an application, it will instruct the executive director to enter into a loan agreement with the applicant under conditions complying with sec. 100 of this chapter and provisions specified in the resolution. (Eff. 4/13/79, Reg. 70)

Authority: AS 44.56.080
AS 44.56.170

3 AAC 94.100. TERMS OF LOANS. The terms of loans made by the authority from the power project revolving fund will be contained in the authority resolution approving the application and will comply with the following conditions:

(1) the loan must bear an interest rate or rates as determined by the authority, but the rate must not be less than three percent;

(2) the loan must mature on the date and pay interest on the dates and in such amounts as determined by the authority, but the final maturity date must not extend beyond the expected and specified productive life of the project being financed; and

(3) the loan must be supported by appropriate documentation which may include, without limitation, a loan agreement, bonds, notes, or other documentation, evidencing to the satisfaction of the authority that the loan is secured by one or more of the following:

(A) a pledge of the revenues of the borrower or the project;

(B) a lien, mortgage, security interest, collateral agreement or other encumbrance on the project or other assets, rights or interests of the borrower; or

(C) a pledge of the taxing power of the borrower. (Eff. 4/13/79, Reg. 70)

Authority: AS 44.56.080
AS 44.56.170

3 AAC 94.110. INSPECTION OF RECORDS AND FACILITIES. (a) An applicant shall make its books and records, facilities, and its real and personal property of any kind, available for inspection at any reasonable time by the authority, its executive director, or its agents, upon receipt by the applicant of a written request to inspect.

(b) The authority, its executive director, or its agents, will, in the discretion of the authority or its executive director, inspect upon reasonable notice the construction of any project which is being financed, in whole or in part, with funds obtained by a loan from the authority. The inspection does not subject the authority, its executive director, or its agents to any action for damages.

(c) An applicant which has obtained a loan from the authority shall permit the authority, its executive director, or its agents to inspect its books, records, facilities, and real and personal property as long as any portion of the loan, including interest, remains outstanding.

(d) The authority will, in its discretion, by written request require an applicant which has obtained a loan from the authority to

(1) submit at reasonable times to audits or examinations of its books and records by an independent firm of certified public accountants selected by the authority to determine whether the provisions of the loan agreement have been complied with and to pay the cost of this audit or examination;

(2) submit a sworn statement by a responsible officer of the applicant as to the purposes to which the proceeds of the loan have been applied. (Eff. 4/13/79, Reg. 70)

Authority: AS 44.56.080
AS 44.56.170

ARTICLE 4.
GENERAL PROVISIONS

Section
900. Definitions

3 AAC 94.900. DEFINITIONS. In this chapter, unless the context requires otherwise

(1) the definitions in AS 44.56.230 apply to words used in this chapter;

(2) "city" or "borough" includes a unit of home rule local government which has been unified under AS 29.68.240 *et seq.*;

(3) "executive director" means the executive director of the Alaska Power Authority;

(4) "long-term electrical power d... plan" means the plan to be prepa... Department of Commerce and ... Development under AS 44.56.224 as ... the time of consideration or determin...

(5) "nonprofit marketing cooperat... a cooperative organized under AS 10... Alaska Cooperative Corporation Act, ... operated on a nonprofit basis for t... benefit of its members and which ... containing provisions relating to the ... of revenues and receipts as may be nec... appropriate to establish and ma... nonprofit and cooperative charac... cooperative organized under AS 10... Electric and Telephone Act, which ex... powers granted to an electric coopera... 10.25.020;

(6) "regional corporation" means ... Native Regional Corporation establi... the laws of the State of Alaska in ... with the provisions of the Alaska Nat... Settlement Act (P. L. 92-203);

(7) "small scale" means a power ... 20 or fewer megawatts installed capac...

(8) "village corporation" means ... Native Village Corporation organized ... laws of the State of Alaska as a b... profit or nonprofit corporation to ho... manage, and distribute land, proper... and other rights and assets for and on ... native village in accordance with th... the Alaska Native Claims Settlement ... 92-203);

(9) "village council" means the du... governing body of an unincor... community which has between 25 ... people residing within a two-mile ra... 4/13/79, Reg. 70)

Authority: AS 44.56.045 AS 44.5...
AS 44.56.080 AS 44.5...
AS 44.56.170

JAY S. HAMMOND
GOVERNOR

STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

May 6, 1980

The Honorable Brian Rogers
Chairman, House Finance
Subcommittee on CSHB754
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

draft language only

Brian

Dear Representative Rogers:

We have reviewed CS for House Bill 754 (Finance) and offer the following amendments for your serious consideration.

1. p. 5, line 5

add (iii) Resolutions submitted to the Board for loan approvals under this section and requests for appropriations for specific loans in the APA budget shall include a finding, pursuant to Sec. 170(c)(5), of the present value of the difference in the cost of the loan to the borrower between a rate under (ii) of this subsection and a rate under (i) of this subsection.

If it is to remain policy to provide below-market interest rates for power development, one critical piece of information which should be developed and presented is the present value of this subsidy. The APA should be required to compute this figure by comparing the cost to the borrower under subsection (2)(B)(ii) if this option is recommended and (2)(B)(i) of this section.

2. p. 5, line 18

after "(1)" add after consultation with other agencies of state government or other sources of information on alternative sources of power,

proposed

Both the Energy Center and the Division of Energy and Power Development are in the business of developing and disseminating information on alternative power technologies. The APA should be required to work in conjunction with these and other related entities.

3. p. 5, line 27

after "authority" add , in ~~cooperation~~ consultation with the Division of Budget and Management,

Once promulgated by the APA and approved by the Department of Law (on legal, not policy grounds) these regulations have the weight of law and Budget and Management can only review on the basis of whether or not the APA studies follow the substantive and procedural requirements of the regulations. To strengthen the ability of Budget and Management to perform an adequate review, they should be given the power to work with the APA in establishing the regs defining the substance of APA studies.

4. p. 7, line 8

after "project" change ";" to . and add If the proposed project is not ~~significantly~~ superior, based on established criteria, ~~to~~ than its next best alternative, the analysis required under this subsection, shall contain all the information required under (b)(1) of this section for the next best alternative; and ~~to its next best alternative~~ OK

Unless it is reasonably clear that the proposed project is far superior to its alternatives, the APA should be required to develop complete information on at least the top two alternatives so that a detailed comparison is possible.

5. p. 8, line 7

after "required." add The plans of finance shall include an estimate of the present value of state financial assistance, computed as the difference between the market rate determined as either (1) the rate under 170(f)(2)(B)(i) or (2) the estimated interest rate on revenue bonds issued by the Authority for the project, and the effective rate resulting from state financial assistance.

See comment for Recommendation No. 2.

6. p. 8, line 8

after "authority" add , in ~~conjunction~~ cooperation with the Division of Budget and Management,

See comment for Recommendation No. 4.

7. p. 9, line 25 and 27

delete Sections 187(a)(1)(A) and (B). Line 24 after "fund" add . and delete rest of sentence.

As presently written, Sec. 187(a) means not only that the Division of Budget and Management may not review APA studies, but it also means the APA is not required to conduct reconnaissance or feasibility studies on any project. Even the reconnaissance study for Susitna cost less than $3 million and few feasibility studies cost that much.

The timing of funding requirements is fairly loose, and the development of a finance plan comes relatively late in the process (as part of the feasibility study). Thus there is considerable opportunity for the APA to shift both appropriation requests and expected appropriation requests far enough into the process to effectively use this section as written to escape Sections 177-185 entirely. The review of reconnaissance and feasibility studies by the Division of Budget and Management should not be based upon a given level of appropriations in a given year. It should be based on the degree of possible state involvement in a project which cannot be assessed until completion of both studies. Unless no state appropriations will be involved at all from the outset, these sections should apply.

8. p. 10, line 5

delete Sec. 187 (b).

We fail to see how the size of a project per se relates to whether or not Sec. 177-185 should apply to that project. Indeed, under FERC regulations, any project over 1.5MW requires the types of analysis required by Sec. 177-185 for licensing, and, therefore, the APA should be required to perform such studies in preparation for FERC licensing proceedings.

9. p. 12, line 5

add a new section to read:

(c) Upon expiration of a contract entered into by the authority under (a) of this section, any revenues remaining with the authority earned under that contract shall be used to reduce rates or improve services to consumers served by the power project.

Upon expiration of a contract or of covenants pursuant to a contract, the APA may be in possession of reserve accounts, sinking funds, or other monies pledged to secure that contract. Such surplus revenues should be applied to reducing rates or improving services.

10. p. 5, line 16 and throughout

The meaning of the term "new project" is undefined in Sec. 230 Definitions. In the original statute, the only indication of what a new project is was contained in Sec. 180 (Sec. 180(d) in 1978 amended version) and was anything that was not an "addition, modification or repair," etc. The new Sec. 189 provides no clues as to the meaning of new project, nor the difference between "new" and "old" projects. The original intent was that all projects are "new" projects for purposes of executive and legislative review until bonds have been issued, at which time a project becomes an "old" project. This was to protect bondholders from having projects return to the political arena.

Either the term "new" project should be analyzed in the context of HB754 and defined, or the word "new" should be deleted wherever it appears in conjunction with "project."

Sincerely,

Keith Specking

Keith Specking
Legislative Assistant

PROJECTS AUTHORIZED — UNDER STUDY
POWER

BRADLEY LAKE

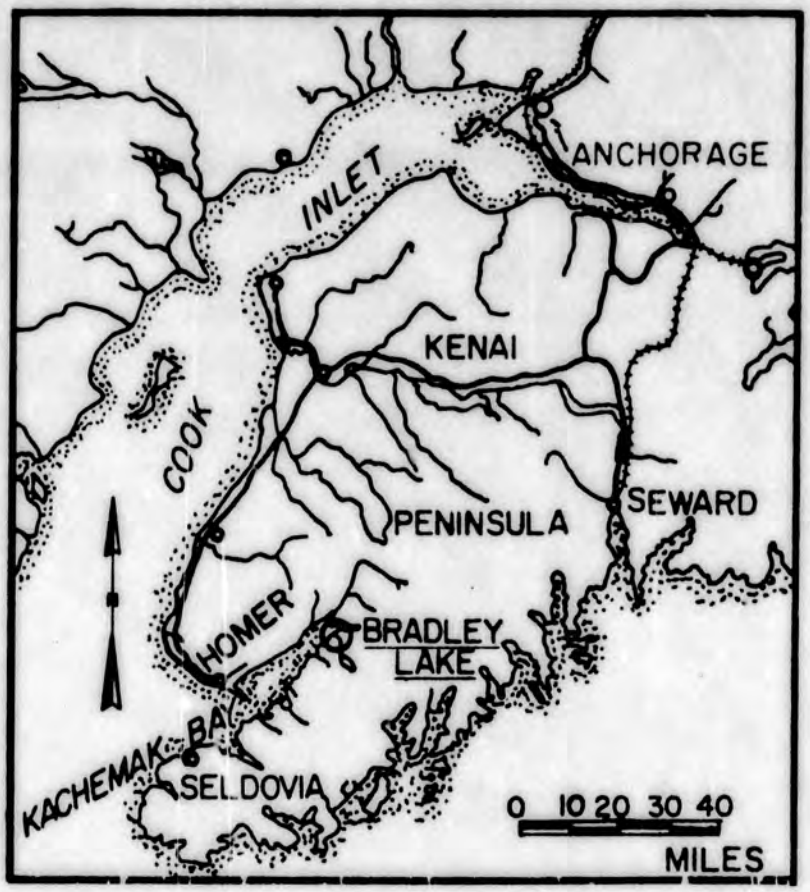
This potential hydropower project is at the mouth of Bradley Lake on the Kenai Peninsula at the head of Kachemak Bay, some 25 air miles northeast of Homer and 110 miles southwest of Anchorage.

Basic project features include two dams to block the outlet of the lake, two small dams with ditch systems to divert flows from the north fork of Bradley River and from Nuka River into the reservoir, and a lake-tap-powerhouse-tailrace complex for power generation. Authority for advanced engineering and design work was contained in the 1962 Flood Control Act.

Congress authorized a restudy of this potential project. By the end of 1978 the Alaska District had selected the final project features. The market analysis was performed by the Alaska Power Administration.

Load growth projections will be reanalyzed and updated commensurate with the greatly increased demand for electrical energy in Alaska generally and in the railbelt area specifically. Substantial growth in population and business on the Kenai Peninsula in the past three years has brought increased local power needs.

Study of this possible power site is a phase of the long-range examination of energy sources being explored in the District's Southcentral Railbelt Area Study. (See Congressional Studies Under Way, Power, pages 44, 46). Objective of that study is the location of sources of power available to the railbelt area, which extends from Fairbanks and vicinity southward to include the Kenai Peninsula.



It is estimated that the contemplated installation, providing an ultimate installed capacity of 118,000 kW, may cost $156,000,000.

Physical data on the project, as authorized by the 1962 Flood Control Act, are:

Drainage area damsite: 68 sq. miles.

Main dam:	
Type:	Concrete-gravity
Spillway:	Ungated overflow
Height	100 feet
Crest length:	1,215 feet
Reservoir:	
Gross capacity:	311,000 acre feet
Dead storage:	100,000 acre feet

MEMORANDUM May 19, 1980

To: Representative Russ Meekins
Representative Jim Duncan
Representative Joe Montgomery

From: Hugh Malone

Re: Alaska Power Authority Operating Budget, Development Category

As you know, the House approved three new positions for the Alaska Power Authority: two engineers and one economist. I feel that these new positions are vital, given the amount of work the legislature has directed the authority to accomplish. We have directed them to do over fifty million dollars worth of work this next fiscal year, including scores of reconnaissance and feasibility studies for communities in every part of the state. The authority currently has only three professional staff: an executive director, a director of finance and a director of engineering. If we are to expect good work on the projects of the authority, we must provide the proper level of administrative support. Thank you for your attention to this very important matter.

H Malone

cc; Senator John Sackett

CH.* SLA* OR RP*	PROJECT TITLE AND LOCATION	AMOUNT AUTHORIZED	ESTIMATED TOTAL EXPENDITURES THROUGH JUNE 1980	PLANNED EXPENDITURES THROUGH COMPLETION	EST. COMPL. DATE	STATUS
SB 63	Susitna Alternative Method	150.0	150.0	150.0	1/80	Alternative Method will be developed according to plan by 10/79.
SB 63	Susitna Feasibility Analysis	8,178.0	4,000.0	26,400.0	3/84	Appropriation was to the Governors Office.
HB 32	Swan Lake Hydroelectric Project	3,165.0	3,165.0	21,165.0	10/81	Funds have been loaned to the Utility. State assistance in financing is necessary
HB 32	Lake Tyee Hydroelectric Project	2,000.0	2,000.0	12,000.0	10/82	Development of Project has been taken over by the Authority. Clarification on use of funds is necessary. State assistance in financing is necessary.
HB 32	Terror Lake Hydro-electric Project	2,000.0	2,000.0	2,000.0	6/80	Funds have been loaned to the utility and work is proceeding on schedule.
HB 32	Power Creek Hydro-electric Project	250.0	250.0	750.0	6/81	Funds will be loaned to the utility after completion of a Corps of Engineers study. Fully funded by FCCSSB 53. Appropriation in FY'80.
FCCSSB 53	AVEC Fuel Conversion Project	150.0	150.0	275.0	6/81	Project is proceeding on schedule. Funds RSA'd from Dept. of Com. & Reg. Affairs
FCCSSB 53	Cordova Hydro Project	500.0	500.0	750.0	6/81	Fully funded in FY'80.--See Above
FCCSSB 53	Bradley Lake Hydro Project	80.0	80.0	3,580.0	6/82	Work will proceed in cooperation with the Corps of Engineers.
FCCSSB 53	Solmon Creek Hydro Project	200.0	100.0	200.0	6/81	Alaska Electric Light and Power has not as yet applied for loan of the fund.
FCCSSB 53	Anchorage Energy Pooling	120.0	60.0	120.0	6/81	This study has not been initiated as yet.
FCCSSB 53	Mennonite Creek Hydro. Project	90.0	90.0	290.0	6/80	A detailed feasibility study will be initiated in October with a loan to the utility.

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

01-1030 (7 79)

38 STATUS OF CURRENTLY APPROVED CAPITAL PROJECTS

REVISED DATE

000111

CH.* SLA* OR RP*	PROJECT TITLE AND LOCATION	AMOUNT AUTHORIZED	ESTIMATED TOTAL EXPENDITURES THROUGH JUNE 1980	PLANNED EXPENDITURES THROUGH COMPLETION	EST. COMPL. DATE	STATUS
FCCSSB 53	Lake Elva Hydroelectric Project	80.0	60.0	480.0	6/82	A Feasibility Study and Stream Gaging have recently been initiated.
FCCSSB 53	Chilkat Hydroelectric Project	50.0	45.0	550.0	6/82	A Reconnaissance Study has recently been initiated for the Haines/Skagway area.
FCCSSB 53	Kisaralik Hydroelectric Project	80.0	80.0	580.0	6/82	A Feasibility Study and Stream Gaging have recently been initiated.
FCCSSB 53	Gartina Creek Hydro. Project	400.0	150.0	400.0	6/82	A preliminary feasibility report is presently being completed on this project.
FCCSSB 53	Gunnuk Creek Hydro. Project	195.0	95.0	195.0	6/82	A preliminary feasibility report is presently being completed on this project.
FCCSSB 53	Thayer Creek Hydro. Project	220.0	100.0	220.0	6/82	A preliminary feasibility report is presently being completed on this project.
FCCSSB 53	Black Bear Lake Project	440.0	150.0	440.0	6/82	A preliminary feasibility report is presently being completed on this report.
FCCSSB 53	Larsen Bay/Old Harbor Hydro. Projects	80.0	80.0	480.0	6/82	Detailed Feasibility Studies will be initiated in the spring of 1980 for both villages.
FCCSSB 53	Nome/Kotzebue Assessment	80.0	80.0	680.0	6/82	A Reconnaissance study of the areas will be initiated in 9/79. One project near Nome has been identified.
FCCSSB 53	Thomas Bay Power Authority-Tyee Phase II	60.0	60.0	60.0	6/80	Funds have been loaned to the Commission for work on the Lake Tyee Project
FCCSSB 53	Seward Hydro. Study	40.0	40.0	1,040.0	6/82	Feasibility Studies are presently being initiated in conjunction with the City of Seward.

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

01-103P (7.79)

38 STATUS OF CURRENTLY APPROVED CAPITAL PROJECTS

REVISED DATE

000112

Impact of State Assistance in Financing Power Project Construction

($ millions in 1979)

CY	1979	1980	1981	1982	1983	1984	Total
# Project Starts	2	1	6	12	4	1	26
Projects	Green Lake Solomon Gulch	Waste Heat Recovery	Swan Lake Lake Tyee Mennonite Creek 3 AVEC Village Projects	Terror Lake Larsen Bay Old Harbor Haines/Skagway Power Creek THREA-Gartina Creek 6 AVEC Village Projects	Bradley Lake Grant Lake Dillingham Kisaralik	Black Bear Lake	
$ Value	80.2	55.0	138.0	159.0	320.0	16.0	768.2
State Assistance	8.6	0	33.1	15.0	30.0	4.0	90.7 (1) (2)
# Project Starts w/o State Assistance	1	1	1	2	1	0	6
$ Value	35.0	55.0	1.0	105.0	180.0	0	376.0
Projects	Solomon Gulch	GVEA-Alyeska	Mennonite Creek	Terror Lake Old Harbor	Bradley Lake		
Locations	Valdez	Fairbanks	Kodiak	Kodiak	Railbelt		

(1) Approximately $17.6 million of state assistance for small power projects has been provided through FY 80.

(2) State assistance in the construction financing through subordinate loans represents $68.6 million of the total, of which approximately $60 million could be eliminated with state guarantees of Power Authority bonds.

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TELEPHONE
AREA CODE 907
276-6401

March 17, 1980

The Honorable Bill Miles
Co-Chairman, Resources Committee
House of Representatives
Pouch V
Juneau, Alaska 99811

Re: HB 953

Dear Representative Miles:

Along with Alaska Power Authority Executive Director Eric P. Yould, I appreciated the opportunity last Friday to discuss with you and other interested parties, the contents of HB 953 which was introduced March 11.

At that time, we outlined briefly several changes which the Authority suggested should be made in HB 953 and in existing law. Some of those changes were a modification of provisions of HB 953, some were caused by the impact of the Alaska Supreme Court's recent A.L.I.V.E. Voluntary decision (No. 2022, February 19, 1980), and some were an effort to refine and reorganize the existing legislative oversight provisions contained in AS 44.56.180. We left with you a preliminary draft of several of those suggestions.

Attached is a more complete set of Authority recommendations in a form which Dave Rogers and Jack Chenoweth should find fairly easy to adapt to bill form when producing a committee substitute bill. Section references are to HB 953 as introduced.

Very truly yours,

Pete Argetsinger

PA/lw

Attachment

cc: David Rogers, Esq.
Jack Chenoweth, Esq.
Mr. Eric P. Yould, APA
Mr. Ken Wonstolen, NCSL

ALASKA POWER AUTHORITY

RECOMMENDED

CHANGES TO HB 953

1. In the title: Strike "hydroelectric"; insert "power".

2. Add a new section at the beginning of the bill to amend AS 44.56.080(a)(13) by adding "feasibility studies, engineering and design" following "reconnaissance studies" and preceding "with".

3. Section 1, (.080(a)(16)(A)): Delete all of subparagraph (A) after "project" on page 1, line 15; insert a comma followed by "provided that the authority has first determined that the project cannot be financed with revenue bonds of the authority at reasonable rates of interest". It is desirable also to strike the words "renewable energy" where they appear in this and subsequent sections or, alternatively, to define the term in AS 44.56.230.

4. Section 1, (.080(a)(17)): Add the following new paragraph and change the word "paragraph" on line 10, page 1 to the plural:

> (17) To develop a project under financing agreements with other entities using leveraged leases or other financing methods.

5. Section 2, (.170(b)(1)(A)): Change to read:

> (A) reconnaissance studies, feasibility studies, license and permit applications, preconstruction engineering, and design of any power projects;

6. Section 2, (.170(b)(2)): Change the language of lines 10-13 on page 2 to read:

> (2) to a person for a hydroelectric power project if (A) the loan is entered into under financing agreements using leveraged leases or other financing methods; (B) the financing agreement permits the issuance of bonds for the power project the interest on which is exempt from taxation under the Internal Revenue Code; and (C) the...

7. Section 3, (.170(e)): Change AS 42.06 on line 24, page 2 to read "AS 42.05".

8. Sections 4 and 5, (.180): Delete sections 4 and 5 of HB 953 and substitute the following:

> (a) The authority may undertake a reconnaissance study for each proposed new project and shall undertake a feasibility study and plan of finance for each proposed project if such undertaking is indicated by the reconnaisance study under standard criteria which it has adopted.
>
> (b) The feasibility study and plan of finance shall include recommendations of the most appropriate means to finance a project which may include, but need not be limited to
>
> (1) the issuance of revenue bonds,
>
> (2) the guarantee of indebtedness by the Alaska Permanent Fund Corporation,
>
> (3) the issuance of general obligation bonds of the state or bonds of the authority guaranteed by the state,
>
> (4) an appropriation from the general fund to pay debt service on bonds or for other project purposes,
>
> (5) a loan from the general fund,

(6) financing arrangements with other entities using leveraged leases or other financing methods, or

(7) any combination authorized by this subsection.

(c) The authority shall submit the feasibility study and plan of finance for each new project to the governor and the legislature. In the event the recommendations of the authority as incorporated in the plan of finance include a guarantee of indebtedness by the Alaska Permanent Fund Corporation, an appropriation from the general fund, the issuance of general obligation bonds of the state or of bonds of the authority guaranteed by the state, or in the event the project will have a capacity in excess of 25 megawatts, the authority may not proceed with the engineering or design phase of the project until the legislature has given its approval by law.

(d) The authority may design, acquire, construct or finance the project itself or it may agree with the United States or other person for design, acquisition and construction of the project by the United States or other person, for payments to the United States or other person for such design, acquisition and construction, reimbursement by the United States or other person in certain events, and otherwise on the terms and conditions as may be set out in such agreement, but the authority may not issue any bonds except after 90 days notification of its intent to issue bonds given to the governor and the legislature while the legislature is in session. Such notification shall include the assumptions under which the authority has determined the environmental and economic feasibilty of the project.

9. Add a new section which will redesignate the existing AS 44.56.180(d) as subsection (e) and will strike the words "previously authorized by the legislature" on lines 7 and 8 of the

subsection. This new section of HB 953 should also redesignate existing AS 44.56.180(e) as subsection (f).

10. Section 6, (.185(3)): Delete paragraph (3) which begins on line 29, page 4.

11. Add a new section to change the reference at line 7 of existing AS 44.56.224 from §180(e) to "§180(f)".

12. Add a new section to define "renewable energy power project" if the term is to be used rather than "power project". The language should preferably come from NCSL.

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276-6401

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March 17, 1980

Hon. Bill Miles
Co-Chairman/Resources Committee
House of Representatives
Pouch V
Juneau, Alaska 99811

Re: Ability of Alaska Power Authority to Issue Revenue Bonds in Light of State v. A.L.I.V.E. Voluntary (No. 2022, February 19, 1980) - Our File No. 3610.

Dear Representative Miles:

On March 14, 1980 during a drafting session in regard to HB 953 we indicated to you that we had advised the Alaska Power Authority that in view of the recent Alaska Supreme Court decision in the A.L.I.V.E. Voluntary case referenced above the Authority could not now issue any of its revenue bonds even though previously approved by resolution. At the conclusion of that discussion we agreed to reiterate that opinion in the form of a letter to you, enclosing a bill which we believe will remedy the problem. Eric Yould has also requested that we communicate this information to Representative Gardiner with whom he has also discussed the matter.

The Alaska Power Authority Act in AS 44.56.180(c) provides that the Authority may not design, acquire and construct a new project, nor may it issue its bonds in that regard unless the Legislature has adopted "a joint resolution approving the general design and maximum amount of bonds". In addition, AS 44.56.180(b) requires prior approval of the Legislature by joint resolution before the Authority may proceed with the engineering or design phase of power projects the financing of which will include a guarantee of indebtedness by the permanent fund or an appropriation from the general fund. An occasion to utilize the latter of these approval processes where a project will be "subsidized" has not yet been presented. However, the Legislature has previously passed AS 44.56.180(c) joint resolutions approving the issuance of bonds in regard to three projects and joint resolutions approving an additional eight projects are now pending. In addition, HB 953 as introduced on March 11, 1980 would provide that the Legislature by concurrent resolution may prevent the Authority from proceeding beyond the completion of a reconnaissance study in regard to a new power project.

The Supreme Court of the State of Alaska in the A.L.I.V.E. Voluntary decision recently held that the Legislature may not annul a

regulation of an agency or department of the State by adopting a concurrent resolution which so provides. Holding that this method of proceeding violates Article II of the Alaska Constitution, the Court indicated that while the Legislature may express its views and desires (i.e., recommend or act in an advisory capacity) by resolution, when it expected to speak with the force and effect of law (i.e., exercise its legislative power) it must follow the constitutional safeguards which surround enactment of a bill. As Justice Matthews stated in writing the A.L.I.V.E. Voluntary decision,

> "Of course, when the legislature wishes to act in an advisory capacity it may act by resolution. However, when it means to take action having a binding effect on those outside the legislature it may do so only by following the enactment procedures. Other state courts have so held with virtual unanimity." [Slip Opinion at pp. 10, 11]

In view of the Court's decision and after an analysis of the language of the decision, including that quoted just above, we have advised the Alaska Power Authority that, under the present language of the Alaska Power Authority Act which provides for legislative approval of Authority bond issues by joint resolution, it may not issue bonds which have been approved by resolution.

Further, we have advised the Authority that, in our opinion, the approval by resolution provisions of the Act are not severable so that the Authority may not go forward in the absence of legislative approval which meets the mandate of the Alaska Constitution as interpreted by the Supreme Court in A.L.I.V.E. Voluntary. Faced with such a situation we believe that a court would hold that the Legislature clearly had in mind a process involving approval by the Legislature prior to the issuance of bonds and that, therefore, the court would hold that the bonds could not be issued until the process was lawfully completed, or the approval requirement modified by the Legislature.

In view of the doubtful constitutionality of the use of a joint resolution to approve the bonds of the Authority, we have drafted legislation in the form of a bill which would allow the Authority to issue its bonds to finance the projects heretofore approved or expected to be

approved this Session by joint resolution. A copy of that bill is attached.

Very truly yours,

WOHLFORTH & FLINT

By _____
Pete Argetsinger

PA:jr

cc: Hon. Terry Gardiner
Mr. Eric P. Yould

Introduced:
Referred:

IN THE BY

_____ BILL NO. ____

IN THE LEGISLATURE OF THE STATE OF ALASKA

ELEVENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act relating to the Alaska Power Authority and approving the general design and maximum amount of bonds for power projects."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. All action taken by the legislature prior to the effective date of this act to approve the general design and maximum amount of bonds for power projects are confirmed and the authority is authorized to issue its bonds for such projects in the maximum principal amount as follows:

(1) Solomon Gulch, $20,000,000;

(2) Terror Lake, $120,000,000

(3) Golden Valley Electric Association Waste Heat, $110,000,00;

(4) Tyee Lake, $70,000,000;

(5) Swan Lake, $120,000,000;

(6) Glacier Highway Electric Association, $800,000;

(7) Cordova Electric Cooperative, $6,500,000;

(8) Matanuska Electric Association, $2,500,000;

(9) Homer Electric Association, $3,360,000; and

(10) Naknek Electric Association, $730,000.

* Sec. 2. This Act takes effect immediately in accordance with AS 01.10.070(c).

EXHIBIT IV.4

PROPOSED HYDROELECTRIC PROJECTS

NAME	ESTIMATED 1980 COST OF CONSTRUCTION ($ MILLIONS)	FIRM CAPACITY (MEGAWATTS)	FIRM ENERGY (MKWH)	EARLIEST FINISH	STATUS
Green Lake	40.0	13.5	44.5	1981	Construction
Grant Lake	12.0	1.5	12.0	1984	Feasibility
Solomon Gulch	35.0	1.2	56.0	1982	In construction
Swan Lake	60.0	18.0	66.0	1983	At financing stage
Terror Lake	70.0	15.0	125.0	1984	Feasibility - Possible Environmental Problems
Lake Tyee	40.0	8.9	75.0	1984	License Applied for
Power Creek	18.0	5.0	20.0	1985	Feasibility
Gunnuk Creek	7.1	0.75	3.4	1985	Feasibility
Black Bear Creek	13.0	5.0	22.0	1985	Feasibility
Gartina Creek	4.8	0.45	2.2	1985	Feasibility
Thayer Creek	5.4	0.21	1.0	1985	Feasibility
Mennonite Creek	1.0	0.2	1.8	1984	Feasibility
Larson Bay	2.2	1.0	2.7	1985	Feasibility
Old Harbor	3.3	1.2	2.6	1985	Feasibility
Haines/Skagway	20.0	7.0	21.0	1986	Feasibility
Lake Elva	10.0	1.5	8.5	1984	Feasibility
Tazamina Lake	58.0	30.0	90.0	1986	Feasibility
Kisaralik River	100.0	36.0	159.0	1986	Feasibility
Bradley Lake	160.0	70.0	320.0	1987	Phase I Studies
Susitna	2,600.0	1,400.0	6,100.0	1990	Feasibility

Source: Alaska Power Authority

AVEC village hydro Study

Villages with best hydro potential	Est. Cost	Energy Capacity
Ambler	2.7 - 3.5 mil	370 - 740 kw
* Elim	.9 - 1.3	125 - 245
Goodnews Bay	1.3 - 1.6	85 - 175
Grayling	3.2 - 4.4	230 - 460
Kaltag	1.8 - 2.4	155 - 305
Kiana	2.4 - 3.0	235 - 460
* Scammon Bay	.9	285
Shungnak	5.0 - 7.7	1200 - 2500
Togiak	1.0 - 1.2	30 - 60
Old Harbor	23	1200
Akutan	1.1	105

Villages studied, but no economical hydro potential
- Kalskag/Lower Kalskag
- Mekoryuk
- New Stuyahok
- Tanunak
- Toksook Bay
- Wales

Villages without hydro potential

Yukon-Kuskokwim Delta Area
- Alakanuk
- Chevak
- Eek
- Emmoanak
- Hooper Bay
- Kasigluk
- Nunapitchuk
- Quinhagak

Lower Yukon River Area
- Anvik
- Holy Cross
- Huslia
- Marshall (Fortuna Ledge)
- Mountain Village
- Nulato
- Pilot Station
- Pitkas Point-St. Mary's
- Shageluk

Norton Sound Area
- Koyuk
- Shaktoolik
- St. Michael
- Stebbins

Kotzebue Sound Area
- Kivalina
- Noatak
- Noorvik
- Shishmaref
- Selawik
- Buckland (potential AVEC village)
- Deering (potential AVEC village)

Ouzinkie (Kodiak Island)

Red Devil

Lime Village

Chuathbaluk

Crooked Creek

Stoney River

Sleetmute

Takotna

Tanana

Savoonga

White Mountain (for low head hydro)

Est 150,000

Total-all wind
$3,000,000

Environmental Data Collection
(Wind/solar)
50 - 100 sites

Est. 500,000

Wind Power Projects

Hooper Bay	AVEC	10	15 kw units	750,000
Portage Ck.	?			
Platinum				271,000
Wales	AVEC		est.	250,000
Sheldon Pt				225,000
~~King Cove~~ ~~Unalaska~~				
Unalakleet				
Sand Pt.				

Wood burning Heat & electrical generation demo

Nuntak	School	300,000
Hoonah	THREA	500,000

Waste Heat

NEA ~~&~~ Egegik	250,000
Nushagak Electric	250,000
Bethel	

Geothermal

Kotzebue ?

UnAlaska study 500,000

Coal

Northwest study

Low BTU generator AVEC 125,000
Demo Project

Single wire ground return

Kobuk - Shungnak
Bethel

Tidal Power / Pumped Storage

Angoon 500,000

around 5,000,000

Maybe a few
Assoc...

MARK —
PLS REVIEW
THIS W/ JIM

SMALL-SCALE HYDROELECTRIC POLICY REPORT FOR ALASKA: PRELIMINARY LEGISLATIVE OPTIONS AND RECOMMENDATIONS

Prepared for the Alaska
Joint Special Committee on
Renewable Energy Policy

Energy Program-Small-Scale Hydroelectric Project
National Conference of State Legislatures
1405 Curtis St. Suite 2300
Denver, Colorado 80202
303/623-6600

November 1979

ACKNOWLEDGEMENT

The NCSL Small-Scale Hydroelectric Policy Project would like to acknowledge the assistance of Woody Angst, Department of Environmental Conservation; Roger Kemppel, Esq.; Brian Petrie, Water Management Section of Department of Natural Resources; and David Denig-Chakroff, Division of Research and Devleopment of Department of Natural Resources.

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Alaska Policy Report

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I. Introduction

The National Conference of State Legislatures (NCSL) Small-Scale Hydroelectric Policy Project is working with the Alaska Legislature in a review of small-scale hydro policy issues. Project activities were initiated in August, 1979 with a staff visit to Juneau to brief the Joint Special Committee on Renewable Energy Policy about the Small-Hydro Technical Assistance Program and to conduct in-state field research. Following this meeting, the staff assisted the committee in conducting a meeting in Anchorage on September 13, 1979 to identify the issues the committee would consider. Persons from a diverse range of backgrounds and interests participated in this meeting.

On September 14, 1979, the committee and NCSL staff agreed to a workplan outlining the issues that would be studied and laying a future course of action for committee meetings. A copy of the workplan is attached to this document.

This policy report represents the initial research requested by the committee on issues identified in the state workplan. The policy options and recommendations are intended to serve as a base for the formal development of legislative policy on these issues through their discussion.

II. WATER LAW

Introduction

Four issues were identified in the State Workplan for analysis by NCSL: the potential impact of "grandfathered" riparian rights; the potential impact of federal "reserved water rights"; streamflow maintenance; and integrated water management. The following describes the results of NCSL research on these policy concerns.

Riparian Rights

The 1966 Water Use Act[1] recognized the validity of certain existing water uses,[2] including riparian[3] mining claims. To the extent that such unrecorded "grandfather" rights exist, concern has been expressed regarding potential constraints on small-scale hydro development. It appears, however, that the problem may be administratively resolved under existing statutory authority.

The Water Use Act included a provision[4] that claimants to existing water rights must file a declaration of appropriation within a finite filing period. The proposed Water Management Regulations[5] set out such filing schedules. Claims not filed within the specified periods are extinguished.[6] Thus, a mechanism has been proposed which will allow determination of the extent of "grandfather" water rights, thereby removing an area of uncertainty regarding small-scale hydro development.

Federal Reserved Water Rights

Concern has also been expressed over the extent to which Indian[7] and other federal[8] "reserved water rights" might impact small-scale hydro, especially with regard to maintenance of streamflows. Water reservations pursuant to the creation of a federal enclave (e.g., a national monument) do not extend to stream flow maintenance for general environmental and aesthetic purposes.[9] Moreover, such claims are subject to state court jurisdiction[10] via the McCarren Amendment.[11]

The situation is less clear with regard to Indian water claims. Reserved Indian water rights (Winters Doctrine) also are subject to state court adjudication,[12] but Alaskan Native[13] water rights may be "aboriginal" rather than "reserved" (i.e., pursuant to the establishment of a treaty reservation). However, federal land withdrawal pursuant to the Alaska Native Claims Settlement Act of 1971, may be an analagous situation.

These matters have been litigated in Alaska.[14] The Alaska Superior Court for the Third Judicial District found that there has been no Congressional recognition of aboriginal title in Alaska[15] and that in any case, the Winters Doctrine "does apply to...water held by Alaska Natives under aboriginal title...[16] Thus, it appears

that Alaskan Native water claims will be subject to state court adjudication and quantification, thereby ameliorating the expressed concern regarding small-scale hydro development.

It should be noted in this regard that there is no reason to anticipate frequent conflicts between small-scale hydro developers and Alaskan Native Corporations (ANC's). Given the lack of a power transmission grid in Alaska, it is not likely that small-scale hydro developers will seek to develop remote sites adjacent to ANC's in order to transmit the power elsewhere. In fact, ANC's will be the likely beneficiaries of nearby small-scale hydro projects, which may often be developed as a joint venture. Thus, the potential for conflict over water rights may not be very significant.

Stream Flow Maintenance

The Department of Natural Resources, through its Division of Forest, Land and Water Management has the authority to attach conditions to water rights permits.[17] Under the proposed regulations, such conditions may include a reservation of stream flow[18] at specific points or stretches for specific periods or throughout the year. Such reservations are made in the public interest, including for the protection of fish and wildlife.

HB118, introduced in the last session, would have allowed stream flow reservations independent of water rights applications, as well as providing guidance with regard to a hierarchy of uses and cost-benefit analysis. Such legislation has general support from the Water Management Section and should be reconsidered during the upcoming session.

Integrated Water Management

There are numerous agencies in Alaska with an interest in water management, including planning, construction and permitting agencies. The Departments of Fish and Game, Natural Resources and Environmental Conservation have reached a cooperative agreement regarding their respective authorities (attached). Such inter-agency consolidation and cooperation should be pursued in the comprehensive review of water policy scheduled to begin in July, 1980. NCSL stands ready to assist in this effort and to submit recommendations to implement its conclusions.

Water management planning is Alaska has suffered from inconsistent funding. The Water Resources Board has recommended a shift to capital improvement funding. Its resolution is attached for legislative consideration. In addition, there exists a huge backlog of water applications waiting to be processed. Adequacy of funding and staff to reduce this backlog is of primary importance in order to facilitate efficient water and energy development in Alaska.

ADDENDUM

In regard to conditioning water permits in order to maintain stream flow, the power to continue such conditions upon the granting of a certificate of appropriation is unclear. According to the Water Use Act (§ 46.15.120), a certificate will be granted if the appropriation has been perfected in accordance with the permit conditions and may contain such "information" as may be prescribed by regulation.

HB 186, proposed during the 1979 session, would clarify this situation by amending the Water Use Act (§ 46.15.120) to explicitly authorize the attachment of conditions to certificates of appropriation. This legislation has the general support of the Water Management Section and should be reconsidered during the 1980 session.

FOOTNOTES

[1]46.15 AS

[2]46.15.060 AS

[3]Riparian water rights are derived from ownership of land immediately adjacent to a source of water

[4]46.15.135 AS

[5]11 AAC 93 (1979) - proposed

[6]11 AAC 93.020

[7]Winters v. US 207 US 564 (1908)

[8]Arizona v. California 373 US 564 (1962); Cappaert v. US 426 US 128 (1976)

[9]US v. New Mexico 564 P. 2d 615 (1977) aff'd 438 US 696 (1978) It should be noted that the decision in this case related to a National Forest established pursuant to the 1897 Organic Act. A different result may be reached regarding National Forests established subsequent to the 1966 Multiple Use Sustained Yield Act.

[10]US v. District Court for Eagle County 401 US 520 (1971)

[11]43 USC 666

[12]Colorado River Conservation District v. US 424 US 800 (1977)

[13]including Eskimos, Aleuts and Indians

[14]Paug-Vik, Inc. v. LeResche No. 77-17158; Superior Court of Alaska, 3rd District (1979)

[15]id., Conclusion of Law #20; see also Tee-Hit-Ton Indians v. US 348 US 272 (1954)

[16]id., Conclusion of Law #25

[17]46.15.100 AS

[18]11 AAC 93.120 (b)(1)

III. ENVIRONMENT PERMITS

Introduction

A hydroelectric developer in Alaska must obtain a number of state permits before he can commence construction of a project. (A list of applicable permits is included in Appendix A.) These permits are issued by several departments, including the Department of Natural Resources (DNR), Department of Environmental Conservation (DEC), Department of Fish and Game (DF&G), and Department of Transportation and Public Facilities (DOTPF).

Alaska has made great progress in streamlining the state licensing procedure via passage of the Environmental Procedures Coordination Act in 1977. This report discusses that system and specifies some legislation options for improvements of the system.

This report must be read against the background of possible federal pre-emption under the Federal Power Act. Although the U.S. Supreme Court has held the Act to be superior to state procedures, the Federal Energy Regulatory Commission (FERC) has adopted a policy that small-scale hydroelectric developers should comply with state licensing requirements prior to obtaining a federal license. Thus, Alaska's regulatory policies remain relevant to small-scale hydro.

Environmental Procedures Coordination Act (AS 46.35.010 et seq)

The Environmental Procedures Coordination Act (EPCA) sets forth the goal of streamlining the licensing procedures for any project requiring one or more of the permits listed in AS 46.35.200. The procedure establishes the DEC as the lead coordinating agency. A developer submits a master application to DEC, which the department then circulates among appropriate state agencies. Any agency asserting licensing jurisdiction must indicate which permits will be required. The DEC then transmits the relevant applications to the developer. When each permit application is completed by the developer, the DEC will transmit that application to the appropriate agency.

After all permit applications are complete, the DEC will publish notice in a newspaper concerning the project. Information from the public will be received via letter or public hearing. Federal and local government agencies may participate at the public hearing. Within 90 days following the hearing, all agencies must complete their determinations and the DEC will send the developer one document indicating the final decision of each agency.

Should the decision be negative, the developer may request an adjudicatory hearing. If the commissioner of the DEC finds that reasonable issues of fact or law are raised, the hearing will be scheduled, moderated by a hearing officer. At the hearing, the commissioner (or his designee) for each agency which rendered final

decision will review the subject matter applicable to that agency. The commissioner (or designee) may affirm or modify the prior decision. Should the developer remain unsatisfied, he may appeal to the superior court.

EPCA states than although all the permits may be granted, a final decision will be withheld if the developer does not possess the necessary land and water rights. Also, a final decision will be withheld if local government officials do not certify that the project conforms with local ordinances or comprehensive plans (or that such ordinances or plans are not applicable).

Present activities to improve EPCA

In order to improve EPCA, the DEC has compiled Directory of Permits for the state, giving a brief description of the criteria for issuance and subject matter for each permit. This Directory includes more than the list of permits in EPCA, and is an attempt to produce a comprehensive compilation of all state, federal and local permits. The most recent update to the Directory will be available in November, 1979.

The Department of Commerce and Economic Development (DC&ED) is in the process of preparing a Procedures Manual which will include a set of master lists of necessary permits, dependant upon type of project. The manual will also include a description of the necessary procedures relevant to application for a particular permit.

Lastly, the DEC has prepared a set of master lists of necessary permits which is used by DEC. As each project proceeds, the DEC maintains a record of necessary permits, and supplements each list with information furnished by the developer.

Legislative Options and Initiatives

As a result of the NCSL and Joint Committee on Small-Scale Hydro sponsored public workshop, as well as subsequent NCSL field research, several problem areas and possible options regarding EPCA have been identified, including:

1. Does the list of permits contained in EPCA provide a complete set of applicable permits for the small-scale hydro (SSH) developer?

The coordination role of the DEC is limited by statute to those permits specifically included in the EPCA, as well as any additional permits designated by the commissioner. However, it appears that some permits listed in the EPCA are no longer applicable, while other permits not listed are of importance. One approach would be to give the DEC the authority to coordinate "...all permits contained in the Directory

of Permits..." Such a mandate should direct all state agencies to enter the coordinated process. It should be remembered that additional staffing and funding may be required to insure DEC effectiveness.

One consideration regarding inclusion of agencies is whether the Public Utilities Commission should be included in the EPCA process. Primarily, the permits included in EPCA relate to environmental concerns, while the PUC is concerned with the development of Alaska's utility system. The legislature should examine whether it considers the respective policy considerations for these subject areas sufficiently similar to warrent inclusion of the PUC in EPCA. Also, the legislature should consider whether convenience to the developer in the case of small-scale hydro would be fostered by inclusion or exclusion.

2. Would pre-application meetings facilitate the licensing process?

The DEC has informally conducted pre-application meetings between a developer and applicable state agencies before a master application is submitted. This meeting tends to promote communication between the developer and agencies and allows the agencies to express concerns or reservations at an early stage. The legislature may wish to consider whether or not to formally require such a service to be available.

3. Are there conflicts and ambiguities between the EPCA and other statutes?

There are a number of areas where the procedures of the EPCA conflict with other statutes, generating unnecessary confusion. For instance, the notice requirements of some permits are dissimilar from those of EPCA, in terms of time limits, number of publications, proper paper for publication, and financial responsibility for publication (developer or agency). Also, some legislative mandates to the agencies require interagency determinations regarding some permits, but these are not provided for in the EPCA. The legislature should consider revisions to eliminate these conflicts.

4. Are public interest groups sufficiently involved in the EPCA process?

Public interest groups are not specifically included in the EPCA process. They may participate at the public hearing, but by this time the developer has completed a master application as well as all permit applications. One option would be to involve public interest groups at initial stages of the process. For instance, DEC might identify such groups and suggest to the developer that he contact them at an early stage.

5. Should state agencies be prohibited from intervening in the FERC licensing procedure?

It appears that state agencies may intervene in the FERC licensing procedure, and air complaints and reservation at that time. Thus, an agency can avoid participation in EPCA, and still intervene later at the FERC level. This effectively negates the goal of the EPCA that all interested agencies make their determinations in the EPCA process. The legislature may wish to prohibit state agencies from participation in the FERC process if that agency failed to participate in the EPCA process. Alternatively, the legislature may wish to prohibit any agency from intervention at the FERC level, mandating all state discussion occur within the EPCA process.

6. Should Alaska parallel the FERC criteria for short form applications?

Under the FERC licensing procedures, facilities at existing dams of less than 1.5 Mw capacity recieve a streamlined treatment. Also, facilities at existing dams of 1.5Mw to 15 Mw can use a short form application. The legislature should consider whether Alaska should parallel these criteria in its licensing procedure, and provide an abbreviated procedure for qualifying sites.

7. Should there be a Master Application with all relevant questions, rather than a series of permit applications?

Under the current system, the master application is really designed to provide sufficient information so that an agency can determine whether a particular permit is necessary. The legislature should consider whether a Master Application could be designed which would include all relevant information, thus allowing a developer to deal with only one application rather than many.

Also, the legislature may wish to consider adoption of a General Permit for a class of activities. Such a permit would allow several activities related to a type of enterprise with attendant conditions as specified by the administering agency. For instance, there might be one Hydroelectric Permit, or several classes of Hydro Permits, including Small-Scale Hydro and Large-Scale Hydro, distinguished by power characteristics.

8. Should central authority for a final determination be given to one lead agency?

The DEC is presently given the role of central coordination, but does not have final authority for a decision. Under a lead agency system, one agency would listen to the views of the other and then make an independant decision.

Such a lead agency might perform a function which is absent in Alaska's system. That function is to compare the overall social, economic, environmental, and energy costs with the overall social, economic, environmental,

and energy benefits of a project. Each agency now examines a particular facet of a project, but no one agency makes an overall evaluation weighing all the factors in balance.

If a lead agency system is chosen the role of the DEC should be reexamined. The DEC has a primary mandate of ensuring environmental conservation, and might be in a conflict situation if it also attempted to weigh all other costs and benefits. Perhaps an existing planning agency within the DC&ED, such as the Division of Energy and Power Development, could best perform this role. Alternatively, an Energy Facilities Siting Committee could be created. Development of a comprehensive State Energy Plan would facilitate this type of approach.

This system would have certain advantages and disadvantages compared to the present system. In terms of advantages, it could resolve any interagency conflicts which had arisen, and would offer a larger perspective than that of the individual agencies. It would have a legislative mandate to make an overall evaluation of the project. It would also facilitate the FERC licensing process because it could present the FERC with a uniform view (i.e., the State of Alaska has approved this project with the following conditions and requirements) and allow the FERC to only deal with only one state agency.

This sytem poses the disadvantage that it will conceivably overrule another agency which has more expertise. The present agencies possess a great deal of technical knowledge in their subject area, and it would be unfortunate to have an agency with less knowledge of the subject matter in a position to override a decision. Also, due to political realities, such a system might produce interagency tension and distrust, and utimately be less effective.

9. Should a Joint Interim Committee be established to study these and other recommendations?

Some of the options outlined above will require detailed research before the legislature can properly amend statutes. For instance, study of EPCA conflicts vis-a-vis other statures (No. 3) requires an in-depth analysis of present law. The possibility of a Master Application (No. 4) requires careful drafting to insure that all relevant information is included. The legislature may wish to create a Joint Interim Committee to study those options which the legislature finds most interesting. Staffing and funding should be provided, with a final report from the Committee presented to the legislature at a given time (6 months to 1 year).

INTRODUCTION

The purpose of this set of options is to provide the Alaska Legislature with various methods for stimulating renewable energy resource development. Numerous options have been suggested for modifying the authority of some existing developmental and funding entities and for securing additional development funds. Our selections for accomplishing these purposes are designed to provide for the least amount of change to the existing state structure and/or to serve special needs that currently are not being met.

To accomplish the purposes identified, some degree of state subsidization may be required. Generally, a subsidy is any non compensated transfer of resources from the state treasury. An example of state subsidization is where the state provides direct financing for projects at interest rates below the market rate because such projects are viewed as beneficial to the state's interest.

Constraints should be imposed on any form of state subsidization program to insure that the least cost methods of achieving the desired end is selected and that the degree of subsidization is limited to that desired by the legislature.

There are various methods of achieving this result, two of which are discussed in this report. One method is to insure the feasibility of projects by considering the best alternative for the desired purpose. This may be accomplished by having the project size limited to match a reasonable forcast of end-use demand. A second check is provided by insuring that project financing costs

are minimized by enabling the utilization of financing economies of scale, requiring the selection of the most appropriate method of financing for each project and directing that project subsidies be limited to those necessary to enable the construction of a particular project.

OPTION NUMBER 1 Renewable Resource Planning and Demonstration

The Renewable Resource Planning and Demonstration Option is not designed to provide for actual development of a particular project. Under this option, the Legislature would be responsbile for conducting oversight responsibilities specifically geared to requiring action by the Alaska Renewable Resource Corporation in the exercise of their project demonstration and technical assistance functions. In addition, this option calls for the legislature to expand the current responsibilities of the Alaska Power Authority.

The Alaska Power Authority (APA) and the Alaska Renewable Resources Commission (ARRC) could be given a comprehensive planning function. The plans, submitted annually or more frequently to the Governor, Legislature and Department of Commerce and Economic Development, should detail present use and future projections for the use of renewable resources throughout the state.

In addition to planning, the APA could be authorized by appropriate legislation to engage in demonstration projects involving renewable resources. These projects could be financed through legislative appropriations. The ARRC presently has the authority to conduct demonstration projects. An annual or semi-annual reporting requirement may also be appropriate here. The reporting requirements

for demonstration projects should include: technical performance data, costs, and potential commercial application of the demonstration projects; projections of the technology's future contribution to energy supply for each renewable resource; and, projections as to how each renewable resource demonstrated will match end-use demand under various geographic situations, could be required.

This option would have little effect on the status quo from a financial perspective, while at the same time would be providing the Alaska Legislature and Governor, as well as prospective developers, with technical information and comprehensive planning. The planning aspect would be of particular benefit to the State in its attempt to develop a comprehensive energy plan and would insure that renewable resources were appropriately included.

OPTION NUMBER 2 Alaska Renewable Resources Development Corporation

This option would provide the Alaska Renewable Resources Corporation with developmental authority specifically for renewable resources technology projects, and/or for a liberalization of their current loan restrictions. This action would obviously require a change in the legislative charter of the Corporation. The Alaska Renewable Resources Corporation presently has the authority to sponsor research and development of renewable resource technology and to assist in demonstrating their technical and economic feasibility. (ALASKA STAT. § 37.12.010 [1978]). The existing Alaska Renewable Resources Corporation may also loan money to developers under specific circumstances.

Either instead of, or in addition to, granting the Corporation developmental authority, many of the loan restrictions which currently are in effect could be eliminated or modified. For example, loan periods are presently limited to thirty years unless the legislature approves the loan by concurrent resolution. The Corporation could be given discretion to increase the loan retirement period for projects which could justify the need for such longer period.

An increase in the maximum amount per loan could also be permitted. Presently, the per project limit is set at five percent of the resources of the Corporation or $1,500,000, whichever is less.

Both of these suggestions are desirable for stimulating renewable energy resource development. Most of these projects (hydroelectric projects for example) are very capital intensive and will frequently require loans in excess of the maximum limit. Additionally, many potentially valuable renewable energy projects will require a payback exceeding 30 years.

There presently also exists a limit on the percentage of outstanding corporate stock in any one project which may be held by the Corporation without legislative approval. To provide maximum development flexibility to ARRC, this limitation could be removed.

OPTION NUMBER 3 Exemption of Small Scale Renewable Resource Projects Developed or Financed by APA From Legislative Approval

The APA has board authority to develop generating and transmission facilities in Alaska. However, projects, without regard

to size, are subjected to legislative approval. This option is designed to exempt renewable resource projects either developed directly or financed by the APA from legislative approval.

The statutes under which the APA operates would have to be amended to achieve this objective. The exemption could be provided for APA projects of: a limited dollar amount, limited output capacity, or limited to a reasonable forcast of a particular project's end-use demand capacity.

This exemption would be provided by the APA upon a determination that all the requirements of technological and economic feasibility which the APA must currently consider are met. The reasoning behind the exemption is that renewable resource projects of a small scale nature should not be delayed for the period of time requried for legislative consideration and approval.

The APA could also be given the authority to issue general obligation bonds, pledging the full faith and credit of the State. This additional bonding authority would round out the APA's financing flexibility. Of course, general obligation bonding would not be appropriate for all APA projects, but could be useful for some, since it should enable a slight saving over revenue bond rates.

Presently, the APA is required to submit details of proposed projects to the Governor to assure that all projects built conform to the Alaska comprehensive energy plan. The energy plan has not been completed and will not likely be so in the near future. A procedure for consultation rather than a requirement for approval from the Governor's Office would, at this point in time, appear to

be more appropriate. This consultation procedure would insure that projects undertaken by the APA will be incorporated in the final energy plan without burdening the APA with the uncertainty and delay in the current process.

As mentioned earlier, the APA has been delegated broad authority by the Legislature to engage in electric generation and transmission projects. It appears, however, that the special opportunities available to the APA have not been fully utilized. This appears to be largely a funding and autonomy problem. It would seem that the ability of the APA to accomplish its intended purpose would be enhanced by according the agency the independence and discretionary authority consistent with the original recognition of its expertise. Thus, in addition to the above suggestions, the APA would benefit from a general appropriation. Legislative control could be assured through the normal continuing exercise of legislative oversight over APA activities and some form of annual review and audit.

OPTION NUMBER 4 Establishment of a State Development Agency Using the Rural Electric Authority Model

The main purpose behind adoption of a State REA model is to provide for the development and funding of projects for areas of the State of Alaska which are either presently not receiving electricity, or are not adequately receiving such power. Since many areas in Alaska are not located near generation and distribution facilities, individual projects designed to meet the needs of such areas are necessary. Since the Alaska Power Authority has the power to develop projects in any area of the state, this proposal

is intended to supplement, not replace, the Alaska Power Authority.

Another purpose behind the adoption of a Rural Electric Authority (REA) model in Alaska is to serve some of the needs not being met by the Federal REA program currently in effect in Alaska. One of the most significant problems of the Federal REA program is that of limited funds available to state REA's and the substantial nationwide competition for those funds. Since this option is not designed to substitute the use of Alaska revenues for those provided by the federal programs, but only supplement the federal program, it may be desirable to stipulate that those projects apparently eligible for Federal REA funding attempt to acquire such funding before approval under the state program.

I. Authority

The initial step is to design a structural framework which would be suited to Alaska. The Federal Rural Electrification Act of 1936, as amended, (7 U.S.C. § 901 et seq. [1977]), and the Alaska Electric and Telephone Cooperative Act would provide a model for developing such a system. The Federal REA statute would provide a model for the state level Authority, while the Alaska REA statute would provide guidelines for establishing local cooperatives. Needless to say, both these statutes would have to be revised to meet the specific needs of Alaska but they should be consulted for structural guidence.

II. Financing the State REA

Providing the State Rural Electric Authority with financing sufficient to carry out the purposes of the enactment can take place in a number of ways. First, the Legislature may want to make

a direct appropriation from the general fund or other identifiable source of state revenues such as the Alaska permanent fund.

A system of loan advances could be made by the State Treasury from either the general fund or the Alaska permanent fund. These loans could be made providing for a set or accelerating interest rate, a deferred system of interest payments, or for no interest. In determining the interest amount, the current market rates could be used or the legislature could provide an interest subsidy, which would be any amount less than the market rates. The loan period could also be established by statute with or without a provision for extentions.

A revolving loan fund could also be set up, similar to the Power Project Revolving Fund, in the State Treasury. Capital and interest payments made by the individual cooperatives would be paid into this fund for later use by the State REA.

Another option would be to grant to the State REA bonding authority with the state pledging a guarantee on the bonds.

III. Cooperative Membership

Membership necessary to form a cooperative could be designed to accomodate the legislature's perception as to whom the benefits of the Act should innure. One possibility would be to have the Act available to all interests.

An alternative would be to specify those entities who would be qualified under the Act. The selection could include individuals, groups of individuals, all industries or specific industries, municipalities, boroughs, tribes, etc., or any combination of these or others.

Minimum limits as to the number of individuals necessary to create a cooperative may be desirable to assure future accountability. A maximum limit of inhabitants in an area may be imposed so as to insure the benefits of the Act are limited to rural or isolated areas as consistent with the purpose designed to be served by the Act.

IV. Cooperatives - Terms of Assistance and Amounts

The legislature may, for any one project or other cooperative undertaking, desire to place a maximum limitation on the amount which may be disbursed from the State Authority. The State Authority may be granted the appropriate authority by the legislature to distribute funds to the cooperatives in a variety of ways or combinations.

One possibility would be for the State Authority to issue direct loans to the cooperatives at an established interest rate based on market rates or in an amount less than the market rates. Deferred payment may also be desired. It is worth pointing out at this point that any interest rate on loans or other form of assistance which is not equivalent to the outside market rates is in fact a subsidy. Therefore, in establishing a set interest rate below the current market rate the legislature should consider what the market rates are at the time the rates are established so as to identify the extent of the subsidy provided.

Providing grants for projects meeting certain criteria may be available for allocation by the Authority. These grants could be established for feasibility studies, construction, or operation and maintenance.

To attract outside investors, the State REA may be given the authority to guarantee loans. Such guarantees may provide for a pledge of the Authority's appropriations or mortgages or the legislature may provide that the Authority be permitted to pledge the full faith and credit of the state or the general fund or permanent fund specifically.

Guaranteed loans should provide the cooperatives, assuming the project contemplated is otherwise economically feasible, with lower interest loans. Outside investors will also be more likely to invest in cooperative activities with a pledge of the credit of the state insuring repayment.

Another method would be for the State REA to sudsidize a percentage of the interest payment on money financed from outside investors. This method could be expanded to provide a subsidy on not only a percentage of the interest, but also on the capital invested. One benefit associated with subsidizing some percentage of the interest on the project's debt is that the merits of the project have been evaluated by the market system prior to application and the precise subsidy necessary to finance the project may be identified and the subsidy limited to that amount.

A loan schedule should be established for cooperatives to undertake feasibility studies. Loans for feasibility studies should be forgiveable in the event the project is not built. Some threshhold criteria for eligibility for feasibility study loans could be established by the State REA to insure these funds are optimally used.

V. Standards for Review of Project Loans

Special consideration must be devoted to developing standards of review prior to the granting of project loans if renewable resources are deemed a priority for development. Given the capital intensity of most renewable resource projects short-run cost comparisons are ill suited. However, some comparison of alternatives should be made.

Projects proposed by cooperatives should be evaluated considering the best alternative over a period of years. The Federal REA has set the period for comparison purposes at ten years. Due to the high initial cost of renewable resource projects the period used for comparison purposes may need to be extended. Also, a reasonable fuel escalation factor should be used in determining the operating expenses of fossil fuel plants considered as alternatives.

Projects should also be evaluated based on their compatability with end-use demand, determined by the use of appropriate established forcast methodologies. The methodologies to be used could be established through the promulgation of rules by the Administrator of the State REA. These procedures would insure continuity in evaluating the alternatives.

VI. Qualifying Projects

Many options are available to the legislature in establishing what will be deemed a qualifying project. For instance, the legislature may desire to define a qualifying project as any project which will produce power or energy or used to transport energy. This could be construed to include all types of generating and trans-

mission facilities including the wiring of individual homes or industries. Numerous limitations could be written in to disqualify specific types of generating facilities and/or end-user benefits.

An alternative would be to limit the generation facilities covered by the program to renewable resources, including or excluding cogeneration projects. The types of projects covered under renewable resources should be specified.

As to either of the above definitions of qualifying projects, a size limitation could be adopted. The size limitation could be expressed in terms of megawatts or B.T.U.'s whichever is appropriate for the energy type.

V. FUTURE WORK

Due to time constraints on the NCSL staff, several items outlined in the workplan were not covered in this policy report. The areas of (1) Public Utility Regulation, (2) Insurance, and (3) Federal Interface will be addressed in a future policy report to the committee. Pending the committee's future needs on the issues presented in this policy report and those not considered yet, NCSL staff will prepare additional policy reports, policy options and recommendation papers, and bill drafts as requested.

VI. APPENDICES

A. List of state permits

B. State workplan

C. Resolution 79-8

D. Cooperative Agreement between Alaska Agencies on Environmental Conservation

E. HB 178

F. HB 186

Appendix A

The following is a list of state permits which may be required by a hdyroelectric developer. Some permits will apply to all sites; others are site specific. The reader is recommended to review each permit in detail in the Directory of Permits. The page number for each permit is included within the parenthesis, and refers to the March, 1978 edition of the Directory. These page numbers will probably be different in the newest edition of the Directory, due for release in November, 1979. As this list was compiled be use of the older edition of the Directory, the list may contain some discrepancies from present practice.

List of possible permits (some are site specific);

A. Department of Natural Resources (DNR)

1. Water rights - Water Use Permit (DNR-22)
   (Question as to status of vested riparian water rights)

2. Land use - proof of ownership or proper lease
   If land owned by State of Alaska,
   Leasing of Lands-Other Than for the Extraction of Natural Resources (DNR-10)

3. Miscellaneous Land Use Permit (DNR-12)

4. Right of Way or Easement Permit (DNR-14)

5. Special Land Use Permit (DNR-16)

6. Tidelands Permit (DNR-18)

7. Change or Vacation of Land Plat Approval (DNR-9)

8. Conditional Use Permit

9. Compliance with Soil Conservation Districts regulations

10. Compliance with Alaska Historic Preservation Act

If facility is within a state park, or has access or transmission routes through a state park, the following should be considered:

1. Access Route Permit (DNR-33)

2. Disturbance of Natural Material Permit (DNR-35)

3. Special Land Use Permit (DNR-39)

4. State Park Noncompatible Use Permit (DNR-40)

5. Field Archeology Permit (DNR-37)

B. Department of Environmental Conservation (DEC)

1. Air Quality Control Permit to Open Burn (DEC-1)
2. Air Quality Control Permit to Operate (DEC-4)
3. Discharge into Navigable Waters - Certificate of Reasonable Assurance (DEC-7)
4. Pesticide Permit (DEC-12)
5. Solid Waste Disposal Permit (DEC-15)
6. Surface Oiling Permit (DEC-15)
7. Waste Water Disposal Permit (DEC-25)

C. Department of Fish & Game (DF&G)

1. Anadromous Fish Protection Permit (DF&G-21)
2. Critical Habitat Areas Permit (DF&G-23)
3. State Game Refuge Land Use Permit (DF&G-24)
4. State Game Sanctuary Permit
5. Requirement of construction of fish ladders or hatcheries

D. Department of Transportation and Public Facilities (DOTPF)

1. Utility Permit for Encroachment within Highway Right-of-Way (DOTPF-9)
2. Encroachment Permit (DOTPF-11)
3. Driveway Permit (DOTPF-13)

E. Department of Commerce & Economic Development (DC&ED)

1. Public Utilities - Certificate of Public Convenience and Necessity (DC&ED-1)

F. Local

1. Certification of compliance with local zoning ordinances or comprehensive plans, or certification that there are no applicable requirements. (AS 46.35.130)

NATIONAL CONFERENCE OF STATE LEGISLATURES

ENERGY PROGRAM -- ALASKA
SMALL SCALE HYDROELECTRIC PROJECT

Study Areas

A. Environmental Permits

- conflicting statutory mandates (public notice hearing)
- mechanisms to implement ERCA not in place
- consolidation of permits and hearings
- establishment of agencies' response to pending permits for time deadlines

B. Water Law

- investigate administrative resolution of the riparian question that is unresolved from the 1966 Water Use Act which adopted the appropriation doctrine for the state
- joint resolution supporting federal quantification of reserved rights

C. Public Utility Regulation

- raise annual business revenue exemption for regulation purposes
- implementation of PURPA
- analysis of cream skimming by non-regulated utilities in a regulated utilities service area

D. Insurance

- examine authority of state to mandate pooled insurance

E. Financing

- state REA funding concept utilizing a portion of the permanent fund use for low interest loans
- alternate methods of providing feasibility assistance
- development of discretionary funds for Alaska Power Authority
- bond guarantee program
- small-scale hydro tax incentives
- investigate Renewable Resources Corporation potential for increased financial support to micro hydro

F. Federal Interface

- development of memoranda of understanding with regard to the issue of federal jurisdiction in Alaskan projects where such jurisdiction is questionable

Staff Responsibilities Task	Staff	Status
Project Introduction	NCSL	completed
Issue Identification	Joint	completed
Research and Analysis	NCSL	in progress
Supplemental Field Research	Joint	in progress

- State staff will conduct interviews and provide support for in state research. State staff will also assist in contact coordination.
- Emphasis will be placed on the issue areas of financing and environmental permits for 1980 session.

Project Milestones	Staff	Status
- State Profile	NCSL	completed
- Options and Recommendations	NCSL	November
- Issue Papers	NCSL	November
- Discussion Bill Drafts	Optional	December
- Draft Legislation	Optional	December
- Commercialization Workshop	NCSL	Summer 1980
- Review of Proposed Legislation	Joint	December

NATIONAL CONFERENCE OF STATE LEGISLATURES

ENERGY PROGRAM -- GEOTHERMAL PROJECT
PROPOSED TECHNICAL ASSISTANCE PROGRAM

STATE OF ALASKA

Study Areas

A. Resource Characterization

- distinguish high & low temperature resources
  - temperature threshold
- confirm subsurface ownership separate from water right
- address water law interface
  - property implications
  - protection of existing rights & water quality
  - clarification of application to by product water

B. Resource Access

- simplified procedures for low-temperature uses
  - miscellaneous land use permit/water right
  - unregulated put. residential use/warer right
- substitute conforming use section for state withdrawals
- examine designation criteria & acreage limit (max.)
- adjust lower acreage limit for small-scale uses
- set deadline for mining claim diversion

C. Resource Allocation

- adopt firm policy with enforcement power
  - assign jurisdiction

D. Permitting

- remove overlapping jurisdiction re drilling
- distinguish regulation of high & low-temperature wells
- implementation of EPCA

E. Finance

- operator's incentives
  - state investment tax credit/property tax adjustment
  - deferral of royalties

- waive royalties for low-temperature use
  * implications of temperature threshold
- state loan/bond guarantees or certification
- mandated pool coverage of reservoir risk

- consumer's incentives
  - income tax credits
  - property tax exemptions
  - state/utility loan program (weatherization/TVA)

F. District Heating

- confirm public bonding ability (alternative heat sources)

G. Public Utility Commission

- investigate commission policies
  - discretion to exempt from rate jurisdiction
  - certification control
  - reliability control

Staff Responsibilities

NCSL energy staff, in conjunction with legislative staff, will identify issues, conduct research, analyze policy concerns, investigate administrative responses and prepare legislative proposals, as needed.

Tasks	Staff	Status
Project Introduction	NCSL	completed
Issue Identification	Joint	completed
Research & Analysis	NCSL	in-progress
Supplemental Field Research	Joint[1]	in-progress
Project Milestones		
- Policy Profile	NCSL	completed
- Options & Recommendations[2]	NCSL	12/79
- Discussion Bill Drafts	Optional	1/80
- Draft Legislation	Optional	2/80
Review of Proposed Legislation	Joint	1980

1- State Staff will conduct occasional in-state interviews and facilitate agency visits. Assistance of Geothermal Specialist in Div. of Energy and Power Development (State Energy Office) will be sought.

2- 1980 legislative proposals in selected areas only: leasing revisions, temperature threshold, DH, allocation, permitting, financing.

STATE OF ALASKA

JAY S. HAMMOND, Governor

WATER RESOURCES BOARD

Resolution 79-8

BUDGETING FOR WATER DATA COLLECTION

WHEREAS data on streamflow, precipitation, and groundwater levels is necessary for flood forecasting, public water supplies, hydropower, fisheries management, and water rights adjudication, and

WHEREAS proper statistical development of hydrologic data requires multi-year efforts due to seasonal changes in the hydrologic cycle and yearly or multi-year changes in climate patterns, and

WHEREAS state agency programs to collect hydrologic data have traditionally been funded from the agencies annual operating budget, and

WHEREAS shifting annual priorities or budget cutbacks have sometimes eliminated hydrologic data collection programs in mid-term, thereby negating thousands of dollars of effort and rendering the project valueless;

NOW THEREFORE BE IT RESOLVED that the Board recommends that hydrologic data collection which requires multi-year efforts, be funded through the Capital Improvement Program rather than annual operating budgets to assure year-to-year continuity as well as timely conclusion and reduction of funding when the project is completed.

Adopted August 8, 1979

Richard H. Sims

Richard H. Sims
Chairman

Appendix D

COOPERATIVE AGREEMENT

BETWEEN THE

ALASKA DEPARTMENT OF FISH AND GAME

AND THE

ALASKA DEPARTMENT OF NATURAL RESOURCES

AND THE

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

This Cooperative Agreement is made and entered into this 21st day of June, 1979, by and between the Alaska Department of Fish and Game, hereinafter referred to as Fish and Game, the Alaska Department of Natural Resources, hereinafter referred to as Natural Resources, and the Alaska Department of Environmental Conservation, hereinafter referred to as Environmental Conservation.

WHEREAS, Fish and Game is responsible for the protection, conservation, and management of fish and game within the State of Alaska pursuant to Title 16 of the Alaska Statutes, and

WHEREAS, Natural Resources is responsible for the management of public lands owned by the State of Alaska pursuant to Title 38 of the Alaska Statutes, and is responsible for the determination and adjudication of rights in the waters of the State, and in water appropriation and distribution pursuant to Title 46, Chapter 15 of the Alaska Statutes, and

WHEREAS, the Department of Environmental Conservation is responsible for water pollution control pursuant to Title 46, Chapters 3 and 7 of the Alaska Statutes, and

WHEREAS, the purpose of this Agreement is to provide for mutual cooperation and coordination among the three Departments with regard to water rights permits and certificates, anadromous fish permits, wastewater disposal permits and State water quality certifications;

NOW, THEREFORE, the three Departments hereby agree as follows:

FISH AND GAME AGREES:

1. To send Natural Resources and Environmental Conservation copies of anadromous fish permit applications and locational maps when they are received by Fish and Game.

2. To send Natural Resources and Environmental Conservation copies of anadromous fish permits when they are issued pursuant to AS 16.05.870.

NATURAL RESOURCES AGREES:

1. To send Fish and Game and Environmental Conservation copies of water rights applications, locational maps and public notices for surface and groundwater appropriations as required by AS 46.15.070(b) during adjudication by Natural Resources. All single family domestic applications of 1,000 gallons per day or less will be exempt from this notice.

2. To identify to Fish and Game and Environmental Conservation by a copy of the posting notice, grandfather water rights cases for surface and groundwater appropriations that are being adjudicated by Natural Resources. All single family domestic declarations of 1,000 gallons per day or less will be exempt from this notice.

3. To send Fish and Game and Environmental Conservation copies of water rights permits and certificates authorized by AS 46.15 when they are issued.

ENVIRONMENTAL CONSERVATION AGREES:

1. To send Natural Resources and Fish and Game copies of wastewater disposal permit applications and locational maps as required by AS 46.03.110(c) when received by Environmental Conservation.

2. To send Natural Resources and Fish and Game copies of public notices of applications and locational maps for State Water Quality Certifications of federally permitted activities received by Environmental Conservation under 18 AAC 15 and P.L. 95-217 except where notice is received from the federal permitting agency.

3. To send Natural Resources and Fish and Game copies of wastewater disposal permits authorized by AS 46.03.100 and P.L. 95-217 when they are issued.

4. To send Natural Resources and Fish and Game copies of State water quality certifications authorized by P.L. 95-217 when they are issued.

FISH AND GAME, NATURAL RESOURCES, AND ENVIRONMENTAL CONSERVATION MUTUALLY AGREE:

1. Each Department will make available to the public appropriate permit application forms from the other two Departments.

2. Each Department will directly contact applicants for permits and certifications of the other Departments, when requiring information additional to the permit or certification applications and maps provided by the issuing Department, and to send a copy of any such written correspondence to the issuing Department.

3. Each Department will reference all interagency correspondence and correspondence to applicants concerning water rights permits and certificates, anadromous fish permits, wastewater disposal permits, and state water quality certifications with the document number assigned by the issuing agency.

4. Each Department will provide comments to the issuing Department on all projects for which applications for water rights permits or certificates, anadromous fish permits, wastewater disposal permits or water quality certifications have been received.

5. Comments upon permit or certification applications will be provided to the issuing Department within the time period stated on the transmittal memo sent by the issuing Department.

6. Each Department may notify another Department in writing that the Department will have no comment regarding a class or type of permit or certification application judged to have minor adverse impacts.

7. To include in water rights permits and certificates, anadromous fish permits, wastewater disposal permits, and state water quality certifications a citation of appropriate statutory authority along with conditions provided by Fish and Game for fish and game resource and habitat protection, conditions provided by Natural Resources for water appropriation and distribution and conditions provided by Environmental Conservation for water quality protection when these conditions are based on the statutory authority of these Departments, and to consider the inclusion of other recommendations provided by these Departments when judged by the issuing Department to be in the best public interest.

8. Prior to issuance, each Department will notify the appropriate Department of recommendations that the issuing Department does not agree to include in a permit or certification.

9. Each Department will be responsible for enforcing permit and certification conditions established pursuant to the authorities of that Department.

10. Each Department's permits and certifications will state that issuance of the permit or certification does not relieve the applicant from the responsibility to obtain permits or authorizations that may be required by other Federal, State, or local agencies. This statement shall direct the applicant to contact Environmental Conservation's Permit Information and Referral Center for information on additional authorizations that may be required.

11. Amendments to this Agreement may be proposed by one Department and shall become effective upon approval by each Department.

12. This Agreement shall become effective 30 days after it has been signed by each Department and shall continue in force until terminated by one Department following one hundred-twenty (120) days notice in writing to the other Departments of that Department's intention to so terminate.

STATE OF ALASKA
DEPARTMENT OF FISH AND GAME

BY Ronald O. Skoog
Ronald O. Skoog
Commissioner

Date 25 June 79

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES

BY Robert E. LeResche
Robert E. LeResche
Commissioner

Date 26 June 1979

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

BY
Ernest W. Mueller
Commissioner

Date JUN 22 1979

Introduced: 2/2/79
Referred:- Resources

IN THE HOUSE

BY THE RULES COMMITTEE BY REQUEST OF THE GOVERNOR

HOUSE BILL NO. 118

IN THE LEGISLATURE OF THE STATE OF ALASKA

ELEVENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act relating to the maintenance of stream flows and levels of water."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 46.15.030 is amended to read:

Sec. 46.15.030. WATERS RESERVED TO THE PEOPLE. Wherever occurring in a natural state, the waters are reserved to the people for common use and are subject to appropriation and beneficial use and to reservation of instream flows and levels of water, as provided in this chapter.

* Sec. 2. AS 46.15 is amended by adding a new section to read:

Sec. 46.15.145. RESERVATION OF WATER. (a) The state or any political subdivision or agency of the state may apply to the commissioner to reserve sufficient water to maintain a specified instream flow or level of water at a specified point on a stream or body of water, or in a specified stretch of stream, throughout the year or for specified times of the year, for protection of fish and wildlife habitat, migration, and propagation, for recreation and park purposes, for navigation and transportation purposes, and for sanitary and water quality purposes.

(b) Upon receiving an application, the commissioner shall proceed in accordance with sec. 70 of this chapter.

(c) The commissioner shall issue a certificate reserving the water requested if he finds that.

(1) the rights of prior appropriators will not be affected by the reservation;

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(2) a need exists for the reservation;

(3) there is unappropriated water in the source sufficient for the reservation; and

(4) the proposed reservation is in the public interest.

(d) After the issuance of a certificate of reservation, the specified water shall be withdrawn from appropriation and the commissioner shall reject an application for a permit to appropriate the reserved water.

(e) A reservation under this section does not affect any rights in existence when the certificate reserving water is issued.

* Sec. 3. AS 46.15.260(1) is amended to read:

(1) "appropriate" means to divert, impound, or withdraw a quantity of water from a source of water, or, in the case of a public agency, to reserve water in accordance with sec. 145 of this chapter, for a beneficial use;

* Sec. 4. AS 46.15.260(2) is amended to read:

(2) "appropriation" means the diversion, impounding or withdrawal of a quantity of water from a source of water, or, in the case of a public agency, the reservation of water in accordance with sec. 145 of this chapter, for a beneficial use;

* Sec. 5. AS 46.15.260(3) is amended to read:

(3) "beneficial use" means a use of water for the benefit of the appropriator, other persons or the public, that is reasonable and consistent with the public interest, including, but not limited to, domestic, agricultural, irrigation, industrial, manufacturing, fish and shellfish processing, navigation and transportation, mining, power, public, sanitary, fish and wildlife, [AND] recreational uses, and maintenance of water quality;

Appendix F

Introduced: 2/13/79
Referred: Resources and Judiciary

IN THE HOUSE

BY THE RULES COMMITTEE BY REQUEST OF THE GOVERNOR

HOUSE BILL NO. 186

IN THE LEGISLATURE OF THE STATE OF ALASKA

ELEVENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act relating to the Water Use Act; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 46.15 is amended by adding new sections to read:

Sec. 46.15.069. DETERMINATION OF EXISTING RIGHTS. (a) A claimant of an existing right under AS 46.15.060 shall file a declaration of appropriation with the commissioner as set out in this section. The declaration shall be considered correct until a certificate of appropriation is issued or denied. Priority of the right dates from the day work was begun on the appropriation if due diligence was used in completing the work; otherwise, from the day water was applied to the beneficial use.

(b) The commissioner shall, as soon as practicable, determine the rights of persons owning existing appropriations. To accomplish this, the commissioner shall

(1) by order set a definite period for filing a declaration of appropriation within a specified area or from a specified source;

(2) publish notice of the order once a week for three weeks before the beginning of the period in a newspaper of general circulation in the affected area;

(3) give notice of the order by certified mail to any appropriator within the specified area or from the specified source who has requested mailed notice or of whom the commissioner can readily obtain knowledge, including each owner of a recorded mining claim.

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(c) The commissioner shall make investigations he considers necessary of rights asserted by declarations filed under this section and shall determine each existing appropriation and mail a summary of that determination to each person who has filed a declaration with respect to the specified area or source. Any person adversely affected by a determination may file with the commissioner a request for a hearing within 15 days after the date the notice is mailed. If a hearing is requested, the commissioner shall send a notice of the time and place of the hearing to each person who has filed a declaration.

(d) If a hearing is not requested with respect to a determination, or if, after the hearing, the commissioner finds the determination to have been correctly made, he shall immediately issue a certificate of appropriation. If the commissioner finds the determination to be incorrect, he shall correct it and either issue a certificate of appropriation or refuse the certificate according to his findings.

(e) A person aggrieved by the action of the commissioner may appeal to the superior court within 30 days after the date on which that action is final.

Sec. 46.15.115. TERMINATION OF PERMITS. (a) If the commissioner has reason to believe that a permit holder has wilfully violated any terms, conditions, restrictions, or limitations of the permit, he may require the holder to show cause why the permit should not be canceled. Notice must be provided to the holder by personal service or by certified mail. Upon giving notice, the commissioner may, and at the request of the applicant shall, hold a hearing. Whenever, after notice and hearing, if any, the commissioner finds that a wilful violation has occurred, he may cancel or suspend the permit or impose conditions on its future use to prevent furtner violations. Notice of the order or decision must be served personally or sent by certified

to the permit holder.

(b) If a permit holder fails to notify the commissioner, upon or before the expiration of his permit or any extension of it, that he has perfected his appropriation as provided in AS 46.15.120, the commmissioner may require the holder to show cause why the permit should not be canceled. Notice must be provided to the holder by personal service or by certified mail. Upon giving notice, the commissioner may, and at the request of the applicant shall, hold a hearing. Notice of the order or decision must be served personally or sent by certified mail to the permit holder.

(c) Upon termination of a permit under this section, the appropriation reverts to the state and the water becomes unappropriated water.

* Sec. 2. AS 46.15.120 is amended to read:

Sec. 46.15.120. CERTIFICATES. Upon completion of construction of the works and commencement of use of water, the permit holder shall notify the commissioner that he has perfected his appropriation. If the commissioner determines that the appropriation has been perfected in substantial accordance with the permit, he shall issue the permit holder a certificate of appropriation. <u>The commissioner may issue the certificate subject to conditions he considers necessary to protect the water rights of other persons and the public interest.</u> [THE CERTIFICATE SHALL SET OUT SUCH INFORMATION AS THE COMMISSIONER MAY PRESCRIBE BY REGULATION.]

* Sec. 3. AS 46.15 is amended by adding a new section to read:

Sec. 46.15.134. NOTICES; OBJECTIONS. (a) Upon receiving an application, the commissioner shall prepare a notice containing the location and extent of the proposed appropriation, the name and address of the applicant, and other information he considers pertinent. The

determination upon the application.

(e) A person aggrieved by the action of the commissioner may appeal to the superior court.

(f) The commissioner may, by regulation, designate types of appropriations which are exempt from this section and provide simplified procedures for ruling on the applications. (§ 1 ch 50 SLA 1966; am § 6 ch 104 SLA 1971; am § 52 ch 71 SLA 1972)

notice must state that within 15 days after publication or service of notice, persons may file with the director written objections, stating the name and address of the objector, and any facts tending to show that rights of the objector or the public interest would be adversely affected by the proposed appropriation.

(b) The commissioner shall have notice published at the applicant's expense in one issue of a newspaper of general circulation in the area of the state in which the water is to be appropriated. The commissioner shall also have notice served personally or by certified mail upon an appropriator of water or applicant for or holder of a permit who, according to the records of the Department of Natural Resources, might be affected by the proposed appropriation, and may serve notice upon any governmental agency, political subdivision or person; notice must also be served upon the Department of Fish and Game and the Department of Environmental Conservation.

(c) Within 15 days after publication or service of notice, an interested person may file an objection. The commissioner may hold hearings upon giving notice and shall grant, deny, or condition the application in whole or in part after receipt of the last objection or after conclusion of the hearing. Notice of the order or decision must be served personally or mailed to any person who has filed an objection.

* Sec. 4. AS 46.15.140 is amended to read:

Sec. 46.15.140. ABANDONMENT, FORFEITURE, AND REVERSION OF APPROPRIATIONS. (a) The commissioner may declare an appropriation to be wholly or partially abandoned and cancel the permit, certificate, or declaration [REVOKE THE CERTIFICATE] of appropriation if an appropriator with intention to abandon, does not make beneficial use of all or a part of his appropriated water. An appropriation so forfeited and abandoned reverts to the state and the water becomes unappropriated

water.

(b) The commissioner may declare an appropriation to be wholly or partially forfeited and shall cancel the permit, certificate, or declaration [REVOKE THE CERTIFICATE] of appropriation if an appropriator voluntarily fails or neglects, without sufficient cause, to make use of all or a part of his appropriated water for a period of five successive years.

* Sec. 5. AS 46.15.150(b) is amended to read:

(b) To be entitled to a preference, an applicant must show that his use will be prevented or substantially interfered with by a prior appropriation, [;] the use is a preferred use, [;] the applicant agrees to compensate a permit or certificate holder of [FOR] the prior appropriation for any damages occasioned or caused by the preferred use [SUSTAINED BY THE PREFERRED USE], and other information which the commissioner requires by regulation.

* Sec. 6. AS 46.15.160(a) is amended to read:

(a) The right to use water under an appropriation is [OR PERMIT SHALL BE] appurtenant to the land or place where it has been or is to be beneficially used; however, [PROVIDED, THAT] water supplied by one person to another person's property is [SHALL] not [BE] appurtenant to the property unless the parties so intend. An appurtenant water right passes [SHALL PASS] with a conveyance of the land, or transfer, or by operation of law unless specifically exempted from the conveyance.

* Sec. 7. AS 46.15.180 is amended to read:

Sec. 46.15.180. CRIMES. A person who constructs works for an appropriation, or diverts, impounds, withdraws, or uses a significant amount of water from any source without a permit or certificate of appropriation; or a person who violates an order of the commissioner to cease and desist from preventing any water from moving to a person

having a prior right to use the same; or who violates an order of the commissioner requiring him to modify a water body alteration that is preventing water from moving to a person having a right to use the water; or who disobeys an order of the commissioner requiring him to take steps to cause the water to so move; or who fails or refuses to install meters, gauges or other measuring devices or control works; or who violates an order establishing corrective control works; or who violates an order establishing corrective controls for an area or for a source of water, or who knowingly makes a false or misleading statement in a declaration of existing rights, is guilty of a misdemeanor. Crimes under this section are in addition to any other crimes provided by law.

* Sec. 8. AS 46.15.070 and 46.15.135 are repealed.

* Sec. 9. This Act takes effect immediately in accordance with AS 01.-10.070(c).

ALASKA POWER AUTHORITY

MEMORANDUM

TO: The Honorable Charles Webber
Commissioner
Department of Commerce &
Economic Development

FROM: Eric P. Yould EPY
Executive Director
Alaska Power Authority

DATE: February 27, 1980

SUBJECT: Position Paper on SB 467 and HB 573

SB 467, and companion bill HB 573, appropriate $1,000,000,000 to the Power Project Revolving Loan Fund administered by the Power Authority. A fiscal note and bill analysis was prepared on 2/20/80 and are attached. This position paper is submitted at the request of the Governor's office and reflects more consideration and perspective on the potential impacts of the bill than was expressed in the original bill analysis and fiscal note.

The current municipal tax exempt market is in turmoil unlike what has ever before been experienced. The impacts of inflation, the world political and economic environment, and Federal actions have all contributed to the present confusion in the municipal market which has reigned in other markets for the past year. When order is restored, the current high interest rates will most likely either persist or at best moderate slightly in succeeding years. This situation makes decisions to finance capital intensive projects extremely difficult in the short term due to potential large long term costs associated with wrong decisions.

If the municipal market interest rates are forecast to persist, then municipal finance at current rates should proceed. In this situation, direct state equity investment would achieve the principal purpose insuring lower cost power for Alaskan consumers. If todays rates are an aberration, then no projects should be financed in the municipal market until the market improves. In this situation, direct state equity investment in capital intensive projects can serve the purpose of interim financing to avoid the costs of inflation on construction costs due to delays in construction.

The appropriation would permit definite financing of all small scale power production facilities in the state of Alaska presently estimated to be developed over the next 10 to 15 years. Failure to pass the bill may result in stagnation of power development in the state while costs of projects

continue to inflate and the ability to finance projects improves or worsens. The economic impacts of this occurrence in the inflationary energy environment that exists today are difficult to estimate. The benefit of not approving the appropriation is that state general fund surpluses can be invested for long or short term high yields until decisions to expend the principal and interest earnings are made.

A state decision to directly finance power projects through equity investment must involve additional decisions governing terms and conditions of the investment. The interest rate and terms of each investment will represent a return to the state and a subsidy to the project beneficiaries which should be based upon guidance from the legislature or administration.

To amplify on the foregoing discussion the impact of the appropriation bill should be illustrated by a case example. The Swan Lake Project in Ketchikan represents an ideal case which may be financed and constructed in the near future. The Plan of Finance for the project prepared in January, 1980 presented the impacts on power costs of state assistance and a revenue bond interest rate of 8½%, which was considered conservative at the time. The state assistance in the form of an $18 million subordinate loan would lower bond indebtedness, improve the credit of the project financing, and result in lower costs of power to consumers. The Plan of Finance assumed low load growth forecasts and what appeared to be a conservative interest rate of 8½%. In the present municipal market, the Swan Lake project probably could not be financed, and if it could, it would be at a rate of 9 to 9½%. The Ketchikan Public Utilities could decide to accept the state loan, initiate construction of the project, and delay financing in anticipation of an improved market. If the market improves, the project could be financed and the only penalty is the cost of inflation on the portion of project construction for which bids were not accepted and construction not initiated. If the market does not improve, the Utility will have expended $18 million on construction of a project which cannot be financed and which has increased in cost due to inflation.

SB 467 and HB 573 would alleviate the problems which face many project financings in today's market. In an unstable market, the state loans can greatly assist economic development and achieve lower cost power for Alaskan consumers.

STATE OF ALASKA

Inter-Department Route Slip

TO:
MAIL STATION NUMBER 3100

DEPARTMENT Legislature

ATTENTION Rep Malone & Wonk

☐ Approval	☐ Note & Return
☐ Signature	☐ Initial & Return
☐ Comment	☐ Return As Requested
☐ Contact Me	☐ Return For Approval
☐ Prepare Reply	☐ Necessary Action
☐ For Your File	☐ Your Information

Remarks:

FROM:
MAIL STATION NUMBER 0102

DEPARTMENT Budget & Mgmt

BY George Wuerch DATE

02-002 (REV.10/73)

Glacier Highway Electric Association Inc.

P.O. Box 115 • Auke Bay, Alaska 99821 • Phone (907) 789-7344

NEWSLETTER

VOLUME II, NO. 3
MARCH 1980

* JUNEAU'S ENERGY FUTURE *

Our hydroelectric power resource is not limited to the Snettisham Project. The following is a list of potential hydroelectric projects in our back yard.

Resource Site	capacity (MW)	firm energy (gWH)
Snettisham (in service)	47	169
Crater Lake	27	106
Lake Dorothy	34	150
Tease Creek	16	70
Sweetheart Falls	29	125
Speel River	63	275
sub total	216	895
less Juneau's 1979 load	(26)	(130)
Net reserves	190	765

Our abundant hydopower capability is apparent. If you wish to look far into the future, our Canadian neighbors have gigantic hydropower potential. Some time in the 21 st. century there will probably be a power grid tying Southeast Alaska with British Columbia and the Yukon Territory. Hydroelectric power is our energy future. No informed man could say otherwise.

* NOTICE *

The annual meeting of the GHEA membership will be held March 20, 1980, 7:30 p.m., at the Auke Bay Elementary School's multi-purpose room (gym). The meeting is to promote better understanding by members of cooperative affairs, reporting on 1979 operations, future plans, election of three directors, and consideration of other business that should come before the membership.

Door prizes totaling some $500 will be given away, including one month's free electricity for a residence. We hope you will join us for an informative and pleasant evening.

PRESIDENT'S MESSAGE

In the last several newsletters we have tried to bring to light some of the aspects of important decisions facing us. Decisions on major issues such as stand-by generation, development of a transmission line and power substation at Auke Bay, major line upgrades (rebuilds), the merger question, financing requirements, marketing efforts, and philosophies on retail rate design are in the immediate future.

At this year's annual meeting we will be making an earnest effort to present information regarding GHEA's future to you, and more importantly - to listen to what you have to say. We will be streamlining the "reports" portion of the meeting this year and will be encouraging dialog between each of you, your elected board of directors, and the manager. Since a director's sole function is to represent you while steering GHEA on a course of sound business practice, we need your input.

I earnestly request you, a member and owner of GHEA, to come to the annual meeting; to come prepared to think, and to express your thoughts. As GHEA grows, it is becoming more and more a substantial business enterprise. Your thoughts matter. We, the directors, are fully prepared to listen.
Attentively!

Sincerely,

Gordon Misch,
President

Decision is a sharp knife that cuts clean and straight; indecision is a dull one that hacks and tears and leaves rugged edges behind it.

-- Gordon Graham

* FROM THE WALL STREET JOURNAL *

The average annual cost of driving a humble new compact is now up to 32¢ per mile, or $3,200 per year according to the Hertz Corp. That includes gasoline, oil, maitenance, parts and repairs, license fees, sales taxes, insurance, loan interest, and, of course, depreciation (which is computed simply by subtracting the resale value from the vehicle's initial purchase price). Its assummed in arriving at these figures, that the cars are driven 10,000 miles annually for three years, and that the owners put up 1/3 of the purchase price and finance the rest. In all, the cost of owning and driving a new car has risen about 90% between 1973 and 1979 says Hertz Corp. The jump in basic sales price has been the major culprit. The intermediate size car you bought in 1973 for $3407, for example, would have cost you $6,738 in 1979. That's an increase of 72.5%.

---

* GHEA's RATES *

Do you understand how our rates work? We have reason to suspect there are a number of people who don't. Our present residential rate is:

first	250 KWH	12.3¢ per KWH
next	250 KWH	9.6¢ per KWH
next	250 KWH	7.7¢ per KWH
over	750 KWH	4.7¢ per KWH

Now this rate does not work like an oil rate schedule. If in a month you purchase over 750 KWH you don't get all your electricity at 4.7¢ per KWH. Every month your bill is computed from zero. For example, if you purchased 800 KWH your bill would be:

first	250 KWH @	12.3¢	= $30.75
next	250 KWH @	9.6¢	= $24.00
next	250 KWH @	7.7¢	= $19.25
next	50 KWH @	4.7¢	= $ 2.35
TOTAL=			
	800 KWH		= $76.35

Understanding this rate is critical when considering electric heat. In our past newsletters we have been comparing oil heat to electric with electricity at 4.7¢ per KWH. This comparison is valid only if your present electricity use without electric heat is at least 750 KWH. In this case, all of your additional electricity purchases (in excess of 750 KWH) would be at the 4.7¢ rate.

* MEET THE CANDIDATES *

One of the more important items of business to be conducted at the annual meeting is the election of three directors. These directors are elected from among the membership. They serve as volunteers, without any monetary compensation, to direct the cooperative business toward accomplishing its stated objectives. Our present and potential directors as of this date are:

Back Loop Road
- Mike McGonegal, Vice President
- Gordon Misch, President

Mendenhall Penninsula
- Malcolm Hursh, director
- Eric Lindegaard Jr., director (retiring from the board this year)

Auke Bay to Indian Point
- Ralph Graham, Treasurer
- Jim House, director candidate
- Jim Sidney, director candidate

Indian Point to Tee Harbor
- Bob Millard, director
- Andrew Rakos, director
- Karen Ryals, Secretary (up for reelection)
- Don Fisher, director candidate
- Roy Varni, director candidate
- Dennis Gwyther, director candidate

Tee Harbor to Eagle River
- Carl Jensen, director (retiring from the board this year)
- John Gitkov, director candidate

We point out the geographical location of the directors and nominees as one of the provisions of GHEA's bylaws is the desirability of geographical representation. The nominations for director are by a special committee appointed by the board. Our nominating committee this year consisted of the following people:

- Dick Forrest, chairman
- Leigh Gallagher
- Bernie Hulk
- John Gitkov
- Kean Nordgensen
- Jim Olsen
- Frank Metcalf
- Ted Vadman
- Bill Flint

* BUILDER'S - TAKE NOTE *

The table reproduced here is taken directly from a market study of electric heat prepared by CH2M-Hill, a reputable international consulting firm. This study was commissioned by GHEA to gain an unbiased, professional analysis of oil versus electric structure and water heating. This table compares total annual costs for different systems to deliver space heat and hot water to a typical 2000 square foot Juneau home. For persons planning to build a new house, the conclusion is clear. All electric homes will be very popular. For a free copy of the complete study (24 pages in all) simply write or stop by the GHEA office and request the "Electric Heat Market Study".

COMPARISON OF TOTAL ANNUAL COST FOR ALTERNATE SPACE HEATING AND WATER HEATING SYSTEMS IN THE GHEA SERVICE AREA

Heating System	Energy Price	Case I--at Weather Station Temperatures	Case II--10°F Colder than at Weather Station	Case III--20°F Colder than at Weather Station
1. Heat Pump				
Current Price:	4.7c/KWH	$2,125	$2,842	$3,872
Proposed Price:	4.2c/KWH	1,991	2,632	3,552
Future Price:*	5.0c/KWH	2,206	2,968	4,064
2. Electric Baseboard				
Current Price:	4.7c/KWH	2,870	3,820	4,777
Proposed Price:	4.2c/KWH	2,593	3,442	4,297
Future Price:	5.0c/KWH	3,037	4,048	5,066
3. Oil Furnace Hydronic**				
a. 50% efficiency				
Current Price:	$0.90/gallon	2,857	3,757	4,664
Future Price:	$1.25/gallow	3,819	5,068	5,327
b. 60% efficiency				
Current Price:	$0.90/gallon	2,445	3,195	3,951
Future Price:	1.25/gallon	3,246	4,288	5,337

* Projected

**Based on 138,000 Btu per gallon of fuel oil

Note: Total annual cost includes fixed capital costs and fuel costs. Maitenance expenses are not included.

GHEA adds: Most consumers will no doubt favor the electric baseboard option. It is the least expensive to install and does not require any maitenance. Add the ease of individual room temperature control and you have a winner!

LAW OFFICES

WOHLFORTH & FLINT

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276-6401

ERIC E. WOHLFORTH
ROBERT B. FLINT
TIMOTHY G. MIDDLETON

PETER ARGETSINGER
SARAH FORBES

MEMORANDUM

TO: Alaska Power Authority

FROM: Wohlforth & Flint Eric E. Wohlforth

DATE: July 5, 1979

RE: Application of Executive Budget Act (AS 37.07) To Alaska Power Authority

Background

The Alaska Power Authority is established under AS 44.56 as a public corporation of the state in the Department of Commerce and Economic Development with a separate and independent legal existence, AS 44.56.020. The purpose of the Authority is to provide a means of constructing, acquiring, financing and operating specified types of power production facilities and waste energy conservation facilities, AS 44.56.070. In furtherance of its corporate purposes, the Authority may receive and expend proceeds from the issuance of revenue bonds, income from the operation of power projects, grants or loans from the federal government, and appropriations from the general fund of the state, AS 44.56.080, 44.56.170, 44.56.180.

Although AS 44.56 appears for the most part to allow the Authority broad discretion and autonomy in the management of its financial affairs, AS 44.56.210 provides:

> (a) Notwithstanding any other provision in this chapter, the Authority is subject to the provisions of the Executive Budget Act (AS 37.07).
>
> (b) The Authority shall, by the 15th day of each regular legislative session, present to the Legislature a report detailing project status, original costs and projected costs, particularly highlighting any costs in excess of the original cost estimates submitted for each project when the project was originally approved by the Legislature.

AS 37.07, the Executive Budget Act, prescribes the manner in which the Governor is to prepare and submit the annual

budget to the Legislature, and the manner in which the Legislature shall review and act upon the budget. The Governor is required to submit a budget covering all estimated receipts and proposed expenditures of the state government, AS 37.07.070(a). The Governor also shall submit a capital improvement and financial plan, AS 37.07.020(b). Each agency shall prepare a program and financial plan which shall be submitted to the Division of Management and Budget for review and incorporation into a comprehensive plan to be submitted to the Legislature, AS 37.07.060. On the basis of the plans and the proposed budgets, the Legislature determines the necessary levels of funding for the activities of the several state agencies, AS 37.07.070.

The Alaska Power Authority recognizes that under AS 44.56.210 (a) its expenditures of monies appropriated from the state general fund for operating expenses are subject to appropriation under the Executive Budget Act. However, the Authority asserts that its expenditures of other funds should not be subject to the Executive Budget Act. As an independent corporate entity which plans to operate principally with revenue bond proceeds and project income, and currently operates with state appropriation, the Authority argues that its operations would be unduly hindered if its expenditures of funds from sources other than monies appropriated from the general fund for operating expenses are subject to AS 37.07.

Questions Presented

Does AS 44.56.210(a) require that expenditures of the Alaska Power Authority, other than expenditures of money appropriated for operating expenses to be funded from the state general fund, be subject to the appropriation and other procedures prescribed under the Executive Budget Act, AS 37.07?

Conclusions

Despite the provisions of AS 44.56.210(a), significant features of the context of AS 44.56, including the case law on the relationship of independent public authorities to legislative appropriation requirements, the structure of AS 37.07 and AS 44.56, and the legislative history of AS 44.56.210(a) support the construction that AS 44.56.210(a) subjects to the Executive Budget Act only the Authority's operating expenditures appropriated from the general fund.

This conclusion means that

a) bond or note proceeds of the Authority and amounts derived from any source other than the state are not subject to the Executive Budget Act;

Wilmington Medical Center vs. Bradford, supra, was an action challenging legislation establishing a state health facilities authority. The authority was authorized to make loans to non-profit licensed health care facilities and issue tax exempt bonds for that purpose. The court described the authority's relation to the constitutional appropriation requirement [no money shall be drawn from the state treasury except pursuant to an appropriation made by act of the General Assembly...] as follows:

> It is contended by Bradford that the Statute violates Art. VIII, §6 in that the funds raised by the Authority are public funds permitted by the Statute to be expended without the required appropriation by the General Assembly. We find no merit in this argument.
>
> Monies in the "treasury", within the meaning of the constitutional term, are those in the custody and control of the State Treasurer. Opinion of the Justices, Del.Supr., 315 A.2d 580 (1974). The funds here involved would not pass through the State Treasury; they would be segregated and handled as trust funds by the trustee designated under §9712 of the Statute.
>
> The generally accepted concept in this regard is the "conduit theory," originated by the U. S. Treasury Department in its consideration of the tax positions of the parties involved in the issuance of tax exempt revenue bonds. Under this theory, the Authority or municipality is deemed to be merely a conduit through which the bond proceeds pass to the borrower and the premiums pass to the bond purchasers. See 50 Wash. L. Rev. 440, 460 (1950). 382 A2d 1338, 1349-1350.

Huber vs. Groff, supra, involved a challenge to the constitutionality of the Montana Housing Board Statute, establishing a corporation to issue revenue bonds to provide financing for low income persons to purchase housing. The court stated:

> The Constitution's provisions for payment out of the treasury only on a warrant and pursuant to an appropriation presents no problem, for the trust indenture funds are not deposited with the treasurer and the funds received from the sale of the resolution bonds are by statute deemed continuously appropriated. Section 35-523(1)(c), R.C.M. 1947.

> This Court discussed a similar provision in Geboski v. Montana Armory Board, 110 Mont. 487, 493, 103 P.2d 679, 682, where it said:
>
> "Section 14 relates to the method of handling the deposits of (f) state monies. The money raised here by the sale of bonds becomes a special fund to be disbursed for the erection of proposed buildings. This money is not derived by taxation and consequently need not be handled in that manner." 558 P.2d 1124, 1133-1134.

With regard to an authority formed to finance and operate a sports complex, the court in New Jersey Sports and Exposition Authority vs. McCrane, supra, comprehensively discussed the constitutional principles underlying the finances of public authorities:

> The doctrine has long been settled that a State does not have to serve or perform personally all its governmental functions or public purposes. Performance of a particular public purpose or project may be entrusted under proper guidelines to an independent autonomous authority or agency. Like acceptance has been achieved for the view that when such an agency is created by act of the Legislature it may be authorized to incur financial obligations in the execution of its delegated governmental tasks, and to raise the funds to meet them by issuing its bonds or notes. In such case, the prevailing rule in this State and elsewhere is that if under the enabling statute there is an express declaration that the bonds or notes are obligations of the authority alone, that the State assumes no liability for their payment, that the faith and credit of the State are not pledged for their satisfaction, and that the holders must look solely to the authority for payment, then the debt limitation clause is satisfied. [citations]
>
> * * *
>
> From all of the above we are satisfied that where the Legislature has created a corporate agency, as an instrumentality of the government to perform a public purpose, whose debts are not dependent upon the Legislature for annual appropriations, Article 8, § II, ¶ 2 [regarding appropriations] is not applicable. It is common practice for such agencies by legislative prescription to run their own independent operation, manage their own income therefrom

> and pay off their bonds solely from such funds, without regard to or control by or being subject to the appropriations clause. See, e.g., Clayton v. Kervick, supra; New Jersey Mortgage, Finance Agency v. McCrane, supra; Roe v. Kervick, supra; Behnke v. New Jersey Highway Authority, supra, 13 N.J. at 30-31, 97 A.2d 647 (1953); Parsons v. New Jersey Turnpike Authority, supra; McArthur v. Smallwood, supra, 281 S.W.2d 328; City of Oxnard v. Dale, supra, 290 P.2d 859; Antle v. Buchbreiter, 414 Ill. 571, 111 N.E.2d 836 (1953); Book v. State Office Bldg. Comm'n, supra, 149 N.E.2d 273; State v. Board of Regents, 167 Kan. 587, 207 P.2d 373 (1949); State v. Board of Examiners, 121 Mont. 402, 194 P.2d 633 (1948). See generally Shestack, The Public Authority, 105 U.Pa.L.Rev. 553, 557-562 (1957); Comment, Obligations of a State Created Authority: Do They Constitute Debts of the State?, 53 Mich.L.Rev. 439 (1955). We do not find persuasive the arguably contrary view expressed in Nebraska in State v. Steen, 183 Neb. 297, 160 N.W.2d 164 (1968). Obviously the agencies' functional efficiency as a means of accomplishing pressing public projects would be virtually nil if the revenue produced by their financially self-sustaining operation had to be channeled into the State Treasury and disbursed in accordance with the annual appropriations clause. 292 A.2d 545, 551-552, 555.

Farrell vs. State Board of Regents, supra, involved legislation authorizing the Board to issue revenue bonds to finance the construction of university facilities. The Court held on the appropriations issue:

> Obviously the legislature can and has determined that such receipts as are legislatively set aside from tuition fees and charges or income derived from university enterprises, and separated into special trust funds for retirement of bonds issued under the Act, are not then "state funds" requiring legislative appropriation. In support hereof see Brack v. Mossman, supra, at 170 N.W.2d 424, and Iowa Hotel Assn. v. State Board of Regents, loc. cit., 253 Iowa 898, 114 N.W.2d 539. If any other approach were to be adopted no self-liquidating program could ever exist or be validly utilized by a state agency operating under any present or prospective legislative appropriation. Finally, as revealed, supra, such method of financing has previously been adjudged valid in Iowa and a great majority of other states.

> From this it follows, the Act does not violate Article VII, section 5 of the Iowa Constitution. 179 N.W.2d 533, 546-547.

The Alaska Supreme Court has implicitly recognized the principle expressed in the cases quoted above. In DeArmond vs. Alaska State Development Corp., 376 P.2d 717 (Alaska 1962), the Court addressed the issue whether the issuance of debenture certificates by the corporation constituted the transfer of public funds and the use of public credit for other than a public purpose. The Court recognized these certificates to be revenue bond obligations, and responded in part as follows:

> No public funds are being transferred to the corporation other than the loans just mentioned [an appropriation of $150,000 as a loan to the corporation for organizational and administrative expenses]. The funds realized from the sale of certificates will come from private sources. The credit of the state is not being pledged. Even though we have found that the corporation's activities will serve a public purpose, it is clear enough that its objectives must be accomplished without the use of public funds and state credit. No violation of the Constitution has been shown. 376 P.2d 717, 722 (Emphasis added).

Here the Court used the term "public funds" in the same sense as the concept of funds in the State Treasury is used in the cases cited above, i.e., as funds derived from general revenue sources whose expenditure is subject to the constitutional appropriation requirement. The Court thus acknowledged that revenue bond proceeds do not fall within this category. The Court amplified its position in DeArmond in Walker vs. Alaska State Mortgage Association, 416 P.2d 245 (Alaska 1966):

> in DeArmond, a similar contention was urged as to the Bonds of the Alaska State Development Corporation. In DeArmond, we concluded that the funds realized through the sale of Bonds which were backed only by the resources and credit of the corporation and which did not constitute debts of the state were not public funds. We are of the opinion that our holding in DeArmond is controlling here and conclude that the bonds, notes and debentures of the Association are not debts of the State of Alaska within the scope of article IX, section 8 of our constitution. 416 P.2d 245, 253 (Footnotes omitted, emphasis added).

Along with its reference to DeArmond, the Court cited Book vs. State Office Building Commission, supra. In Book the Court held that revenues of an independent public authority pledged to the repayment of revenue bonds were not money in the state treasury within the meaning of the appropriation requirement in the Indiana State Constitution, and could be expended by the Authority without an appropriation.

Substantial precedent, recognized as authoritative by the Alaska Supreme Court, holds that special funds of an independent public authority may be expended without an appropriation in accordance with constitutional provisions such as Alaska Constitution Art. IX, §13. Insofar as the scope of AS 37.07 is limited to implementing Article IX §13, it should be construed not to apply to the Alaska Power Authority's expenditure of bond and note proceeds and other special funds. The policy supporting the exclusion of such funds from the constitutional requirement - efficiency and independence in the Authority's operations - supports with equal force a similar limiting construction of AS 44.56.210(a)'s application of AS 37.07 to the Alaska Power Authority.

3. The Structure of AS 37.07 and 44.56 related to the Authority's expenditures.

The requirement in AS 44.56.210(a) that the Authority be subject to the Executive Budget Act should be construed in accordance with the purposes the latter is designed to accomplish. These purposes are proper financial planning and management of state general funds and certain specified capital funds. These purposes do not pertain to non-general funds expended by the Authority. Moreover, AS 44.56 provides for a project-oriented planning and management process for the Authority's expenditures that is much better tailored to the Authority's mode of operation.

The general purpose of AS 37.07 is stated in AS 37.07.010:

> It is the purpose of this chapter to establish a comprehensive system for state program and financial management which furthers the capacity of the Governor and Legislature to plan and finance the services which they determine the state will provide for its citizens.

AS 37.07.020 establishes the general scope of AS 37.07 with regard to budgeting and appropriations. It requires that the Governor prepare and submit to the Legislature a budget for the succeeding fiscal year covering all estimated receipts, including all grants, loans and money received from the Federal Government, and all proposed expenditures of the State Government. The budget shall be accompanied by a general appropriation bill to authorize the proposed expenditures, and a bill or bills covering recommendations in the budget for new or additional revenues.

bill required by AS 37.07.020 shall be divided among the capital projects funds described in AS 44.42.080. These capital projects funds are all funds created in the Department of Transportation and Public Facilities, none of which pertain to capital projects undertaken by the Authority. Hence, budgeting of the Authority's non-general fund capital expenditures under AS 37.07 also would lead to no useful product or result under the structure of that statute.

In contrast, AS 44.56 establishes a project-oriented approval process whereby the Legislature may review the Authority's individual capital projects financed by revenue bonds, AS 44.56.180, and the standards by which the Authority makes loans from the Power Project Revolving Fund to finance projects undertaken by others, AS 44.56.170. Since AS 37.07 provides no specific procedures for the Authority's expenditure of non-general funds, while AS 44.56 does provide such procedures, interpreting AS 44.56.210(a) to subject all Authority expenditures to AS 37.07 contradicts the broader allocation of financial management jurisdiction between AS 44.56 and AS 37.07.

4. The legislative history of AS 44.56.210(a).

Prior to the 1978 legislative session, AS 44.56.210 provided:

> The authority shall submit its annual budget to the legislature through the governor as provided for state agencies by the Executive Budget Act (AS 37.07). It may expend money directly appropriated by the legislature only as provided by the legislature.

The present AS 44.56.210 was enacted by § 19 CH 156 SLA 1978. This bill originated as HB 422 in the 1977 legislative session. HB 422 was introduced at the request of the governor, 1977 House Journal 791 (April 6, 1977). The only statement in the legislative record of the bill's purpose or intent is the governor's letter of transmittal appearing at 1977 House Journal 792 - 793 (April 6, 1977). The provision of HB 422 that became § 19 of CH 156 was enacted without amendment. With regard to that provision the governor's letter of transmittal stated:

> This amendment clarifies the intention that the authority be subject to the Executive Budget Act. Further, it is required that the authority make an annual report to the legislature of the status of each of its projects. 1977 House Journal at 793.

Such a statement by the executive in transmitting proposed legislation to the legislature may be considered in construing the statute. 2A C. Sands, Sutherland Statutory Construction (4th Ed.) § 48.05.

The statement above indicates that § 19 CH 156 SLA 1978 was intended to be a clarification of, rather than a change in, existing law. Although there may be a presumption that an amendment is intended to change legal rights rather than to interpret the preexisting law, the fact of amendment itself does not indicate whether it is one of substance or of form. This must be determined from the total context of the legislation. Laborers & Hod Carriers Union, Local No. 341 vs. Groothius, 494 P.2d 808, 811 (Alaska 1972). The original wording of AS 44.56.210, with its reference to funds directly appropriated by the Legislature, indicated that the statute was enacted to address general fund expenditures. The context of AS 44.56.210 discussed under Parts 2 and 3 above supports that interpretation. Since the amendment of AS 44.56.210(a) was proposed as a clarification of existing law, the amended AS 44.56.210(a) should not be construed to expand the categories of Authority expenditures that are subject to AS 37.07.

5. The Power Project Revolving Fund.

The Alaska Power Authority may make loans from the Power Project Revolving Fund without legislative appropriation; however, where the legislature has designated the use of funds appropriated to the Revolving Fund, the Authority is bound by that designation.

The question with respect to the Revolving Fund involves a determination whether the Revolving Fund is a "special fund" sufficiently segregated from the state's general fund so as not to be subject to the constitutional appropriation requirement.

AS 44.56.170(a) provides:

> There is established as a separate fund the power project revolving fund which shall be administered by the authority as a trust fund separate and distinct from any other money or funds of the authority, and which shall be composed of appropriated funds and interest earned on loans by the fund.

The Authority is authorized to make loans from the fund, AS 44.56.170(b), in accordance with eligibility standards established by regulation, AS 44.56.170(c), (d). The Revolving Fund has several characteristics of a special fund. It is designated a trust fund to be maintained separate from other funds. It is dedicated to a specific purpose, the financing of power project design and construction, AS 44.56.170(b). Interest earned on loans from the Revolving Fund remains in the Revolving Fund, AS 44.56.170(a). The principal difference between this fund and other special funds

is that the money in the Revolving Fund initially is derived from appropriations from the state general fund rather than from non-state government sources, see DeArmond v. Alaska State Development Corp., supra, Walker v. Alaska State Mortgage Association, supra.

On balance, however, it appears that the legislature intended that the Power Project Revolving Fund operate as a special fund, expenditures from which would not be subject to appropriation. First, although AS 44.56.170 specifically indicates that the Revolving Fund would be composed in part of appropriated funds, it is silent as to the need for appropriations for Revolving Fund expenditures. Compare, e.g., the Alaska Renewable Resources Development Fund, expenditures from which are made explicitly subject to the appropriation process, AS 37.11.030. Moreover, the Authority is explicitly authorized to make loans from the Revolving Fund in accordance with eligibility criteria established by regulation, AS 44.56.170(b). Granting such authority and requiring such standards would be superfluous if the legislature intended to retain authority to appropriate individual loans. The legislature in addition retains authority to review the eligibility criteria promulgated by the Authority under its power to review administrative regulations, AS 44.62.320(a), AS 24.20.400-460. Thus it appears that the legislature intended to appropriate funds into a special fund, delegating to the Authority discretion to make loans from the Revolving Fund, subject only to eligibility criteria which in turn are subject to legislative review.

Consistent with this approach, in 1978 the legislature appropriated money to the Revolving Fund, with the terms of the appropriation general as to types of projects and loan recipients, ch. 111 SLA 1978. In 1979, the legislative appropriation to the revolving fund was allocated to specific projects, ch. 49 SLA 1979. Even in 1979, however, it does not appear that the legislature intended that loans of the money so appropriated also be subject to appropriation. While the Authority's discretion in lending from the Revolving Fund would be limited by the terms of the appropriation, the Authority may lend the money in accordance with those terms without further legislative authorization.

Representative Freeman asked what the definition of "rural" was. Representative Meekins stated it is defined as anything with less than a population of 4500. There was discussion on the program.

Chairman Cowper asked what the lid on mortgages would be. Representative Meekins stated they are presently loaning $7 million a month. He stated the $2.8 million appropriation would allow them to average $11 million a month. He stated the AHFC program is a good program. There was discussion on eligiblity for loans. Representative Meekins stated that if there is going to be a working loan program in the bush, it will have to be subsidized. He stated that all this bill will do is alleviate the institutional barriers. He stated this rural program will take into consideration seasonal income, good and bad years (i.e. for fishing), etc. There was further discussion. Representative Meekins stated this bill is not to subsizide housing; he stated it is to provide the same kind of service in rural areas that there currently is in urban areas.

Representative Swanson stated that according to the definition, "rural" could be anything outside the city limits. He stated that according to this, the loans could end up going to areas outside of Anchorage, Juneau, etc., instead of the real "bush" areas. Representative Meekins stated this was a good point, and the definition of rural does need to be changed. He recommended a letter of intent be attached to the bill, defining what the Committee means by "rural". There was discussion. Representative Gruening stated the school foundation program definition relates to transportation facilities and accessibility by highways. He suggested it could be defined in that way.

Representative Gruening moved to report out Finance Committee Substitute to HB 861. Representative Duncan moved to amend the motion to include a letter of intent defining rural. There being no objection to the amendment it was so ordered. The letter of intent will be prepared and the Committee will review it at tomorrow's meeting. There being no objection, CSHB 861 was reported out of Committee with a "do pass" recommendation.

CSHB 861 REPORTED OUT

The next bill to be considered by the Committee was HB 442.

HB 442

An Act relating to the Alaska Power Authority.

Chairman Cowper stated the bill is concerned with the Power Authority issuing revenue bonds with legislative approval. He stated there are several amendments to the bill, and a number of policy questions have to be discussed. He invited Mr. Eric Yould, Executive Director, Alaska Power Authority, to present testimony to the Committee.

Mr. Yould advised he had been Executive Director of the APA for three months. He stated that on March 17th they presented an annual summary of what had been accomplished by APA to the Legislature. Mr. Yould presented a prepared statement (attached) referring to the Governor's amended version of HB 442 by Wohlforth & Flint (3/24/78).

Representative Swanson referred to Sec. 11 (page 5), and stated the original intent of this legislation was for water power. He asked by changing this language, if the intent was to get into windmills, etc. Mr. Yould stated that was a possibility, but they will be developing what is economically feasible.

There was discussion on Sec. 12 (page 5) which clarifies the relationship between APUC and the APA. Representative Gruening asked if the question on the relationship was one of the reasons there were problems in getting financing. Mr. Yould stated it was. Mr. Rhode advised he talked to White Weld about this, and they advised it would have an impact on the sale of bonds. He stated he also asked them about APA supplying power to local utilities, and they advised contracts have an escalation clause covering costs of fuel. He stated it is normal to provide a contract, and arbitration is set out if an agreement cannot be reached. Chairman Cowper asked who would look after the interests of the consumer. Mr. Yould stated APUC would. He stated they would not have control of APA, but will have control of what contracts the utilities can enter into. He stated APA is not taking away any powers of APUC, they are simply saying they are not subject to the same controls as the local utilities. Mr. Argetsinger advised the bond people get very nervous when any outside agency gets into control.

There was discussion on Sec. 20 (page 14). Chairman Cowper stated this Section gives the Governor authority to not approve the projects if he wishes.

There was discussion on the "grandfather" clause (Section 44.56.180(d) page 14). Chairman Cowper stated the clause is broad enough to cover anything the APA mentions in a resolution before July. He asked if there was any problem with limiting it to the specific projects (Healy and Soloman Gulch). Mr. Yould stated there was no problem with that, except they would have to be mentioned specifically in the legislation. Representative Gruening asked if the projects were urgent enough that they had to go ahead with them now. Mr. Yould stated the point is that these two projects are ready to go now. He stated if they didn't go ahead the community would have to find some other course of financing, and it would be most expensive. Chairman Cowper asked why they didn't go through the legislature with these two projects this year before this law is passed. Mr. Yould stated they could. There was discussion on the projects.

Representative Gruening questioned the expanded authority for APA, and asked if they intended to get into nuclear power, or if this could be exempted. Mr. Yould stated the central area is the only area that could support a nuclear plant. He stated that within that area there are two options: (1) hydroelectric power; and (2) coal fire steam plant. He stated that if nuclear power is taken out, it would eliminate another option. He stated they would like to leave their options open so they would be able to look at nuclear plants. He stated they could not develop a nuclear plant within their appropiation. There was discussion on nuclear power. Chairman Cowper stated there is a policy question to be considered on whether or not nuclear power should be developed. Representative Haugen stated he could not imagine nuclear power being developed in Alaska. He asked about hyrdoelectric projects in Southeast.

Mr. Yould stated the $50,000 exclusion would probably take care of the Sitka project, and they would probably not be subjected to the procedure of going through the legislature. He stated the Ketchikan project is not yet ready to proceed with construction. He stated they are still in the design stage.

Chairman Cowper stated the Committee also has received a workdraft revision of sections 16 & 17 (dated 4/5/78 - Rosenstein). Representative Gruening stated they have proposed to develop a procedure for projects that are not entirely viable on straight financing, so an alternative could be looked at. He stated that section 17 of the workdraft deals with that. He stated that section 16 deals with the power project revolving loan fund. He stated these two sections are proposed amendments to the Wohlforth & Flint bill to be used in lieu of their sections 16 and 17.

Mr. Yould stated they have no objections to these sections. He stated the committee might want to add "and principal payments" to line 16. He stated line 12 talks about "small scale energy production facilities", and he thinks this could be a little more definitive. Mr. Argetsinger stated it might be a good idea to have legislative intent indicating what "small scale" means. There was discussion. Representative Gardiner stated he feels projects above $2 million should be going to the regular bond market. Representative Gruening stated he thinks the point is a good one, but he doesn't think it should be a monatary limitation. Chairman Cowper stated legislative intent could be included requiring the APA to come up with regulations that would raise the limit from time to time. Mr. Yould advised they have just adopted the first code of APA rules and regulations and have sent this to the Attorney General's Office. He

stated there is time to include this in regulations. Representative Gardiner stated it probably would be better to define small scale in the size of the project, rather than a dollar figure, because the dollar figure could be outdated within a few years.

Representative Gruening stated section 17 would expand the authority of the loan fund in areas of water supply. He stated the feeling was with the APA's engineering expertise, they have the capability to monitor loans for such proposals. Mr. Yould stated he thinks section 17 is very good. He stated section (b) requires that even for projects they are able to finance on the lower money limit, that a report be made to the legislature. He stated they might not want those projects to come before the legislature since they have to come before the legislature anyway under section (c).

There was discussion on the loan fund. Chairman Cowper asked if it would be just as easy to use an annual appropriation from the Permanent Fund. Mr. Argetsinger stated that if the funds are subject to the Legislature to be appropriated, they have no guarantee. Chairman Cowper stated the question is wheter a loan guarantee is the same thing as an appropriation. Speaker Malone stated this question came up under HB 595 on dedication of the permanent fund revenue. He stated he thinks legislative research stated that dedication of funds is constitutionally possible. Mr. Argetsinger stated before a person is going to accept a guarantee based on that, they will have to get an unqualified opinion. There was further discussion. Representative Gruening stated they would have to get an Alaska Supreme Court opinion on this. He stated unless that happens, this wll never be resolved. There was further discussion.

Mr. Yould stated that section (b) really applies to those projects that do have have normal bonding, and should not apply to those that are healthy projects that could be financed no matter what. Mr. Argetsinger suggested that if section (c) is accepted, that section (b) have additional language included stating "for which the maximum estimated total costs is $50 million."

Chairman Cowper stated there are additional proposed amendments in Representative Gardiner's memo of 3/23/78. He stated there is a suggestion that APUC's jurisdiction be extended TO APA, which is directly opposite of the Governor's suggested language.

Representative Gardiner stated there is also a suggested amendment that relates to pricing policies. Mr. Yould stated these are very innovative techniques, but perhaps they should be addressed to the retail level, rather than the wholesale level. He stated he thinks that would be more appropriate. Chairman Cowper asked if that was consistent with their position on APUC jurisdiction. Mr. Yould stated it was. He stated they don't feel APA should be subjected to this.

Representative Gruening asked if under that agreement, APA could preclude APUC from bidding for bulk rates. Mr. Yould said no, they would be providing bulk power at a rate sufficient to pay off the debt. There was further discussion on this amendment.

Representative Gruening asked what would happen when the APA was operating a facility and setting its own rates, and asked if they could operate a facility and charge more then the amount needed to amortize bonds. Mr. Yould stated they couldn't do that, because they would be operating contrary to their statutory limitations, which state they are to be a nonprofit corporation. Chairman Cowper asked where it was written that APA does not engage in retail sales. Mr. Artsinger stated this is in section 12 .090(a) of the bill before the Committee. He stated they can only retail power to a bulk purchaser that is outside the area of existing utilities. Mr. Argetsinger again stated that if they are regulated by APUC, it will effect their ability to get financing and buy bonds.

There was discussion on pricing. Speaker Malone stated the bill is designed to provide for energy conservation. He said it is designed to get a pricing policy basing incremental increases in production to the incremental increases in cost. He stated he thinks it is economically justified. There was discussion on bulk rates.

Representative Gruening stated that maybe this should be written into APUC's authority and not this legislation. Representative Rhode stated he thinks the intent is good, but it shouldn't be in here.

Speaker Malone requested an opportunity to testify on the bill. He stated he didn't see the necessity for the grandfather clause under current section 180 in Chapter 278, SLA 1976. He stated there is no reason these projects couldn't be submitted to the legislature in a resolution this session.

Speaker Malone stated that on the workdraft dated 4/5/78, Sec. 17, 180(d), he thinks the key element there begins on line 13 (through line 21). He stated that in those cases where a project is financially feasible wiout these forms of guarantee, they should be able to go ahead without going through the procedure. But, he stated he thinks it is useful to put in a screen so a project that is financially feasibile doesn't crowd out those projects that may be necessary. He stated he thinks something should be included so this doesn't happen. Concerning nuclear energy, he suggested the law be specifically written to prohibit APA from participating in nuclear energy projects. He stated this is a new technique, and that currently there is no system for the disposal of nuclear waste.

There was brief discussion on nuclear power.

Mr. Phil Holdsworth, Southeast Conference, stated in the past they have received direct appropriations under the water resource revolving loan fund. He asked if it was the intent of this legislation to take the place of that type of activity. Chairman Cowper stated he is certain it would not be the intent to hold up any of these projects. Representative Gruening stated this legislation does not address the water resources revolving loan fund.

HB 442 REFERRED TO SUB-COMMITTEE

Chairman Cowper stated he would like to establish a subcommittee and asked them to come back with a new vehicle for the Committee's consideration. The following were appointed to the Subcommittee: Jim Duncan, Chairman; Representatives Gruening, Haugen, Freeman and Rhode. He requested the Subcommittee to report back to the full Committee on April 17 at 1:15 p.m. Chairman Cowper referred HB 906 (An Act making a special appropriation to the power project revolving loan fund; and providing for an effective date) to that Subcommittee.

HB 906 REFERRED TO SUB-COMMITTEE

RECESS

A recess was called at 4:10 p.m. Chairman Cowper recalled the meeting to order at 4:36. He stated the Committee would continue to close out the UNIVERSITY OF ALASKA budget.

U. OF A. JUNEAU DUDGET

UNIVERSITY CENTER-JUNEAU

Instruction: Representative Duncan stated he would like to add $45.0 to doncudt a feasibility study on establishing a maritme school in Southeast Alaska. He stated there is federal money available for the school. There was discussion.

4/10/78

HOUSE FINANCE COMMITTEE
April 18, 1978
2:05 p.m.

PRESENT

All members of the Committee were in attendance, except Chairman Cowper, Representatives Meekins and Rhode. Representative Duncan arrived later in the meeting. Also in attendance: Representatives Nels Anderson and Terry Gardiner; Eric Yould, Executive Director, Alaska Power Authority; J. Williamson, R.W. Beck & Associates; Fred Boness, Deputy Commissioner, Department of Natural Resources; Department of Fish and Game: Bob Rausch, Director, Division of Game; Rupert Andrews, Director, Division of Sport Fish; Jeff Morrison, Director, Division of Administration; Jim Rhode, Administrative Assistant to Chairman Cowper; Jay Hogan, Director, and Bob Grogan and Bob Schroeder, Fiscal Analysts, Legislative Finance Division.

HB 442

Vice Chairman Freeman called the meeting to order and stated the Committee would address HB 442:

> "An Act relating to the Alaska Power Authority; and providing for an effective date."

[Representative Duncan arrived at this time.]

In referring to the Finance Committee Substitute (work draft copy) for HB 442, Representative Duncan stated it incorporates all the changes recommended by the subcommittee yesterday. He advised the Committee would hear testimony on proposed amendments by Mr. Williamson, representing the Southeast communities, and decide where to incorporate these in the bill.

SOUTHEAST COMMUNITIES AMENDMENTS

Mr. Williamson began his presentation by stating these amendments relate to the engineering and construction phase. He advised the first, would add a new subsection (f) to Section 16. AS 44.56.170 that relates to the establishment of the revolving loan fund. He stated this would provide that projects that have outstanding loans at 3-5% interest rates and not exceeding 50-year terms would not have to repay such loans until the project becomes operable or 10 years from the date of the loan, whichever is earlier. In answer to a question, he stated the communities this would affect are Kodiak, Petersburg, Wrangell, Sitka and Ketchikan.

Mr. Williamson advised the second amendment (page 8, line 3) relates to the "grandfather" clause, and the last amendment to Section 18. AS 44.56.180(e), relating to reconnaisance report approval by the Legislature, would make exception for those projects already approved by the Department of Commerce.

Representative Guy had a question pertaining to the eligibility criteria of the Alaska Power Authority revolving loan fund. In answer, Mr. Yould stated the ability of

the communities to repay the loans will be considered, but APA would take into account the need for the loans as well. Representative Guy brought up the guarantee of indebtedness by the Alaska Permanent Fund Corporation and asked if they were dipping into Permanent Fund money. Representative Gruening stated AS 37.13.200 deals with a guarantee in the income, not the principal. He advised the bill dealing with Permanent Fund procedures is HB 595.

Representative Haugen moved and asked unanimous consent that these amendments be adopted. Representative Gruening objected to the first amendment, stating he feels it should be left up to the discretion of APA as to whether they make these loans. He further stated he objects to repayment not being necessary until the project commences as a term of the loan. He commented, wherever possible, private financing should be obtained. Discussion followed.

There was discussion on the interest rate, with Mr. Yould stating with the revolving loan fund, APA regulations state they can go down to as low as 1% for any number of years for financing. There was discussion on the need for defining "small scale" power projects, with Mr. Yould stating he would not want to put restriction on monetary value and would rather do so on size. Discussion followed on using 5 megawatts as opposed to "under 30 megawatts" in defining small scale. In answer to a question, Mr. Yould stated cost of a 30 megawatt plant is $70-$100 million, and Mr. Williamson added that wouldn't be spent all in one year. Representative Gruening moved that power production facilities of 5 megawatts or less be defined as small scale, and then withdrew his motion.

There being no further objection, the amendments were adopted.

AMENDMENTS ADOPTED

Representative Schaeffer proposed inserting "regional and" after "boroughs," on page 7, line 20. In answer to a question, he replied he is referring to the 12 Native regional corporations. Discussion followed on including profit-making corporations, with Representative Buchholdt pointing out the Native regional corporations fall into that category. Mr. Jim Rhode commented, when the original act was passed, effort was made to have APA supply power to private corporations. In answering a question, he stated Alaska Electric Light & Power is a private corporation. There being no objection to this proposal, it was so ordered.

SCHAEFFER AMENDMENT ADOPTED

Representative Duncan stated there had been discussion on deleting language in Section 17. AS.56.180(d) regarding public bidding. He advised it was suggested, on page 10, line 9, that a period be placed after "state", deleting "except that public bidding shall not be required,

AMENDMENT ON PUBLIC BIDDING ADOPTED

if the authority so determines on projects in excess of $50,000,000." Mr. Yould commented he sees no reason why public bidding should be exempt and that the construction part should be bid and procuring the services of a professional firm should be a negotiable contract. There being no objection, it was so ordered.

Mr. Yould proposed an addition to the "grandfather" clause (Section 17. AS 44.56.180(c)) be made and suggested the following language: APA AMENDMENT

> "The requirements of Sec. (e) of this section do not apply to any project which the Authority has determined to finance and in which it will not maintain an ownership interest upon completion and for which the Legislature has adopted a resolution of approval prior to the conclusion of the Tenth Legislature."

He stated this would assure this requirement would not be imposed on APA and referred to the Healy and Solomon Gulch projects. Mr. Jim Rhode commented on the situation of bond council regarding these two projects. Representative Haugen asked about the Sitka project, and Mr. Yould replied the Healy and Solomon Gulch projects are projects they can proceed on, and at the present time, APA does not know the Sitka situation. Representative Gruening commented the resolution in this proposal should be denoted "concurrent". ADOPTED

Mr. Yould brought up subsection (e), page 11, line 1, with regard to the Governor's evaluation and recommendations on long-term plans and wondered if he might hold up this submission if the plan is not completed. Representative Duncan stated ",if any," could be inserted after "plan". There being no objection, it was so ordered.

There being no further comment on HB 442, Vice Chairman Freeman advised action would be deferred until the Finance committee substitute is prepared incorporating the adopted amendments. HB 442 was held over until tomorrow. HB 442 HELD OVER

Vice Chairman Freeman brought up HB 906 for consideration: HB 906

> "An Act making a special appropriation to the power project revolving fund; and providing for an effective date."

Vice Chairman Freeman stated this would appropriate $5 million of general fund money to the revolving fund. He indicated the bill can be reported out at this time, if the Committee so desires. However, he commented he

STATE OF ALASKA

MEMORANDUM

OFFICE OF THE COMMISSION

TO: The Honorable Thomas K. Williams
Commissioner
Department of Revenue

DATE: October 5, 1979

FILE NO:

TELEPHONE NO:

FROM: Avrum M. Gross
Attorney General

By: Thomas M. Jahnke
Thomas M. Jahnke
Assistant Attorney General
Department of Law

SUBJECT: Withdrawal and investment of appropriations for Alaska Power Authority
Our File: J-66-012-80

Three questions have been addressed to the Department of Law for its consideration. They will be answered in turn.

You have inquired whether the Alaska Power Authority may withdraw an appropriated amount from the Renewable Resources Investment Fund [see AS 37.11.050 - 090 and AS 37.12.020(b)] prior to the receipt of revenue by that fund. The answer is no. At least three sources of authority support this result.

The first basis for this conclusion is AS 37.05.170 which declares:

> No payment may be made and no obligation incurred against any fund unless the Department of Administration certifies that its records disclose that there is a sufficient unencumbered balance available in the fund and that an appropriation or expenditure authorization has been made for the purpose for which it is intended to incur the obligation.

As applied to the facts presented here, the result is indisputable: there being no balance in the fund, there can be no disbursement.

The second basis for the conclusion is the case of Ada County v. Wright, 92 P.2d 134 (Idaho 1939). In that case the state legislature appropriated to the counties money to be used for road and bridge construction. The appropriation was out of the State Highway Fund in the amount of 20% of the

receipts of that fund, but not less than one million dollars. The hypothetical question arose: What if the entire State Highway Fund failed to amount to one million dollars? Would the state be obliged to make up the difference from other sources? The court observed in dicta:

> [O]f course there would be no liability on the state to make up the deficit, for the reason that this appropriation is made specifically out of the Motor Fuels Tax; and of course whenever that is exhausted, there can be no further claim or demand under the appropriation.

Id. at 140 (emphasis in original).

The third basis for the conclusion is an analogous line of cases which stand for the proposition that a contractual obligation to pay out of a specified but as yet non-existent fund is not enforceable until the fund is created. Martin v. Martin, 43 P.2d 314, 315 (Cal. App. 1935); Owen v. Cohen, 119 P.2d 713, 716 (Cal. 1941) (en banc); Wilshire Realty Co. v. Kry Corp., 58 Cal. Rptr. 469, 475 (Cal. App. 1967); Furst and Thomas v. Elliott, 56 P.2d 1064, 1068 (Idaho 1936) and cases cited therein.

Under the latter two bases it is clear that there can be no payment to the Alaska Power Authority: the fund out of which the money is to be paid does not have a balance, the existence of which is an implied condition to any duty to disburse the appropriation.

Your second and third inquiries concern the propriety of withdrawal and investment by the Alaska Power Authority of appropriations prior to incurring the costs for which the amounts were specifically appropriated. The proposed withdrawal and investment would not be proper on these facts.

Your inquiries have two aspects: first is the propriety of a withdrawal of the money; second is the propriety of the investment of the money. On the first point, it must be

understood what is meant by "appropriation" and "withdrawal." Our supreme court endorsed the following definition of "appropriation":

> An appropriation is the setting aside from the public revenue of a certain sum of money for a specified object, in such manner that the executive officers of the government are authorized to use that money, and no more, for that object, and no other.

Thomas v. Rosen, 569 P.2d 793, 796 (Alaska 1977). The key words in the definition are "setting aside," for they point out the distinction between appropriation and actual disbursement:

> There is a pronounced distinction between the appropriation, or the setting aside, of a sum of money for a particular thing, and the actual disbursement of funds to meet the object of such an appropriation.

State v. Lee, 163 So. 859, 868 (Fla. 1935).

Insofar as the appropriations in question (ch. 49, SLA 1979; sec. 2, ch. 76, SLA 1979) are for the express purpose of paying the costs of enumerated projects, and insofar as no costs have been incurred in connection with those projects, there is no basis for any disbursement.

On this same issue, the established practice and interpretation of your department is entitled to considerable weight in interpreting an ambiguous legislative enactment. State v. Sorlie, 219 N.W. 105, 108 (N.D. 1928) (opinion of State Industrial Commission and state auditing board on the availability of appropriation for payment in subsequent year); In Re Integration of State Bar, 100 P.2d 1000, 1002 (Okla. 1940) (opinion of State Auditor on availability of appropriation). Thus, your view that an appropriation may not be disbursed unless and until there are obligations incurred on the designated project is legally significant.

It should be noted that the result might be different if the appropriations were unconditional appropriations to the Alaska Power Authority or the power project revolving fund. This memorandum does not address that situation.

On the second point, the propriety of investment of the appropriations if and when they are disbursed, the special purposes attached to the appropriation preclude their investment, with the possible exception of investment in the particular projects enumerated in the appropriations. This is in conformity with the rule that boards or officials having public funds in their control are without power to depart from the literal statutory requirements as to loans and investment of those funds. Annot. 104 ALR 623, 628 (1936). Even if we assume that the Alaska Power Authority and the power project revolving fund have investment authority (an extremely doubtful proposition with respect to the revolving fund), the conditions of the appropriations plainly restrict the exercise of any assumed investment authority.

In summary, the response to your second and third inquiries is that the appropriated funds may not be withdrawn before obligations are incurred and may not be invested in violation of the conditions attached to the appropriations.

TMJ:md

The proposed Six-Year Capital Program for the Alaska Power Authority supports goals and objectives for the Economic Development Program area. The Governor's policy theme # 4 is fully supported by the program objectives guiding this six-year plan since the projects will produce reasonable cost power in the future, improve the standard of living, increase employment opportunities, reduce the cost of living, and encourage long term use of renewable resources.

Major assumptions for the capital budget submission and six-year capital program are:

1. Diesel fuel will continue to escalate in price above the rate of inflation.

2. Use of natural gas for electric power generation will be restricted or precluded by federal energy policy or market conditions.

3. There will be no future contracts for inexpensive natural gas in the Cook Inlet area.

4. The population of Alaska desires to continue use of electricity as a form of energy and strongly supports renewable resource generation alternatives.

The condition that the capital program will effect is the rapidly increasing cost of electric energy for all electric power consumers in Alaska. The Long and Short-range Objectives of the Program address the sources of the condition by providing state assistance in the financing and development of alternative electric energy projects using renewable resources. Capital project development is the primary purpose of the Power Authority, consequently the objectives are related to the steps of the project development process.

Objective # 1 has no capital projects specifically associated with it, however it would assist in the financing of certain projects in the state like Swan Lake and Lake Tyee and negate the requirement for state loans to assist in financing the projects.

Objective # 2 is associated with what should be a continuing project if the Susitna Feasibility Analysis is initiated in FY '80. The Susitna project will provide 1,400 MW's of power and 6,000 Gwh of energy to the railbelt area of Alaska at a present cost of $2.6 billion.

Objective # 3 is a continuation of a project funded in FY '80 to investigate a small biomass gasification/generation system for use in rural villages to lower electric power costs. The AVEC fuel conversion project was funded for $150,000 in FY '80 to demonstrate the system in Anchorage, and $125,000 is necessary in FY '81 to demonstrate village application.

Objective # 4 involves the final step in development of a power project. Numerous projects in the railbelt area will not require special assistance from the state in order to obtain construction financing. The waste heat conversion generation project of the Golden Valley Electric Association and miscellaneous generation and distribution projects of other railbelt utilities will only require authorization from the legislature for the Power Authority to assist in financing the improvements. The Swan Lake project in Ketchikan and the Lake Tyee project for Petersburg and Wrangell require loans from the state subordinate to revenue bond debt issued to finance the construction. Swan Lake is a 22 MW capacity project with an estimated cost of $85 million which will provide 69 million kwh of firm energy per year to Ketchikan. An $18 million loan in FY '81 will be required to insure that the project can be financed. The Lake Tyee project will have 15 MW's of capacity and produce 69 million kwh of energy for Petersburg and Wrangell for $45 million. A $10 million loan in FY '82 will be required to insure that the project can be financed.

Objective # 5 and # 6 involve Feasibility Study and Federal Energy Regulatory License Application funds for numerous projects described below. Rough estimates of the total cost of the projects are provided for later years of the Capital Improvement Program without an estimate of the form or amount of state assistance.

1. Bradley Lake near Homer - Feasibility and FERC License - $1,500,000 in FY '81, $2,000,000 in FY '82, and no state assistance in construction financing. This project can provide 70 MW's of power and 300 million kwh of energy per year to the Kenai Peninsula and Anchorage area for an estimated cost of $170,000,000. This will be a project of the state.

2. Grant Lake near Seward - Design and FERC License - $1,000,000 in FY '81 and no state assistance in construction financing. This project can provide 6 MW's of power and 25,200,000 kwh's of energy to Seward for an estimated cost of $20 million. Grant Lake will be a project of the state and no state funds will be necessary for construction financing.

3. Haines/Skagway Project - Feasibility Study and FERC License - $500,000 in FY '81 - Energy alternatives for the communities are presently being assessed in a reconnaissance study. Results of the study are not available at the time of preparation of the budget. In order to proceed with development of a project in FY '81, funds must be reserved now to insure timely development of the best alternative identified for the area. State assistance for construction financing cannot be assessed at this time.

4. Dillingham (Lake Elva, Grant Lake, or Tazimina) - Detailed Feasibility and FERC License - $400,000 in FY '81 - No state assistance is required for construction financing unless the Taximina project is recommended for development to serve a large region. The Alaska Power Administration completed a Reconnaissance study of the Bristol Bay region. The Power Authority is presently conducting a feasibility assessment of the

Lake Elva, Grant Lake, and Tazimina River projects. The project which appears most feasible as a result of present studies will require state assistance for detailed study and preparation of a FERC license if the project appears feasible.

5. Kisaralik Project in the Bethel area - Feasibility and FERC License - $500,000 in FY '81, $1,000,000 in FY '82, and an undetermined level of state assistance in financing construction of this state project if the project appears feasible throughout the consecutive stages of the project development process. The Kisaralik River project would serve the lower Kuskokwim River area if the project appears feasible and the Single Wire Ground Return Transmission Demonstration Project is successful. The projects together may assist in the rural energy problem. A 1975 estimated cost of construction adjusted for inflation is $100 million.

6. Larsen Bay, Old Harbor and Port Lions (Mennonite Creek) on Kodiak Island - $200,000 for each project in FY '81 will permit initiation of design and FERC license applications for three small hydroelectric projects which will provide 200 kw of power at Port Lions, 400 kw of power for Old Harbor, and 1 MW of power for Larsen Bay. The projects were studied initially by the Alaska Power Administration and more detailed feasibility assessments are being completed by the Power Authority. Mennonite Creek is estimated to cost $1 million, Old Harbor $3.2 million, and Larsen Bay $2.2 million.

7. Moonlight Springs near Nome - Design, FERC License, and Construction - $600,000 in FY '81. A small run of river hydroelectric project with 500 kw of capacity has been identified in close proximity to the City of Nome. A preliminary feasibility study is being accomplished at this time.

3/8 Not adequate

The capital projects and objectives which are based on the project development process are oriented toward a hydroelectric power development management strategy. Numerous other strategies are constantly assessed and in fact recommended where appropriate. Wood combustion steam generation options are being assessed for the Haines/Skagway area, Klawock, and Petersburg/Wrangell. This strategy appears to have short term merits for Haines and Klawock. Capital construction and operating costs are less than the hydroelectric option for early years of operation, however uncertain long term fuel supplies and rapidly increasing operating costs make hydroelectric power the best long term strategy for most communities where the alternative is available. Coal generation in the railbelt area will be assessed principally by the utilities and private industry. Capital costs as well as operating costs are high for this management strategy which is being assessed in conjunction with the Susitna Feasibility Analysis. Tidal, wind, and solar technologies have not been shown feasible in areas studied so far by the Power Authority due to cost, engineering, and climate constraints. Conservation is a management strategy which is promoted on a national level and by utilities, and by state DEPD/APUC, and it is considered within the load growth and energy demand forecasts for all project studies.

adequate

No priorities were set for each fiscal year of the 6-year plan. The stage of project development, the nature of the project being developed, its location, the project sponsor (state project, public utility project, cooperative utility project), and the amount of financial assistance individual projects required were factors considered in the recommendation of projects. Projects in rural Alaska require more state assistance than projects in Southeast Alaska, which in turn require more than projects in the railbelt area of Alaska. Delay of low priority projects will result in continued rapid increases in electric power costs, higher costs of projects ultimately constructed due to inflation, and negative economic impacts on the communities or regions of Alaska the projects would serve. Delay in development of capital projects will consequently result in delay in accomplishment of both short term and long term objectives.

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

01-1031 (7/79)

31 ANALYTIC STATEMENT (Six-Year Capital Program)

REVISED DATE

000058

AGENCY SUBMISSION							GOVERNOR'S RECOMMENDATION Please Do Not Write In This Area			
AGENCY PRIORITY	OBJ NO(S)	PROJECT TYPE	PROJECT TITLE AND LOCATION	AGENCY FUNDING YEAR 1981	FUNDING SOURCE		GOVERNOR'S FUNDING YEAR 81	GOVERNOR'S FUNDING YEAR 82	GOVERNOR'S FUNDING YEAR ____	GOV'S PRIORITY
1	2	C, L, P, E, O	Susitna Feasibility Analysis Upper Susitna River ULTIMATE ANNUAL OPERATING COST = N/A EXPECTED YEAR - FY 1996		FED RCPTS					
				3,335.0	GEN FUND		3,335.0			
					GO BONDS					
					TOTAL		3,335.0			
2	4	C, L, P, E, O	Swan Lake Hydroelectric Project Ketchikan ULTIMATE ANNUAL OPERATING COST = 150.0 EXPECTED YEAR = 1984		FED RCPTS					
				18,000.0	GEN FUND					
					GO BONDS					
					RRIF		18,000.0			
				18,000.0	TOTAL		18,000.0			
3	4	C, L, P, E, O	Lake Tyee Hydroelectric Project Petersburg/Wrangell ULTIMATE ANNUAL OPERATING COST = 200.0 EXPECTED YEAR = FY 1984		FED RCPTS					
				10,000.0	GEN FUND		10,000.0			
					GO BONDS					
				10,000.0	TOTAL		10,000.0			
4	3	C, E, P	AVEC Fuel Conversion Project Nulato ULTIMATE ANNUAL OPERATING COST = N/A EXPECTED YEAR = FY 1981		FED RCPTS					
				125.0	GEN FUND		125.0			
					GO BONDS					
				125.0	TOTAL		125.0			
5	5, 6	P	Bradley Lake Hydroelectric Project Homer ULTIMATE ANNUAL OPERATING COST = 430.0 EXPECTED YEAR = FY 1987		FED RCPTS					
				1,500.0	GEN FUND		0			
					GO BONDS					
				1,500.0	TOTAL		0			

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development PROPOSED FUNDING YEAR FY'81

PROJECT TYPE CODES
C Bldg. Construction L Land
I Other Improvement P Professional Svcs.
E Equipment O Other

34 PROPOSED SIX-YEAR CAPITAL PROGRAM

REVISED DATE

000059

AGENCY SUBMISSION						GOVERNOR'S RECOMMENDATION Please Do Not Write In This Area			
AGENCY PRIORITY	OBJ. NOISI	PROJECT TYPE	PROJECT TITLE AND LOCATION	AGENCY FUNDING YEAR 1981	FUNDING SOURCE	GOVERNOR'S FUNDING YEAR 81	GOVERNOR'S FUNDING YEAR	GOVERNOR'S FUNDING YEAR	GOV'S PRIORITY
6	5, 6	I, P	Grant Lake Hydroelectric Project Seward ULTIMATE ANNUAL OPERATING COST = 50.0 EXPECTED YEAR = FY 1984		FED RCPTS				
				1,000.0	GEN FUND	0			
					G O BONDS				
				1,000.0	TOTAL	0			
7	5, 6	I, P	Dillingham Hydroelectric Project Dillingham/Naknek ULTIMATE ANNUAL OPERATING COST = 50.0 EXPECTED YEAR = 1984		FED RCPTS				
				400.0	GEN FUND	100.0			
					G O BONDS				
				400.0	TOTAL	100.0			
8	5, 6	I, P	Kisaralik Hydroelectric Project Bethel Area ULTIMATE ANNUAL OPERATING COST = 150.0 EXPECTED YEAR = FY 1985		FED RCPTS				
				500.0	GEN FUND	100.0			
					G O BONDS				
				500.0	TOTAL	100.0			
9	5, 6	I, P	Haines/Skagway Hydroelectric Project Haines/Skagway ULTIMATE ANNUAL OPERATING COST = 40.0 EXPECTED YEAR = FY 1984		FED RCPTS				
				500.0	GEN FUND	100.0			
					G O BONDS				
				500.0	TOTAL	100.0			
10	5, 6	I, P	Mennonite Creek Hydroelectric Project Port Lions ULTIMATE ANNUAL OPERATING COST = 2.0 EXPECTED YEAR = FY 1984		FED RCPTS				
				200.0	GEN FUND	200.0			
					G O BONDS				
				200.0	TOTAL	200.0			

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development PROPOSED FUNDING YEAR FY'81

PROJECT TYPE CODES
C Bldg. Construction
I Other Improvement
E Equipment
L Land
P Professional Svcs.
O Other

34 PROPOSED SIX—YEAR CAPITAL PROGRAM

REVISED DATE

000060

AGENCY SUBMISSION						GOVERNOR'S RECOMMENDATION Please Do Not Write In This Area			
AGENCY PRIORITY	OBJ NO(S)	PROJECT TYPE	PROJECT TITLE AND LOCATION	AGENCY FUNDING YEAR 81	FUNDING SOURCE	GOVERNOR'S FUNDING YEAR 81	GOVERNOR'S FUNDING YEAR	GOVERNOR'S FUNDING YEAR	GOV'S PRIORITY
11	5, 6	I, P	Larsen Bay Hydroelectric Project - Larsen Bay ULTIMATE ANNUAL OPERATING COST = 15.0 EXPECTED YEAR = FY 1983		FED RCPTS				
				200.0	GEN FUND	200.0			
					G O BONDS				
				200.0	TOTAL	200.0			
12	5, 6	I, P	Old Harbor Hydroelectric Project - Old Harbor ULTIMATE ANNUAL OPERATING COST = 20.0 EXPECTED YEAR = 1983		FED RCPTS				
				200.0	GEN FUND	200.0			
					G O BONDS				
				200.0	TOTAL	200.0			
4A	3, 5 6	I, P	AVEC Village Hydroelectric Study - 9 Villages ULTIMATE ANNUAL OPERATING COST = 20.0 each EXPECTED YEAR = FY 1983		FED RCPTS				
				300.0	GEN FUND	325.0			
					G O BONDS				
				300.0	TOTAL	325.0			
13	5, 6	I, P	Discretionary Project Study Funds - Statewide ULTIMATE ANNUAL OPERATING COST = N/A EXPECTED YEAR = FY		FED RCPTS				
				300.0	GEN FUND	75.0			
					G O BONDS				
				300.0	TOTAL	75.0			
			FY 81 TOTAL ULTIMATE ANNUAL OPERATING COST = EXPECTED YEAR = FY		FED RCPTS				
				36,560.0	GEN FUND	4,760.0			
					G O BONDS				
					RRIF	28,000.0			
				36,560.0	TOTAL	32,760.0			

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development PROPOSED FUNDING YEAR

PROJECT TYPE CODES
C Bldg Construction L Land
I Other Improvement P Professional Svcs
E Equipment O Other

34 PROPOSED SIX—YEAR CAPITAL PROGRAM

REVISED DATE 10/31/79

000061

AGENCY SUBMISSION						GOVERNOR'S RECOMMENDATION Please Do Not Write In This Area			
AGENCY PRIORITY	OBJ. NO(S).	PROJECT TYPE	PROJECT TITLE AND LOCATION	AGENCY FUNDING YEAR 1982	FUNDING SOURCE	GOVERNOR'S FUNDING YEAR 82	GOVERNOR'S FUNDING YEAR	GOVERNOR'S FUNDING YEAR	GOV'S PRIORITY
1	2	C, L, P, E, O	Susitna Feasibility Analysis Upper Susitna River ULTIMATE ANNUAL OPERATING COST = N/A EXPECTED YEAR = FY 1996	10,599.0	FED RCPTS				
					GEN FUND	10,599.0			
					GO BONDS				
				10,599.0	TOTAL	10,599.0			
2	5, 6	P	Bradley Lake Hydroelectric Project Homer ULTIMATE ANNUAL OPERATING COST = 430.0 EXPECTED YEAR = 1987		FED RCPTS				
				2,000.0	GEN FUND	0			
					GO BONDS				
				2,000.0	TOTAL	0			
			ULTIMATE ANNUAL OPERATING COST = _____ EXPECTED YEAR = FY _____		FED RCPTS				
					GEN FUND				
					GO BONDS				
					TOTAL				
			ULTIMATE ANNUAL OPERATING COST = _____ EXPECTED YEAR = FY _____		FED RCPTS				
					GEN FUND				
					GO BONDS				
					TOTAL				
			FY'82 TOTAL ULTIMATE ANNUAL OPERATING COST = _____ EXPECTED YEAR = FY _____		FED RCPTS				
				12,599.0	GEN FUND	10,599.0			
					GO BONDS				
				12,599.0	TOTAL	10,599.0			

PROPOSED FUNDING YEAR FY'82

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROJECT TYPE CODES

C Bldg. Construction L Land
I Other Improvement P Professional Svcs.
E Equipment O Other

34 PROPOSED SIX-YEAR CAPITAL PROGRAM

REVISED DATE

000062

AGENCY SUBMISSION						GOVERNOR'S RECOMMENDATION Please Do Not Write In This Area			
AGENCY PRIORITY	OBJ. NO(S)	PROJECT TYPE	PROJECT TITLE AND LOCATION	AGENCY FUNDING YEAR 1983	FUNDING SOURCE	GOVERNOR'S FUNDING YEAR 83	GOVERNOR'S FUNDING YEAR	GOVERNOR'S FUNDING YEAR	GOV'S PRIORITY
1	2	C, L, P, E, O	Susitna Feasibility Analysis	5,778.0	FED RCPTS				
					GEN FUND	5,778.0			
					G O BONDS				
			ULTIMATE ANNUAL OPERATING COST N/A						
			EXPECTED YEAR = FY 1996	5,778.0	TOTAL	5,778.0			
					FED RCPTS				
					GEN FUND				
					G O BONDS				
			ULTIMATE ANNUAL OPERATING COST						
			EXPECTED YEAR =		TOTAL				
					FED RCPTS				
					GEN FUND				
					G O BONDS				
			ULTIMATE ANNUAL OPERATING COST =						
			EXPECTED YEAR = FY		TOTAL				
					FED RCPTS				
					GEN FUND				
					G O BONDS				
			ULTIMATE ANNUAL OPERATING COST =						
			EXPECTED YEAR = FY		TOTAL				
					FED RCPTS				
			FY'83 TOTAL	5,778.0	GEN FUND	5,778.0			
					G O BONDS				
			ULTIMATE ANNUAL OPERATING COST =						
			EXPECTED YEAR = FY	5,778.0	TOTAL	5,778.0			

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development PROPOSED FUNDING YEAR FY'83

PROJECT TYPE CODES
C Bldg. Construction L Land
I Other Improvement P Professional Svcs.
E Equipment O Other

34 PROPOSED SIX—YEAR CAPITAL PROGRAM

REVISED DATE

000063

March 24, 1980

The Honorable Bill Miles
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

Dear Representative Miles:

Thank you for this opportunity for the Administration to comment on the proposals before your Committee regarding the Alaska Power Authority. The importance of the Alaska Power Authority in the State's energy future has increased rapidly and dramatically in the few years in which it has been in existence. This increasing role, in terms of dollars and activity, has also brought increased responsibility for the Legislature and the Administration in insuring that we are making carefully considered decisions regarding the State's energy future. It is in this spirit, both in support of the Power Authority's important job of developing reasonable cost power and in support of our obligation to make the best decisions for Alaska's energy future, that I offer these comments and recommendations for your consideration.

The first issue concerns the management of appropriations to the APA, specifically the nature and role of the Power Project Revolving Loan Fund. As you know, there are bills pending in the Legislature to appropriate $1 billion to this revolving loan fund. The Power Project Revolving Loan Fund was originally created to finance front-end costs for power projects and actual construction financing for small projects. As it was expected that relatively minor amounts of money would be invovled, the Power Project Revolving Loan Fund was established as a trust to be administered by the Power Authority. Also, due to the recurring nature of the use of these funds, the Fund was established as a revolving fund, whereby principal and interest payments would return to the Fund to be loaned out again.

During this session of the Legislature, due to our large expected revenue and the confused state of the bond markets, considerable interest is being focused on the use of state general funds to provide major financing for power projects. The $1 billion appropriation proposal is evidence of this interest. If the Legislature does allocate a large portion of

general fund revenue to power development, we feel that the Power Project Revolving Loan Fund as presently constituted should not be the vehicle for such appropriations. The principle reason for this position is that under existing law large amounts (interest and principle repayments) would revolve back to the Authority automatically and would be unavailable for other uses, in effect a de facto dedication for the purposes of the Fund. We feel that the Administration and the Legislature should make major funding decisions on an annual basis through the budget process.

Representative Malone has proposed two possible approaches to this question:

1. eliminate the Power Project Revolving Loan Fund, and

2. modify the statutes governing the Power Project Revolving Loan Fund.

The former proposal would require the establishment of a new fund to receive appropriations for specific projects. The latter proposal would strip the Power Project Revolving Loan Fund of its "trust" status, resulting in investment of Fund balances by Revenue, not the APA. Interest earned on fund balances would go to the general fund and not to the Power Project Revolving Loan Fund. Further, the latter proposal would remove the "revolving" status of the Fund so that interest and principal repayments would flow to the general fund. The Administration is in accord with the intent of these recommendations. We feel that the second option is preferable, in that it involves the least revision of current practices while preventing a de facto dedication of very large sums of money to the Fund.

The second issue concerns the selection and development of specific projects by the APA and their review by the Administration and the Legislature. All parties seem to agree that the existing provisions on the APA statute regarding review and approval are vague and cumbersome and result in unnecessary delay to project development. In addition, the recent supreme court A.L.I.V.E. decision has clouded the legality of the present method of legislative approval by resolution.

Both the APA and Representative Malone have offered proposals to your Committee. Whichever approach the Committee follows, we recommend that the project selection and review procedures incorporate the following features:

1. Commencement of the process with an assessment of the demand for electric power in the community or region under consideration, followed by

2. A preliminary assessment (reconnaissance grade study) of all of the alternatives available to meet expected demand. This assessment, along with the APA's recommendation of the best alternative, should

be submitted to Budget and Management for review. Subsequent requests for funding for the selected project should be based on APA's assessment and Budget and Management's review;

3. Subsequent funding for a project at this stage should be targeted for a feasibility study of the chosen alternative. The results of the feasibility analysis should be submitted to Budget and Management for review. Subsequent requests for funding for the project should be based on APA's feasibility study and Budget and Management's review;

4. Subsequent funding for a project at this stage should be targeted for final engineering and design of the project. No further State government review would be necessary for the project unless

   a. general funds are required to supplement or replace bond market financing,

   b. general obligation bonds are recommended for project financing, or

   c. State guarantees are recommended to facilitate bond market financing.

In all of these cases, the market test of project feasibility is removed. Therefore, Budget and Management should be required to contract for an independent assessment of the project to replace market judgements. All of these alternatives would require appropriations or a vote of the people and the normal budget process provides adequate review.

In designing a project selection, development and review process based on these recommendations, the Committee should rely on personnel intimately familiar with the budget process to structure these steps in accordance with current budget practices. Time limits should be included to insure prompt action, and specific reporting requirements should receive attention to insure that the process produces the information of greatest concern to the Legislature and the Administration at the stages in the process when it is needed. It is our intent here to better integrate the review process with the budget process, i.e., specific appropriation to the APA, according to the discrete steps required to develop power projects.

We feel that adoption of these recommendations will help streamline the development of power projects in Alaska, while at the same time increasing the ability of the Legislature and the Governor to make wise and informed decisions. Thank you again for this opportunity to express our views and we hope they will be of help as the Committee discusses these issues.

Yours truly,

Bertram Wagnon
Deputy Commissioner

02-001B (Rev. 10/76)

STATE of ALASKA

MEMORANDUM

TO: Ronald D. Lehr, Director
Division of Budget & Management
Office of the Governor

DATE: April 17, 1980

FILE NO:

TELEPHONE NO:

FROM: George Matz, Budget Analyst
Division of Budget & Management
Office of the Governor

SUBJECT: APA Reconnaissance and Feasibility Studies

Mark Wittow, A.A. to Representative Malone, requested from Budget and Management a review of the reconnaissance and feasibility studies which have been completed for Alaska Power Authority (APA) projects. Attached is a table listing projects for which a reconnaissance or feasibility report or a budget request has been submitted to Budget and Management. The list does not include all APA projects.

The table includes an "approved" column for the reconnaissance and feasiblity categories. The basis for approval is 1) statutory compliance; 2) approval by virtue of an appropriation for the next stage of project development; 3) approval via a joint resolution by the legislature. Regarding statutory compliance, it does not appear that any project actually complies with AS 44.56.180; specifically (b) which requires approval of a reconnaissance study by a joint resolution of the legislature before the APA can proceed with the engineering or design phase of a project if funded by the Permanent Fund or an appropriation from the General Fund and (e) which mandates an analysis by the Governor of the economic, environmental and social benefits and costs of a project when a joint resolution is required.

Again, this table is based on submittals to Budget and Management, not the entire Governor's Office. Some project reports (i.e., GVEA Waste Heat) have been submitted to DPDP. Previously, there was no standard procedure as to where reports should be submitted.

Attachment

cc: Mark Wittow

PROJECT	RECONNAISSANCE				FEASIBILITY			
	Appro-priated	Under-way	Comple-ted	Approved	Appro-priated	Under-way	Comple-ted	Approved
Susitna	X		X	X	X	X		
Swan Lake					X		X	X*
Lake Tyee	X		X	X	X		X	X*
Terror Lake					X		X	X**
Power Creek, Cordova					X**			
Bradley Lake					X**	X		
Salmon Creek					X		X	X***
Mennonite Creek	X		X	X	X*			
Lake Elva	X	X						
Chilkat	X	X	X					
Kisaralik	X		X					
Gartina	X		X					
Gunnuk	X							
Thayer Creek	X		X					
Black Bear Lake	X		X					
Larsen Bay	X			X	X*			
Old Harbor	X			X	X*			
Grant Lake	X		X					
Green Lake							X	X**
City Creek			X				X	
Salomon Gulch					X		X	X**
Anch-Fbnks Intertie	X							

~~Chilkat~~

* Approved via Governors Budget
** Appropriated or approved (joint resolution) by the Legislature.
***APA Board of Directors

Projects which do not appear on this list (i.e., GVEA Waste Heat) have not had a study or budget request submitted to Budget & Management.

Project status as of April 1980.

Power Authority Calls for Wise Investment in Hydropower

By ERIC P. YOULD
Executive Director
Alaska Power Authority

This year will see intensified activity in electrical power development. The investigations needed for construction of the Susitna hydroelectric project will be initiated, while Green Lake and Solomon Gulch hydropower projects at Sitka and Valdez will enter their second construction season. If all goes well, Swan Lake and Terror Lake hydropower construction for Ketchikan and Kodiak will also be initiated in 1980 followed by Tyee Lake hydropower for Petersburg and Wrangell.

Projects still under investigation which may prove feasible for construction in the future are at Cordova, Homer, Seward, Bristol Bay, the Tlingit-Haida area, the lower Kuskokwim and Yukon area, and at some smaller rural communities. Other communities may be able to develop wood or peat fueled generation, while still others might be able to develop small tidal or wind power generation. The Alaska Power Authority is attempting to expedite these projects, and the end result should be a significant degree of electrical energy independence by the end of the next decade.

Because this is the first year that the Alaska Power Authority has been invited to outline its program for Alaska Construction and Oil, it is appropriate to review the authority's purpose and goals. Briefly, it is a corporation of the State of Alaska whose five-member board of directors is appointed by the governor, and confirmed by the legislature. The board of directors consists of chairman of the board, Charles Behlke, dean of the School of Engineering at the University of Alaska at Fairbanks; Arnold Espe, chairman of the board of the Alaska Pacific Bank; vice chairman of the board, Charles Conway, president of Conway Docks and a director of the Alaska Visitors Association; Charles Webber, commissioner of Commerce and Economic Development, and Jack Wick, chairman of the board of Koniag Native Corporation. This blue-chip board's responsibility is to "... provide reasonable cost power to Alaska ...," thereby advancing its economic and social welfare.

The power authority concentrates on renewable resource developments that will lessen the state's dependence on depletable and inflation-prone fossil fuels. On a statewide basis, the renewable resource most feasible for power generation is hydropower.

Project financing will be available from the revenue bond market, however, the "front end" money needed for planning and concept design has in the past been provided by the state. It is envisioned that the state will be repaid from the revenue generated by the projects, and thus, the impact on the state treasury should be minimal. While many projects can be shown to be economically feasible, in some cases the magnitude of the investment perhaps coupled with a weak fiscal base in the communities to be served may necessitate state financial assistance in order to achieve revenue bond financing. In these cases, the state hopefully would recapture its portion of investment from project-generated revenue.

The two projects presently under construction are Green Lake and Solomon Gulch. The Green Lake project has been spearheaded by "Rocky" Gutierrez, city manager of Sitka, whose enthusiasm and energy are directly responsible for the project's successful construction start. Financing for the $45-million project was provided through an $8-million loan from the state and the remainder from revenue bond financing managed by Dillon Read and Company. Engineering, design and management is being provided by R. W. Beck and construction has been awarded to S. J. Groves and Sons. The project consists of a 230-ft. high, concrete, thin-arch dam, with a crest length of 460 ft. The power conduit is approximately 1,900 ft. long, consisting of a 10.5 ft. dia. tunnel from the intake works to the powerhouse. The powerhouse will house two vertical Francis turbines under a net head of 349 ft. for an installed capacity of 16,500 kw. The project will transmit power by way of 7.4 mi. of 69 kv transmission line and will terminate at the existing Blue Lake hydropower project substation. Green Lake will generate 44.2 million kwh of firm energy annually and another 20.7 million kwh of secondary energy. Power-on-line is scheduled for late 1981.

The Solomon Gulch project consists of a 12,000 kw installed capacity plant with two Pelton turbines. The principal features of this $35-million project are a 100-ft. high earthfill dam, 2,000 ft. of "Alyeska pipeline" penstock and roughly 100 mi. of

continued

transmission line. The market area for Solomon Gulch power is tentatively Valdez and Glennallen. This load center could be later tied into the railbelt area if Susitna proceeds to construction. Like Green Lake, Solomon Gulch development has been fortunate to receive the drive of a stong utility manager which in this case is Jim Palin. An REA cooperative, Copper Valley will receive 60 percent of project financing from REA with the remainder to come either from power authority revenue bonds, or perhaps Valdez general obligation bonds. The project engineer is R. W. Retherford Associates and the transmission engineer is Minor and Minor Engineers. Construction engineer for the powerhouse will be Alaska Constructors, Inc. The contract for the transmission line has not yet been awarded.

Projects still in the planning stage are Susitna, Swan Lake, Terror Lake and Tyee Lake. During its last session, the legislature appropriated $8.2 million to initiate field explorations for the Susitna hydropower project. On Nov. 2, 1979, the power authority selected Acres American, Inc. as the engineer manager. The field explorations will begin in January 1980 and will require 2½ years to complete at a cost of some $26 million. Assuming feasibility, project construction would begin upon issuance of a construction license by the Federal Energy Regulatory Commission (FERC). The FERC may take up to three years to act, however, there is potential to expedite Susitna construction approval under the President's new energy mobilization board.

The Swan Lake project planning is further advanced than Susitna and is probably next in line for construction. Assuming timely licensing and availability of financing, construction could start in July 1980 with power-on-line anticipated in early 1984. The Swan Lake project is similar to Green Lake in many respects. The project consists of a 190-ft. high, thin-arch dam, 4,200 ft. of power tunnel, two 11,000-kw Francis turbines and roughly 25 mi. of transmission line. Estimated cost of Swan Lake is $85 million with financing provided through the power authority.

Following Swan Lake in 1980 should be the Terror Lake project. Unfortunately, Terror Lake is partially located in a national bear wildlife refuge, an area with less restrictions than proposed wilderness areas under d-2. The Department of Interior, which manages the refuge, has intervened against the project. Terror Lake, estimated to cost $81 million, consists of a 156-ft. high earthfill dam, rock spillway, four mi. of power tunnel and penstock, a powerhouse consisting of two 10,000-kw Pelton turbines and 17 mi. of transmission line. Financing will come jointly from REA and the power authority.

Construction on the Tyee Lake hydropower project could start in early 1981. The project will consist of a conventional lake tap similar to the Snettisham project in Juneau. The major features consist of 4,500 ft. of power tunnel connecting Tyee Lake to an underground powerhouse which will house two 10,000-kw turbines. Tyee will deliver power to Petersburg and Wrangell through 80 mi. of transmission line. When the initial capacity of Tyee has been absorbed, construction of a small dam at the outlet of Tyee Lake and a third unit in the powerhouse would provide an ultimate installed capaci-

ty of 30,000 kw. The first stage of Tyee is estimated to cost $53 million with funding through the power authority and with power being sold to the Thomas Bay Power Commission.

Other activities during 1980 will include field explorations for a number of hydropower projects. The field explorations will lead to Federal Energy Regulatory Commission license to construct those projects that prove feasible. In addition to the hydro, it is anticipated that the power authority will get involved in facilitating waste heat development in the Fairbanks area and hopefully in some of the rural communities.

Alaska is rich in energy resources, and has a unique opportunity not available to other states. Relative energy independence can be achieved through renewable resource development if a portion of the state's nonrenewable income from oil and gas is utilized for this purpose. Equity investment by the state will move today's surplus dollars into the future, thus creating not only economical power for Alaskans, but a long-term source of revenue for the state treasury. Hydropower is capital-intensive, but it is also inflation-proof and a revenue-producer. Wise investment in hydropower is one of the most valuable long-term economic actions that the state could take. □

Fairbanks' DeLong To Head ERC Oil Group

Dan M. Krausse, Earth Resources Co. president and chief executive officer, has announced two management changes.

Louis F. DeLong, president of ERC of Alaska, will move to Dallas to become group vice president of the parent company with responsibility for its oil group.

Succeeding DeLong as ERC of Alaska president is John L. Seawell, currently president of the Rogers & Babler road-building and paving materials division in Anchorage. He will retain that post. ERC of Alaska headquarters will remain in Fairbanks. □

Big Three Lincoln Announces Expansion

Big Three Lincoln Alaska has announced an addition to its physical plant in Palmer. The new equipment and addition will increase Big Three's capability to serve customer's needs for liquid and gaseous nitrogen and compressed air. The Palmer manufacturing plant presently produces liquid oxygen, gaseous oxygen, and acetylene. □

Cdr.

ALASKA POWER AUTHORITY

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

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

October 12, 1979

Mr. David A. Rose
Executive Director
Alaska Municipal Bond Bank Authority
601 West 5th Avenue, Suite 325
Anchorage, Alaska 99501

Dear Mr. Rose:

There is a need for a timely financing vehicle for diesel powered plants for small Alaskan communities that the Power Authority presently cannot provide due to the requirement for a joint resolution of the legislature authorizing the sale of bonds by the Authority. For this reason I support the proposed amendment to AS 44.58. I have not had an opportunity to present the proposal to the Power Authority Board of Directors, however, I am confident it would be supported as long as certain considerations are adhered to by the Bond Bank Authority in exercising this purpose.

First, there is great concern expressed by private and cooperative utilities statewide and the Alaska Public Utilities Commission of competition in power generation by the government sector, whether it is federal, state, or local, with the existing certificated utility. This competition promotes inefficient production of power and higher costs for all customers of the utility. Therefore, I urge the Bond Bank Authority to insure coordination and agreement with the existing utility, if one exists, prior to financing any diesel generation capacity. Standby reserve generators and replacement generators financed for existing small public utilities do not normally present a problem.

Second, the Bond Bank Authority may desire to coordinate or seek comments of the Power Authority staff on any diesel power generation proposals which are considered for financing. This may help to eliminate wasteful investment in generation capacity, duplication of efforts, and coordination as mentioned above.

Thank you for your consideration in seeking concurrence of the Power Authority.

Sincerely,

Eric P. Yould
Executive Director

cc: Power Authority Board Members
Representative Terry Gardiner
Senator Clem Tillion
APUC
DEPD

Department Of Energy
Alaska Power Administration
P.O. Box 50
Juneau, Alaska 99802

October 5, 1979

Mr. Loyd M. Hodson
General Manager
Alaska Village Electric
Cooperative, Inc.
4831 Eagle Street
Anchorage, AK 99503

Dear Mr. Hodson:

As a follow-up to our meeting in your office October 5, here are cost estimates for investigation of the better hydropower sites that have been identified near AVEC villages. These costs are rough but should be adequate for budgetary estimating purposes.

Scammon Bay	$25,000
Elim	30,000
Kiana	40,000
(Storage plan $45,000)	
Ambler	45,000
Shungnak/Kobuk/Mine	35,000
Togiak	25,000
Good News	20,000
Grayling	35,000
Kaltag	35,000
	$300,000

The costs include travel, per diem, professional services in the field, and services necessary to write up the reports. The studies would have the essential information for finalizing power potential and determining engineering and economic feasibility.

Costs are included to establish a stream staff gages to obtain stream flow data. These require periodic reading and actual stream measurements three to four times to establish flow curves. Surveying and mapping would include enough topography to locate diversion points, penstock alignment, powerplant location, and transmission location. A surface examination of soil and geologic conditions would be made to verify stability and appropriateness of the physical site. A brief fish and wildlife study would be made to determine potential fish and wildlife aspects of the project physical features. A brief archaeological inspection would be made at the same time. Project design and cost estimates would be prepared to select turbine and penstock sizes based

on the hydrology data and the power needs, soil conditions, economics, etc. The report would be comprehensive enough to determine engineering and economic feasibility of the project. Costs for the studies have been increased 20 percent for contingencies, unforeseen items, and bad weather delays. An additional 10 percent is included for inflation.

As mentioned during our meeting, we feel that preliminary investigations should be started at Elim and Scammon Bay during 1979-1980, if possible.

If we can answer any questions, please call.

Sincerely,

For Donald L. Shira
Chief, Planning Division

To: Representative Hugh Malone
Representative Pat O'Connell
Senator Clem Tillion

From: Nancy Lord, Aide to Rep. Malone

Date: April 1, 1980

Subject: BRADLEY LAKE HYDROELECTRIC PROJECT

I

The Bradley Lake project, authorized by Congress since 1962, is currently being undertaken by the Corps of Engineers. Phase II, which began in August 1979, consists of engineering and environmental studies leading to a General Design Memorandum and Environmental Impact Statement by January 1982. Construction would then begin in 1982 and the project would come on-line in late 1987. The size of the project is 118 MW, the largest proposed hydroelectric project in the state after Susitna, and the estimated cost roughly 200 million dollars. Eklutna and Snettisham are the two other projects in the state which were constructed by the Corps of Engineers and are managed by the federal Alaska Power Administration.

The Alaska Power Authority has expressed a strong interest in the project and its director, Eric Yould, has recommended a joint venture. Under such a plan, the Corps would still construct the project but the state would finance it with revenue bonds and ultimately own it. $3.5 million for initial involvement in the project was included in the Authority's budget request but was deleted by the governor based on the judgement that the project was being adequately taken care of without state involvement. ($5.1 million is the actual amount that would be needed to take the project through Phase II.)

The facts and the merits of the two choices have been greatly

clouded by a lack of information, misinformation, rivalry between state and federal agencies, and competition for the proposed power among municipalities. (A third option, that of construction by a private firm and financing by the Authority, has been urged by some but not considered seriously because of the existing depth of involvement by the Corps and the delay that would result from FERC licensing.)

The challenge is to decide under what conditions and control the Bradley Lake project will provide the greatest benefits to residents of the Kenai Peninsula. The questions to be answered are 1) Under what plan will the cost of power to consumers be the cheapest? 2) Under which plan will those in charge be most receptive to the desires of the local people concerning access, esthetic and social impacts, and availability of power?

II FACTORS TO CONSIDER

Cost. The cost of the project, regardless of who constructs it, should not vary too much. It will depend largely on some factors concerning design and access which are yet to be decided. Although a report by John Nuveen and Co. indicated that state financing would cost less than federal financing, several of its assumptions were faulty and its conclusions cannot be supported. The main difference between federal and state fianancing is that federal financing is by appropriation, with an interest rate which for projects begun in 1982 will probably be 9%. (We know for sure that it will be no greater than 9% and no less than 8%.) State financing is proposed to be by revenue bonds. The Authority claims that these bonds can be sold at 7 3/4% and the money in the construction fund can then be invested at 9½%. However, the

revenue bond market is currently so unsettled that 7 3/4% money may or may not be available in 1982. In addition, it is very unlikely that the Authority would be allowed to hold onto all the bonded construction money for the length of construction and make money from reinvesting it. In either case-- federal or state financing-- once the project has paid for itself the benefits will accrue to the consumers through lower rates or additional increments of power.

Quality. The quality of the project should not vary significantly regardless of who finances the project. The Corps has high standards and its projects must pass through several layers of federal approval. With state fianancing, the project must receive FERC approval. The Corps has a good record with Eklutna and Snettisham, and both it and the Authority consider Bradley a very attractive project with which they would like to make a good showing.

Timing. The Corps plans to have Bradley on-line by late 1987. The Nuveen report assumes that, with state financing, construction could be completed two years sooner than with federal financing. Federal financing requires yearly appropriations, and the Nuveen report assumes that these would be delayed by Congress or the OMB. However, such delays have not been the case in the past with Alaskan projects, and representatives of the Corps and Power Administration assure us that they expect no delays. However, should federal appropriations ever be delayed, there is apparently nothing to prevent the state from making an investment in the project at that point.

Power allocation. Under federal ownership, the decision as to how the Bradley power will be allocated depends on a formula developed by the Power Administration during the construction years. With state ownership, this decision lies with the Power Authority, which has never had this responsibility before. The director of the Authority says a procedure similar to the federal one would be followed, the main difference being that with state financing contracts for the power must be signed before the revenue bonds can be sold and the project constructed, while the Power Administration has until the power is actually on-line to sign contracts. In the case of Bradley, there has emerged clear competition for the power between Anchorage Municipal Light and Power, which would like to have as much as possible-- even all-- until Susitna power is available, and the Homer Electric Association, which is expected to be able to use all the power by 1988 but which may not want to use any of it if natural gas is still available at a cheaper cost. In any case, power allocation could turn out to be the most controversial aspect of Bradley and might involve lawsuits before it's over. The Power Administration has experience and administrative procedures to rely on, while the Authority has neither and might be influenced by state policies or politics. In addition, tax-exempt revenue financing involves some constraints concerning how wide an area the power can be allocated to and in what proportions, while federal financing involves no such constraints. The attorney for the Power Authority is currently looking into the specific effects of tax-exempt financing on the distribution of power.

Responsiveness. The Corps and the Power Administration are well aware that the Power Authority would like to be involved with

the Bradley project, and for this reason they are being extremely cooperative and sensitive to all parties. Their past record is good and they were very well received at the public hearing in Homer in December. The Power Authority would like to participate in the project, laregly for the experience to be gained prior to the much larger Susitna project. However, the Power Authority currently has a very small staff and is involved with at least 17 other hydro projects as well as other types of power projects. It is questionable whether they have the ability to give as much attention to the Bradley project as the federal agencies are able to give.

Other factors. Bradley may very well be the only hydro project in the state which is now economically feasible (and even that is not clearly established). Other projects will be built with state subsidies. If there's any reason to think that a subsidy might be appropriate for the consumers of Bradley power (whose rates could be five times what they are now without any subsidy) state financing should be considered.

III WAYS IN WHICH THE AUTHORITY MIGHT BE INVOLVED

1. financing of the Bradley Lake project, with construction by the Corps of Engineers, as has been discussed.

2. have them monitor the work of the Corps. A private firm could be hired to critique the studies, decision-making, engineering, and construction. (The federal people think this would be a waste of money since they already have a number of federal checks on their work.)

3. have them monitor the progress of the Corps and give notice to the legislature and governor if, at any point, they identify any problems which might delay the project or increase its cost.

4. have them study marketing aspects and make recommendations regarding power allocation.

References:

Bradley Lake Project Power Market Analysis, 1978
Bradley Lake Reanalysis, 1978, 3 volumes
information brochure, Sept. 1979
transcript of Homer public meeting, Dec. 1979
Retherford report, April 1979
Anchorage Municipal Light and Power report, Aug. 1979
Nuveen report, Feb. 1980
Power Administration review of Nuveen report, Feb. 1980
misc. correspondence from Power Administration, Corps, Authority, etc.

ERIC YOULD

Executive Director
Alaska Power Authority

Department of Commerce
& Economic Development
State of Alaska

333 W. 4th Ave., Suite 31
Anchorage, Alaska 99501
Phone (907) 277-7641

DEPARTMENT OF THE ARMY
ALASKA DISTRICT, CORPS OF ENGINEERS
P.O. BOX 7002
ANCHORAGE, ALASKA 99510

EPY

REPLY TO
ATTENTION OF:
NPAEN-PM-PE

25 APR 1980

RECEIVED
APR 29 1980
ALASKA POWER AUTHORITY

Mr. Eric P. Yould
Executive Director
Alaska Power Authority
333 West 4th Avenue
Suite 31
Anchorage, Alaska 99501

Eric

Dear Mr. Yould;

Reference is made to your letter of 28 March 1980 which inquires as to the schedule and funding for pre-construction planning on the Bradley Lake Hydroelectric Project.

The $5.1 million estimate for pre-construction planning is correct and was used in testimony before the Congress this past February. The increase over earlier estimates is based on additional costs for field investigations and environmental studies.

Funding for an accelerated schedule is currently under review by the Congress. This would permit Office of Management and Budget review in time to recommend construction funding to the Congress in the appropriate budget cycle to initiate construction in 1983. If this occurs I will notify you immediately so that future planning and decisions can be made.

Sincerely,

Lee R. Nunn

LEE R. NUNN
Colonel, Corps of Engineers
District Engineer

from 1981 Capital Budget Book

PROJECT TITLE	LOCATION(S)	AREA SERVED	ELECTION DISTRICT(S)
Susitna Feasibility Analysis	Upper Susitna River	Railbelt	5-13

OBJ. NO(S)	OPERATING AGENCY / BUDGET BRU(S)	BUDGET COMPONENT NUMBERS	START DATE	COMPLETION DATE
2	Alaska Power Authority	08-71-7-060	12/01/79	12/01/83

PROJECT NARRATIVE

I. Project Need Statement.

The existing situation for electric power generation and costs for railbelt Alaska is documented in Appendix Part 2 of the Susitna Project Report. Low cost electricity in the Cook Inlet area is attributable to inexpensive natural gas generation which will be impacted by federal energy policy, declining reserves, and increasing costs. The Fairbanks area is dependent upon higher cost coal and diesel oil generation. Overall, the railbelt area of Alaska, where approximately 80% of the electric power is consumed in Alaska, has the lowest cost power in Alaska. With increasing costs of fossil fuels, and heavy capital, operating, and environmental costs associated with coal generation, development of Susitna is an attractive alternative energy resource that should be developed if it is feasible. Susitna development will produce an inflation free source of electric power for the commercial and industrial areas of Alaska which are dependent upon energy at a reasonable price for economic stability and development. Delays in the project will result in a $200 to 300 million increase per year in project construction costs which will be reflected in the ultimate cost of power.

II. Project Description.

Study the feasibility and determine the optimum basin development plan for a multi-dam hydroelectric

PROJECT TYPE

- [X] Building Construction (C)
- [ ] Other Improvement (I)
- [X] Equipment (E)
- [X] Land (L)
- [X] Professional Services (P)
- [X] Other (O) Major Project Feasibility Analysis

PROJECT CHARACTERISTICS

- [X] Totally New Facility
- [ ] Addition to Existing Facility
- [ ] Renovation of Existing Facility
- [ ] Major Maintenance or Repair
- [X] Supplement Previously Authorized Funds to Enable Completion
- [X] One of Several Phases
- [X] Major External Funding Source
- [X] Other

SITE FEATURES

NO	YES	
[X]	[ ]	Site Currently Owned?
[X]	[ ]	All Utilities Available?
[X]	[ ]	Access Already Available?

APPROPRIATION REQUEST (000)

1002	FED. RCPTS.	
1003	G/F MATCH	
1004	GEN. FUND	3,335.0
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	3,335.0

GOVERNOR'S RECOMMENDATION

APPROVED	DEFERRED	DISAPPROVED
X		

1002	FED. RCPTS:	
1003	G/F MATCH	
1004	GEN. FUND	3,335.0
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	3,335.0

01-1035a (12/79)

OPERATIONAL COST & NO. PERSONNEL INCREASE (DECREASE)		FIRST OPERATING YEAR ____	ULTIMATE ANNUAL YEAR ____	PREVIOUS YR-PRIORITY
				N/A
FUNDING SOURCE	FED. RCPTS			AGENCY PRIORITY
	GEN. FUND			81-01
				GOVERNOR'S PRIORITY
TOTAL ANNUAL OPERATIONAL COST				
POSITION (FTE)				

CATEGORY Electric Power AGENCY Alaska Power Authority PROGRAM Economic Development

01-1035a (12/79)

PROPOSED CAPITAL

000064

CAPITAL PROJECT EXPENDITURES (CASH FLOW)	TOTAL (000)	BUDGET YEAR (000)	BUDGET YEAR Plus 1	BUDGET YEAR Plus 2	BUDGET YEAR Plus 3	BUDGET YEAR Plus 4	REMAINING COST
Planning and Engineering	12,920.0	2,578.0	10,342				
Land	72.0	36.0	36				
Construction							
Equipment	500.0	500.0					
Administration and Other	442.0	221.0	221				
Total Annual Expenditure (Capital Cost)	13,934.0	3,335.0	10,599				

CONTINUATION OF NARRATIVE

generation system on the upper Susitna River. The ultimate development will provide 1,400 MW's of firm power and over 6 billion kwh's of energy to the railbelt area of Alaska. The study will be performed by Acres American Incorporated, under contract to the Authority. In FY '80 SB 63 was passed which appropriated $8.178 million to the governor for initial costs of the study. The study must be initiated and funds obligated by January 1, 1980. The study will encompass geotechnical, environmental, survey, hydrologic, economic and power market studies in addition to design activities. A Federal Energy Regulatory License applicationwill be prepared. Most study activities are seasonal in nature, therefore any delay in funding will result in consequent delays in completion of the study.

III. Documentation of Estimated Capital Cost.

Costs for construction and operation of the project are included in reports by the Corps of Engineers on the project and are too lengthy to be addressed in this budget. The project feasibility analysis is treated as a distinct project in itself. The original cost estimate in the June 1978 Plan of Study was $24.1 million for a 46 month Corps of Engineers study. This cost estimate was increased to $26.5 million in July 1979 and $28.3 million in November 1979. The cost estimate for the program of study activities for Acres American for January 1, 1980 is $27,508,400. The estimated study costs including inflation is $29.6 million. The estimated cost to achieve a go-no-go decision to proceed with a license application for the project is $15.7 million after 15 months of the study.

IV. Analysis of Estimate of Operational Expense.

Operational expenses including equipment and personnel costs are included in the capital cost for the study. Cost estimates for operation and maintenance of the project after construction in 1978 dollars was estimated by

the Corps of Engineers at 35 personnel in 1992 at a cost of $3.4 million and 42 personnel in 1996 at a cost of $4.0 million. All O & M costs would be paid from project revenues.

V. Identification of Alternatives Considered.

The investigation of feasible alternatives has been addressed in previous reports for the project and will be explored to greater detail in the final feasibility study. Due to federal policies which may preclude future use of diesel and/or natural gas in the generation of electricity, the Federal Energy Regulatory Commission stipulated that coal combustion steam generation at Beluga and Healy was the most feasible alternative to Susitna. Small decentralized hydroelectric development, coal, conservation, and continued in-state use of natural gas are some of the principal alternatives to Susitna which will be analyzed in more detail in this project. There is essentially no alternative to the performance of this study to determine the best long-term solution to electric energy production in the railbelt area of Alaska. A comprehensive study of the project will determine the best alternatives to develop.

Effects on Acres Flow Studies

CONTINUATION FORM

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROJECT TITLE Susitna Feasibility Analysis

REVISED

000066

01.1033 (7/91)

7C Analysis of Governor's Decisions

ITEM	AMOUNT	FUNDING SOURCE	EXPLANATION
Swan Lake Hydro Project			The request is for a subordinated loan, needed to assure sale of revenue bonds. The Governors recomendation is that the source of funding be the Renewable Resources Investment Fund (RRIF) rather than the General Fund.
Agency Request	18,000.0	G.F.	
Gov. Rec.	18,000.0	R.R.I.F.	

CATEGORY Development AGENCY Alaska Power Authority PROGRAM Economic Development

7C ANALYSIS OF GOVERNOR'S DECISIONS

000067

01-1007C(Rev. 7/77)

PROJECT TITLE	LOCATION(S)	AREA SERVED	ELECTION DISTRICT(S)
Swan Lake Hydroelectric Project	Ketchikan	Ketchikan	A - 1

OBJ. NO(S)	OPERATING BUDGET BRU(S)	NAME(S)	BUDGET COMPONENT NUMBERS	START DATE	COMPLETION DATE
4		Alaska Power Authority	08-71-7-060	Sept. 1980	August 1983

PROJECT NARRATIVE

I. Project Need Statement.

The City of Ketchikan has increasing demand for electric energy which exceeds its existing hydroelectric capacity. Diesel generating capacity is used to provide power at a rapidly increasing price due to the cost of fuel. The project will be difficult to finance due to the restricted market area, the amount of project power that may be excess to initial demand, and the high cost in $/KW for the project. It will be difficult for the utility to market debt for the full cost of the project unless a loan from the State subordinate to the revenue bond debt is made in a manner similar to the Green Lake project at Sitka.

II. Project Description.

The Swan Lake project consists of a dam, power tunnel, penstock, powerhouse, and 28 mile 115 KV transmission line to the City of Ketchikan. The project will have 22 MW of installed capacity producing 18 MW's of firm power and 69 million kwh of firm energy per year. A total of $3,435,000 has been loaned by the state through the Power Project Revolving Loan Fund for design, license application, and purchase of equipment associated with the project in FY'79 and FY'80. A FERC license is expected to be approved by September of 1980, and construction will begin as soon as possible thereafter.

PROJECT TYPE

- [X] Building Construction (C)
- [ ] Other Improvement (I)
- [X] Equipment (E)
- [X] Land (L)
- [X] Professional Services (P)
- [X] Other (O) Hydroelectric Project Construction

PROJECT CHARACTERISTICS

- [X] Totally New Facility
- [ ] Addition to Existing Facility
- [ ] Renovation of Existing Facility
- [ ] Major Maintenance or Repair
- [ ] Supplement Previously Authorized Funds to Enable Completion
- [X] One of Several Phases
- [X] Major External Funding Source
- [ ] Other

NO	YES	SITE FEATURES
[X]	[ ]	Site Currently Owned?
[X]	[ ]	All Utilities Available?
[X]	[ ]	Access Already Available?

APPROPRIATION REQUEST (000)

1002	FED. RCPTS.	
1003	G/F MATCH	
1004	GEN. FUND	18,000
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	18,000

GOVERNOR'S RECOMMENDATION

APPROVED [X] DEFERRED [ ] DISAPPROVED [ ]

1002	FED. RCPTS.	
1003	G/F MATCH	
1004	GEN. FUND	
1005	I/A RCPTS.	
	G.O. BONDS	
1015	RRIF	15,000.0
	TOTAL	

01-1035a (12/79)

OPERATIONAL COST & NO. PERSONNEL INCREASE (DECREASE)		FIRST OPERATING YEAR 1983	ULTIMATE ANNUAL YEAR 1984	PREVIOUS YR-PRIORITY 80-02
FUNDING SOURCE	FED. RCPTS.			AGENCY PRIORITY
	GEN. FUND			
	Project Revenues	150,000	150,000	81-02
				GOVERNOR'S PRIORITY
TOTAL ANNUAL OPERATIONAL COST		150,000	150,000	
POSITION (FTE)		2	2	

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROPOSED CAPITAL

000068

CAPITAL PROJECT EXPENDITURES (CASH FLOW)	TOTAL (000)	BUDGET YEAR (000)	BUDGET YEAR Plus 1	BUDGET YEAR Plus 2	BUDGET YEAR Plus 3	BUDGET YEAR Plus 4	REMAINING COST
Planning and Engineering							
Land							
Construction	18,000	18,000					
Equipment							
Administration and Other							
Total Annual Expenditure (Capital Cost)	18,000	18,000					

CONTINUATION OF NARRATIVE

III. Documentation of Estimated Capital Cost.

Construction costs estimates for the project were prepared by R. W. Beck and Associates in a Feasibility Report on the project for the Ketchikan Public Utility. The cost estimate of $86 million included interest during construction and inflation throughout the construction period. The total amount of the bond issue to include financing costs and funding of reserves could exceed $100 million which would be perceived by investors as too large for a community the size of Ketchikan. State assistance in the form of a subordinate loan will provide a degree of security to investors and result in a bond issue in a more acceptable range of $80 million.

IV. Analysis of Estimate of Operational Expense.

The hydroelectric plants of the utility will all be fully automated as a result of funds made available to the community in FY'80. This will decrease significantly the operations and maintenance costs of the project for the utility. All O & M costs and debt service will be paid from revenues derived from the sale of electric power by the utility.

V. Identification of Alternatives Considered.

The alternatives available to Ketchikan are limited to other hydroelectric projects or continued dependence upon diesel generation and its associated rapidly increasing cost. Diesel generation is not considered a viable alternative in the short or long run based solely on economics. Other hydroelectric projects considered are Mahoney Lake, Lake Grace, and Lake Tyee. Mahoney Lake was considered too small by the utility and not adequate to meet long term needs even though the cost/KW for power from the project was less than Swan Lake. Lake Grace was encumbered by federal land actions. Lake Tyee was almost a year behind Swan Lake in development, and the merits of the project in relation to Swan Lake were unknown, since Lake Tyee was located 83 miles from Ketchikan. Considering the present progress of project development for Swan Lake, it appears to be the best short and long term solution to Ketchikan's power requirements since Lake Tyee can still be developed to provide future power requirements of the City.

PROJECT TITLE	LOCATION(S)	AREA SERVED	ELECTION DISTRICT(S)
Lake Tyee Hydroelectric Project	Petersburg/Wrangell	Petersburg/Wrangell	2

OBJ. NO(S)	OPERATING BUDGET BRU(S)	BUDGET COMPONENT NUMBERS	START DATE	COMPLETION DATE
4	Alaska Power Authority	08-71-7-060		

PROJECT NARRATIVE

I. Project Need Statement.

Petersburg and Wrangell are largely dependent on diesel electric generation and its associated increasing costs. A renewable resource alternative energy project would alleviate this condition. Either hydroelectric or wood/biomass power generation could be solutions. Both alternatives are being investigated, however the hydroelectric option is most favored due to its flexibility in operation, low O & M costs, and stable source of fuel. The project may also be capable of providing power to Kake and additional power to Ketchikan.

II. Project Description.

The Swan Lake project is in two stages. Stage I provides 15 MW of power and 69 million kwh/year of energy at a cost of $45 million. It consists of a lake tap, power tunnel, penstock, powerhouse, 57 mile 115 KV transmission line to Wrangell, and a 31 mile 37 KV line to Petersburg. Stage II requires construction of a dam to increase storage capacity and the addition of generators in the powerhouse. Stage II produces an additional 15 MW's of capacity and 62 million kwh/year of additional firm energy.

III. Documentation of Estimated Cost.

R. W. Retherford Associates prepared a Preliminary Feasibility Report on the project and estimated in 1978 dollars a cost of $41 million for the

PROJECT TYPE

- [X] Building Construction (C)
- [ ] Other Improvement (I)
- [X] Equipment (E)
- [X] Land (L)
- [X] Professional Services (P)
- [X] Other (O) Hydroelectric Project Construction

PROJECT CHARACTERISTICS

- [X] Totally New Facility
- [ ] Addition to Existing Facility
- [ ] Renovation of Existing Facility
- [ ] Major Maintenance or Repair
- [X] Supplement Previously Authorized Funds to Enable Completion
- [X] One of Several Phases
- [X] Major External Funding Source
- [ ] Other

SITE FEATURES

NO	YES	
[X]	[ ]	Site Currently Owned?
[X]	[ ]	All Utilities Available?
[X]	[ ]	Access Already Available?

APPROPRIATION REQUEST

1002	FED. RCPTS.	
1003	G/F MATCH	
1004	GEN. FUND	10,000
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	10,000

GOVERNOR'S RECOMMENDATION

APPROVED [X] DEFERRED [ ] DISAPPROVED [ ]

1002	FED. RCPTS.	
1003	G/F MATCH	
1004	GEN. FUND	
1005	I/A RCPTS.	
	G.O. BONDS	
1015	RRIF	10,000.0
	TOTAL	10,000.0

01-1038a (12/79)

OPERATIONAL COST & NO. PERSONNEL INCREASE (DECREASE)		FIRST OPERATING YEAR 1984	ULTIMATE ANNUAL YEAR 1985	PREVIOUS YR-PRIORITY 80-03
FUNDING SOURCE	FED. RCPTS.			AGENCY PRIORITY
	GEN. FUND			81-03
	Project Revenues	200,000	200,000	GOVERNOR'S PRIORITY
TOTAL ANNUAL OPERATIONAL COST		200,000	200,000	
POSITION (FTE)		4	4	

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

000071

CAPITAL PROJECT EXPENDITURES (CASH FLOW)	TOTAL (000)	BUDGET YEAR (000)	BUDGET YEAR Plus 1	BUDGET YEAR Plus 2	BUDGET YEAR Plus 3	BUDGET YEAR Plus 4	REMAINING COST
Planning and Engineering							
Land							
Construction	10,000	10,000					
Equipment							
Administration and Other							
Total Annual Expenditure (Capital Cost)	10,000	10,000					

CONTINUATION OF NARRATIVE

Stage I Project including 7% inflation and interest during construction. Due to increased inflation in 1979, an estimated cost of $45 million is included in this project description. A detailed and updated cost estimate is presently being prepared by the engineer as part of the FERC license application. The two communities of Petersburg and Wrangell will have difficulty in financing the project on their own due to the dollar value of the bond issue relative to the size of the communities and the amount of excess project power remaining to be marketed in the early years of operation. A state loan for the project subordinate to the payment of revenue bond debt service will reduce the total dollar value of the bond issue, increase the security of the bonds and make them more marketable, and help to insure project financing. The state loan appropriation is required no later than FY'81 to insure availability of funds prior to the construction financing when the FERC license should be approved. Since the loan may be considered a capital project appropriation, the funds would guarantee timely project financing if they were appropriated in FY'81 for use upon receipt of the FERC license. In FY'80, HB 32 appropriated $2 million for loans for the project. The Power Authority assumed responsibility for management and development of the project in response to a request of the Thomas Bay Power Commission and the two communities. The expenditure of the $2 million appropriated for the project will have to be clarified by the legislature.

IV. Analysis of Estimate of Operational Expense.

All operating and maintenance expenses will be paid from project revenues and are estimated to be $200,000/year with 4 FTE positions for Stage I, and increase by $100,000/year with one additional FTE position with development of Stage II.

V. **Identification of Alternatives Considered.**

Alternatives considered to the Lake Tyee project were other hydroelectric projects which were determined to be too large or small with a higher cost/KW of power produced, continued use of diesel generation with its asso-

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROJECT TITLE Lake Tyee Hydroelectric Project

356 PROPOSED PROJECT ANALYSIS REVISED

000072

ciated high operating and fuel costs, and wood waste combustion steam generation. The wood waste development appears competitive to Lake Tyee in the near term for a short period of economic analysis if a long-term low cost source of waste wood fuel can be established. The wood waste alternative has rapidly increasing fuel and operating costs which are subject to inflation. It also has a useful life of approximately 30 years, which is much shorter than a hydroelectric project.

CONTINUATION FORM

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development 000073

PROJECT TITLE Lake Tyee Hydroelectric Project

PROJECT TITLE	LOCATION(S)	AREA SERVED	ELECTION DISTRICT(S)
AVEC Fuel Conversion Project	Nulato	Rural Alaska	13, 15, 16-19, 21, 22

OBJ. NO(S)	OPERATING BUDGET BRU(S)	NAME(S)	BUDGET COMPONENT NUMBERS	START DATE	COMPLETION DATE
3		Alaska Power Authority	08-71-7-060	July 1979	June 1982

PROJECT NARRATIVE

I. Project Need Statement.

Most rural villages are totally dependent on high cost diesel fuel with seasonal transportation and storage problems for electric power generation. The rural consumer often pays 5 to 10 times the cost/kwh of energy as consumers in Southeast and Railbelt Alaska. The small size of the market in each village precludes capital intensive developments which might employ economies of scale. Small scale alternative's for power development must be developed for rural Alaska, whether the solution is small scale hydroelectric power, wind power, or alternative fuels.

II. Project Description.

The legislature funded in FY'80 the AVEC Fuel Conversion project for $150,000 to investigate feasibility and demonstrate a system which would gasify local wood or coal resources and burn the product low BTU gas in modified small diesel turbines. The system has been purchased and will undergo an Anchorage demonstration with the funds appropriated to date. Additional funds are necessary to fully demonstrate the system in a village environment, develop O & M procedures, fully test the operational feasibility, and fully assess the potential application of the technology in other villages throughout rural Alaska.

PROJECT TYPE

- ☐ Building Construction (C)
- ☐ Other Improvement (I)
- ☒ Equipment (E)
- ☐ Land (L)
- ☒ Professional Services (P)
- ☐ Other (O)

PROJECT CHARACTERISTICS

- ☐ Totally New Facility
- ☐ Addition to Existing Facility
- ☐ Renovation of Existing Facility
- ☐ Major Maintenance or Repair
- ☒ Supplement Previously Authorized Funds to Enable Completion
- ☐ One of Several Phases
- ☐ Major External Funding Source
- ☐ Other

NO	YES	SITE FEATURES
☒	☐	Site Currently Owned?
☐	☒	All Utilities Available?
☐	☒	Access Already Available?

APPROPRIATION REQUEST (000)

1002	FED. RCPTS.	
1003	G/F MATCH	
1004	GEN. FUND	125
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	125

GOVERNOR'S RECOMMENDATION

APPROVED ☒ DEFERRED ☐ DISAPPROVED ☐

1002	FED. RCPTS:	
1003	G/F MATCH	
1004	GEN. FUND	125.0
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	125.0

01-1036a (12/79)

OPERATIONAL COST & NO. PERSONNEL INCREASE (DECREASE)		FIRST OPERATING YEAR ____	ULTIMATE ANNUAL YEAR ____
FUNDING SOURCE	FED. RCPTS		
	GEN. FUND		
	Project Revenues	N/A	N/A
TOTAL ANNUAL OPERATIONAL COST			
POSITION (FTE)			

PREVIOUS YR-PRIORITY: N/A

AGENCY PRIORITY: 81-04

GOVERNOR'S PRIORITY:

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROPOSED CAPITAL

000074

CAPITAL PROJECT EXPENDITURES (CASH FLOW)	TOTAL (000)	BUDGET YEAR (000)	BUDGET YEAR Plus 1	BUDGET YEAR Plus 2	BUDGET YEAR Plus 3	BUDGET YEAR Plus 4	REMAINING COST
Planning and Engineering	20	20					
Land							
Construction	55	55					
Equipment	35	35					
Administration and Other	15	15					
Total Annual Expenditure (Capital Cost)	125	125					

CONTINUATION OF NARRATIVE

III. Documentation of Estimated Capital Cost.

The FY'80 funding was inadequate to fully test and demonstrate the operation of the proposed system in a village environment. The attached description of the project reflects the activities and time and expenditure schedules for the project. A village demonstration will require shipment to and setup of the system at Nulato and detailed investigation of the optimal operating and maintenance parameters of the system for economic and reliable operation in the village environment. The cost estimates were negotiated between the Alaska Village Electric Cooperative (AVEC), their engineers, and the Power Authority as part of the original project contract negotiations. The cost estimate for FY'81 needs may be low, in which case AVEC will absorb the cost overruns.

IV. Analysis of Estimate of Operational Expense.

Operating costs will be derived from revenues from the sale of electric power as part of the overall AVEC system. The gathering of the fuel source (coal or wood) may contribute to the local economy of the village, and in any case may result in a lower fuel cost for the electric utility for specific villages where an alternative fuel is available.

V. Identification of Alternatives Considered.

This project is a demonstration project and as such has been assessed as one of only a few potential feasible solutions to the rural energy problem. Solutions on a village by village basis must be determined, and the application of alternative energy technologies to lower electric power costs in some villages may not be feasible. In that case, only high cost diesel generation with state subsidies will be the solution. This technology has been assessed to warrant demonstration due to its specific limited application to rural Alaska.

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROJECT TITLE AVEC Fuel Conversion Project

35h PROPOSED PROJECT

REVISED

000075

7C Analysis of Governor's Decisions

ITEM	AMOUNT	FUNDING SOURCE	EXPLANATION
Bradley Lake Hydroelectric Project			The Bradley Lake project has been federally authorized and the U.S. Army Corps of Engineers is currently undertaking Phase I feasibility and design work. Consequently no General Funds are allocated for this project.
Agency Request	1,500.0	G.F.	
Gov. Rec.	0		

CATEGORY Development AGENCY Alaska Power Authority PROGRAM Economic Development

7C ANALYSIS OF GOVERNOR'S DECISIONS

000078

01-1007C(Rev. 7/77)

PROJECT TITLE	LOCATION(S)	AREA SERVED	ELECTION DISTRICT(S)
Bradley Lake Hydroelectric Project	Homer	Kenai Peninsula & Anch.	E-J; 7-13

OBJ. NO(S)	OPERATING / BUDGET BRU(S) NAME(S)	BUDGET COMPONENT NUMBERS	START DATE	COMPLETION DATE
5 & 6	Alaska Power Authority	08-71-7-060	July 1980	December 1986

PROJECT NARRATIVE

I. Project Need Statement.

Electric power on the Kenai Peninsula is presently furnished by gas turbine generation from the Chugach Electric Association which wholesales power to the Homer Electric Association. The Anchorage Municipal Light and Power utility depends principally on its own diesel and natural gas turbine generation capacity to serve its customers. With increasing costs of diesel fuel and the federal restrictions on new generation with natural gas, the Bradley Lake Project would provide the next increment of generation capacity for the two areas. The Corps of Engineers has received funding to initiate phase I feasibility and design work on the project. Federal funding for project construction will be extremely slow and intermittent which will result in delays of 1 to 3 years in project operation. State funds are necessary to permit preparation of a FERC license application under a state project development and ownership program, or to enter into an agreement with the Corps of Engineers if the project can be developed and funded under Section 203 of the Water Resources Development Act. Bradley Lake is one of the best potential projects in the state, and it has been a federally authorized project since 1962.

Funding of this project will eliminate federal delays and resultant increased costs of development of this capital intensive project and provide for state ownership of the project.

PROJECT TYPE

- ☐ Building Construction (C)
- ☐ Other Improvement (I)
- ☐ Equipment (E)
- ☐ Land (L)
- ☒ Professional Services (P)
- ☐ Other (O)

PROJECT CHARACTERISTICS

- ☒ Totally New Facility
- ☐ Addition to Existing Facility
- ☐ Renovation of Existing Facility
- ☐ Major Maintenance or Repair
- ☐ Supplement Previously Authorized Funds to Enable Completion
- ☒ One of Several Phases
- ☒ Major External Funding Source
- ☐ Other

SITE FEATURES

NO	YES	
☒	☐	Site Currently Owned?
☒	☐	All Utilities Available?
☒	☐	Access Already Available?

APPROPRIATION REQUEST (000)

1002	FED. RCPTS.	
1003	G/F MATCH	
1004	GEN. FUND	1,500
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	1,500

GOVERNOR'S RECOMMENDATION

APPROVED ☐ DEFERRED ☐ DISAPPROVED ☒

1002	FED. RCPTS:	
1003	G/F MATCH	
1004	GEN. FUND	
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	

01-1035a (12/79)

OPERATIONAL COST & NO. PERSONNEL INCREASE (DECREASE)		FIRST OPERATING YEAR 1986	ULTIMATE ANNUAL YEAR 1987	PREVIOUS YR-PRIORITY
FUNDING SOURCE	FED. RCPTS			80-07
	GEN. FUND			AGENCY PRIORITY
	Project Revenues	430,000	430,000	81-05
				GOVERNOR'S PRIORITY
TOTAL ANNUAL OPERATIONAL COST		430,000	430,000	
POSITION (FTE)		8	8	

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROPOSED CAPITAL

000077

CAPITAL PROJECT EXPENDITURES (CASH FLOW)	TOTAL (000)	BUDGET YEAR (000)	BUDGET YEAR Plus 1	BUDGET YEAR Plus 2	BUDGET YEAR Plus 3	BUDGET YEAR Plus 4	REMAINING COST
Planning and Engineering	2,950	1,250	1,700				
Land							
Construction							
Equipment	320	170	150				
Administration and Other	230	80	150				
Total Annual Expenditure (Capital Cost)	3,500	1,500	2,000				

CONTINUATION OF NARRATIVE

II. Project Description.

The project consists of a concrete gravity dam, diversion works, a power tunnel, powerhouse, and transmission facilities for a 70 MW project that will produce over 300 million kwh of energy per year at a 1978 cost of $160 million. The first two years of funding will produce project authorization documents and preliminary design of the project after detailed site investigations are completed. Future project construction costs will be paid from proceeds of revenue bonds issued for the project.

III. Documentation of Estimated Capital Cost.

The capital cost estimate for project construction is contained in the Corps of Engineers Reanalysis of the Bradley Lake Hydroelectric Project of March 1978. The cost will be significantly higher at project completion due to inflation and project delays if the Corps constructs the project. Considerable savings in construction cost may be realized if the state proceeds to develop the project independently utilizing private industry. The Corps of Engineers estimates a cost of $3.5 million to perform field investigations, studies and preliminary design of the project for authorization for construction as a federal project. A cost of $3,112,000 is estimated for similar activities using private industry and efforts to obtain a FERC license.

IV. Analysis of Estimate of Operational Expense.

The operation and maintenance cost of the Bradley Lake Project was estimated in the Corps of Engineers report. Eight (8) full time positions and maintenance costs will amount to approximately $430,000/year and be paid for by project revenues.

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROJECT TITLE Bradley Lake Hydroelectric Project

35b PROPOSED PROJECT ANALYSIS REVISED

000078

V. Identification of Alternatives Considered.

Alternatives considered are the same as discussed for the Susitna Project in the Cook Inlet area of Alaska. Bradley Lake is a low cost/KW of power project with minimal environmental impact. The cost of energy from Bradley Lake will be competitive with electric power generated with natural gas fuel under new gas contracts.

CONTINUATION FORM

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROJECT TITLE Bradley Lake Hydroelectric Project

REVISED

000079

01-1033 (7/79)

7C Analysis of Governor's Decisions

ITEM	AMOUNT	FUNDING SOURCE	EXPLANATION
Grant Lake Hydroelectric Project			Grant Lake is located in a proposed RAREII area of Chugach National Forest. Since this land status is likely to preclude development of a hydroelectric facility and that the City of Seward is currently tied in to Chugach Electric, no funding is allocated.
Agency Request	1,000.0	G.F.	
Gov. Rec.	0		

CATEGORY Development AGENCY Alaska Power Authority PROGRAM Economic Development

7C ANALYSIS OF GOVERNOR'S DECISIONS

000080

01-1007C(Rev. 7/77)

PROJECT TITLE	LOCATION(S)	AREA SERVED	ELECTION DISTRICT(S)
Grant Lake Hydroelectric Project	Kenai Peninsula	Seward	

OBJ. NO(S)	OPERATING BUDGET BRU(S)	NAME(S)	BUDGET COMPONENT NUMBERS	START DATE	COMPLETION DATE
5 & 6		Alaska Power Authority	08-71-7-060	Sept. 1979	Sept. 1983

PROJECT NARRATIVE

I. Project Need Statement.

The project would serve the electric power needs of the Seward area. The City of Seward now purchases power wholesale from Chugach Electric Association (CEA); the city owns and maintains standby generators only. Since 1972 the power and energy has been provided by CEA without an effective contract. With growth in power demand expected in the Seward area and with the price of the present wholesale power supply rising due to increasing fuel costs, city officials have indicated their desire to develop their own generating facilities.

Development of the hydroelectric potential of Grant Lake will insure an inflation proof source of power and allow the utilization of a renewable resource, falling water, in lieu of fossil fuels. It will also serve to meet the growing power requirements of the Seward area, thereby allowing power from other sources to be diverted to other market areas. This project is in keeping with the policy mandate to encourage renewable resource development. This project is superior to other generation alternatives because it provides lower cost energy (estimated at 40 mills/kwh) and is most preferable from an environmental standpoint. The next best alternative has an estimated energy cost of 65 mills/kwh and would cause greater environmental disruption. Delay in initiating this

PROJECT TYPE

- ☐ Building Construction (C)
- ☒ Other Improvement (I)
- ☐ Equipment (E)
- ☐ Land (L)
- ☒ Professional Services (P)
- ☐ Other (O)

PROJECT CHARACTERISTICS

- ☒ Totally New Facility
- ☐ Addition to Existing Facility
- ☐ Renovation of Existing Facility
- ☐ Major Maintenance or Repair
- ☐ Supplement Previously Authorized Funds to Enable Completion
- ☐ One of Several Phases
- ☐ Major External Funding Source
- ☐ Other

SITE FEATURES

NO	YES	
☒	☐	Site Currently Owned?
☒	☐	All Utilities Available?
☒	☐	Access Already Available?

APPROPRIATION REQUEST (000)

1002	FED. RCPTS.	
1003	G/F MATCH	
1004	GEN. FUND	1,000
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	1,000

GOVERNOR'S RECOMMENDATION

APPROVED ☐ DEFERRED ☐ DISAPPROVED ☒

1002	FED. RCPTS:	
1003	G/F MATCH	
1004	GEN. FUND	
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	

01-1035a (12/79)

OPERATIONAL COST & NO. PERSONNEL INCREASE (DECREASE)		FIRST OPERATING YEAR 1983	ULTIMATE ANNUAL YEAR 1984	PREVIOUS YR-PRIORITY 80-16
FUNDING SOURCE	FED. RCPTS.			AGENCY PRIORITY 81-06
	GEN. FUND			
	Project Revenues	$50,000	$50,000	
				GOVERNOR'S PRIORITY
TOTAL ANNUAL OPERATIONAL COST		$50,000	$50,000	
POSITION (FTE)				

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

000081

CAPITAL PROJECT EXPENDITURES (CASH FLOW)	TOTAL (000)	BUDGET YEAR (000)	BUDGET YEAR Plus 1	BUDGET YEAR Plus 2	BUDGET YEAR Plus 3	BUDGET YEAR Plus 4	REMAINING COST
Planning and Engineering	930	930					
Land							
Construction							
Equipment							
Administration and Other	70	70					
Total Annual Expenditure (Capital Cost)	1,000	1,000					

CONTINUATION OF NARRATIVE

project would result in higher construction costs due to inflation and continued use of nonrenewable fossil fuels. Grant Lake is presently in the Chugach National Forest, and a Forest Service permit would be required. A one mile access road would be required for project construction and operation. This project would be one of several that could be intertied to serve the combined needs of the Kenai/Anchorage area. Detailed investigations and analysis are needed to further assess the projects viability and cost.

II. Project Description.

A dam 50 feet in height would be built at the outlet of Grant Lake, one mile from the Seward Highway and the Alaska Railroad. The dam's crest length would be 550 feet. A small saddle dam would also be needed. The raised lake would provide 75,000 acre-feet of storage and complete regulation of the 170 cubic feet per second average flow. One mile of pipeline with about 800 feet of penstock would achieve a head of 250 feet. Average energy output would be 25.2 million kwh annually with an installed capacity of 6 MW. One mile of transmission line would tie the powerplant to the existing transmission line to Seward.

III. Documentation of Estimated Capital Costs.

Currently estimated at $20 million, the project requires detailed site investigations and design to establish construction costs more accurately. The reconnaissance level construction cost estimate is from a Reconnaissance Study of Hydroelectric Power Alternatives done for the City of Seward by CH2M Hill Engineers. Adjusted for inflation, the estimated construction cost is based on a construction start in 1981. All costs would be recovered through revenues from the sale of project power. Based on experience with similar projects, the estimated cost of preconstruction planning and design is $1 million.

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROJECT TITLE Grant Lake Hydroelectric Project

35b PROPOSED PROJECT ANALYSIS REVISED

000082

IV. Operational Expense.

Based on experience with projects of similar size and type of remote operation, the estimated annual operation and maintenance expense (both first year and thereafter) would be $50,000. All costs would be funded from project revenues.

V. Alternatives Considered.

The reasonable alternatives to this project include Seward's continued dependence on CEA or development of other hydroelectric projects in the area. Seward officials do not wish to remain completely dependent upon CEA power, the cost of which is increasing and will continue to increase as long as fossil fuels are used. The other available hydroelectric projects are Crescent Lake, Ressurection River and Snow River. Based on present knowledge, none are competitive with Grant Lake in terms of cost or environmental impact. Postponing development to await the construction of other regional hydroelectric projects does not provide less expensive power, nor does it help to resolve the region's combined power needs.

CONTINUATION FORM

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development 000083

PROJECT TITLE Grant Lake Hydroelectric

7C Analysis of Governor's Decisions

ITEM	AMOUNT	FUNDING SOURCE	EXPLANATION
Dillingham Hydroelectric Project			The agency request is to determine the feasibility of hydroelectric generation in the Dillingham area with emphasis on Lake Elva. However, a recent Alaska Power Administration report states that "high costs raise serious questions about the validity of additional investments in Lake Elva investigations". Consequently, funding for Lake Elva feasibility studies are not funded. The intent of the Gov. Rec. is to use existing data (i.e. Bristol Bay Energy & Electric Potential) to evaluate the potential for all forms of renewable energy in the Dillingham area and to recommend which projects would be most cost-effective in displacing fuel oil.
Agency Request	400.0	G.F.	
Gov. Rec.	100.0	G.F.	

CATEGORY Development AGENCY Alaska Power Authority PROGRAM Economic Development

7C ANALYSIS OF GOVERNOR'S DECISIONS

000084

01-1007C(Rev. 7/77)

PROJECT TITLE	LOCATION(S)	AREA SERVED	ELECTION DISTRICT(S)
Dillingham Hydroelectric Project	Dillingham Vicinity	Dillingham/Naknek	16

OBJ. NO(S)	OPERATING BUDGET BRU(S) NAME(S)	BUDGET COMPONENT NUMBERS	START DATE	COMPLETION DATE
5 & 6	Alaska Power Authority	08-71-7-060	Sept. 1979	Sept. 1983

PROJECT NARRATIVE

I. Project Need Statement.

Nushagak Electric Cooperative supplies electrical power to the Dillingham area. It is a REA cooperative with about 2,900 KW of diesel generating capacity. The Naknek/King Salmon area is served by Naknek Electric Association, an REA cooperative with about 3,700 KW of diesel generating capacity. Thus, the area is susceptible to fuel price increases caused by both inflation and increases in the relative price of diesel oil. Since 1970, the amount of electricity provided by the two utilities has increased at 11% per year, and growth in demand is expected to continue at a rate of at least 4.5% annually.

Several potential hydroelectric projects in the area have been identified that offer the possibility of displacing diesel-fired generation and meeting at least a portion of the anticipated load growth. Unlike diesel fuel, hydroelectric generation is virtually free of the effects of inflation and fuel price escalation. Further, it is in keeping with the state mandate to develop renewable resources.

II. Project Description.

Three projects are now under consideration for the area and are the subject of a feasibility assessment presently underway. The three are the best sites from a longer list of 15 sites evaluated

PROJECT TYPE

- ☐ Building Construction (C)
- ☒ Other Improvement (I)
- ☐ Equipment (E)
- ☐ Land (L)
- ☒ Professional Services (P)
- ☐ Other (O)

APPROPRIATION REQUEST

1002	FED. RCPTS.	
1003	G/F MATCH	
1004	GEN. FUND	400,000
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	400,000

PROJECT CHARACTERISTICS

- ☒ Totally New Facility
- ☐ Addition to Existing Facility
- ☐ Renovation of Existing Facility
- ☐ Major Maintenance or Repair
- ☐ Supplement Previously Authorized Funds to Enable Completion
- ☐ One of Several Phases
- ☐ Major External Funding Source
- ☐ Other

GOVERNOR'S RECOMMENDATION

APPROVED	DEFERRED	DISAPPROVED
X		

1002	FED. RCPTS:	
1003	G/F MATCH	
1004	GEN. FUND	100.0
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	100.0

01-1035a (12/79)

SITE FEATURES

NO	YES	
☒	☐	Site Currently Owned?
☒	☐	All Utilities Available?
☒	☐	Access Already Available?

OPERATIONAL COST & NO. PERSONNEL INCREASE (DECREASE)		FIRST OPERATING YEAR 1983	ULTIMATE ANNUAL YEAR 1984
FUNDING SOURCE	FED. RCPTS.		
	GEN. FUND		
	Project Revenues	50,000	
TOTAL ANNUAL OPERATIONAL COST		50,000	
POSITION (FTE)			

PREVIOUS YR-PRIORITY 80-14

AGENCY PRIORITY 81-07

GOVERNOR'S PRIORITY

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

01-1035a (7/79)

35a PROPOSED CAPITAL

000085

CAPITAL PROJECT EXPENDITURES (CASH FLOW)	TOTAL	BUDGET YEAR	BUDGET YEAR Plus 1	BUDGET YEAR Plus 2	BUDGET YEAR Plus 3	BUDGET YEAR Plus 4	REMAINING COST
Planning and Engineering	400,000	400,000					
Land							
Construction							
Equipment							
Administration and Other							
Total Annual Expenditure (Capital Cost)	400,000	400,000					

CONTINUATION OF NARRATIVE

in a recently completed reconnaissance study by R. W. Retherford Associates for the Alaska Power Administration entitled "Bristol Bay Energy and Electric Power Potential". Grant Lake, about 65 miles north of Dillingham, would incorporate a dam at the lake outlet to increase head and provide full regulation of flows. Installed capacity would be 1.5 MW and 12 million KWH could be provided annually. Access would be by air or overland vehicle. The site is located in Wood River Lakes Park, but hydro development is listed as a compatible use.

The proposed Lake Elva Project is located at a site about 49 miles north of Dillingham. This project would also require a dam to provide increased head and flow regulation. Installed capacity would be 1.5 MW and the project could provide about 8.5 million KWH annually. This site is also located in the state park, and access would be via Lake Aleknagik and Lake Nerka. A stream gage has been installed at this site to verify flow estimates.

The Tazimina Lake Project would include a forebay dam and a reservoir dam upstream. The site is approximately 120 miles from Naknek. It is located in a wildnerness study area, but no definite finding of compatibility has been made. Access to the site would be via a planned state road from Iliamna to Nondalton. With 30 MW capacity, this project would be capable of serving the needs of the Iliamna area as well as Dillingham and Naknek.

A feasibility assessment of these three projects is currently underway. It is anticipated that one or two of the projects will prove viable and should be developed.

III. Estimated Capital Cost.

Preliminary cost estimates are from the previously cited Retherford report and include the cost of transmission. They are 1979 estimates.

Lake Elva $10 million

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROJECT TITLE Dillingham Hydroelectric Project

35b PROPOSED PROJECT ANALYSIS REVISED

000086

Grant Lake	$12 million
Tazimina	58 million

In addition, approximately $400,000 is required for detailed feasibility study and license application for the most viable project.

IV. Operational Expense.

Based on estimates for other hydroelectric projects of similar size and location, annual operation and maintenance costs are estimated at $50,000 for each of the smaller projects and $150,000 for the Lake Tazimina Project. These costs would be paid out of revenues from the sale of project power.

V. Alternatives Considered.

In addition to the 12 other hydroelectric sites, alternative means of providing power include continued use of diesel generation, coal-fired generation from local coal resources, and perhaps wind generation. Alternatives are being further evaluated in the feasibility assessment now underway.

CONTINUATION FORM

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROJECT TITLE Dillingham Hydroelectric Project

REVISED

000087

01-1033 (7/79)

7C Analysis of Governor's Decisions

ITEM	AMOUNT	FUNDING SOURCE	EXPLANATION
Kisaralik River Hydroelectric Project			The Governors intent is to fund a comprehensive analysis of renewable sources of energy which have the potential for end-use displacement of fuel oil in the Bethel area. This analysis is to result in a report which recommends which projects are most cost-effective.
Agency Request	500.0	G.F.	
Gov. Rec.	100.0	G.F.	

CATEGORY Development AGENCY Alaska Power Authority PROGRAM ~~Economic Development~~

7C ANALYSIS OF GOVERNOR'S DECISIONS

000088

01-1007C(Rev. 7/77)

PROJECT TITLE	LOCATION(S)	AREA SERVED	ELECTION DISTRICT(S)
Kisaralik Hydroelectric Project	Kisaralik River	Bethel and Vicinity	16-17-18

OBJ. NO(S)	OPERATING AGENCY / BUDGET BRU(S)	BUDGET COMPONENT NUMBERS	START DATE	COMPLETION DATE
5 & 6	Alaska Power Authority	08-71-7-060	Sept. 1979	Sept. 1983

PROJECT NARRATIVE

I. Project Need Statement.

Bethel's power needs are served by privately owned and operated Bethel Utilities Corporation, while the surrounding villages are served by small diesel-electric units, owned either individually or by AVEC. Being dependent on oil, the cost of electricity is extremely high and fully exposed to future price increases due to both inflation and relative increases in the price of diesel fuel. Power demands are expected to grow at a moderate rate. The proposed project would displace diesel fuel and utilize renewable hydroelectric energy that is virtually inflation-proof once the project has been constructed. The full extent of the savings in power costs depends upon the eventual project cost which has yet to be verified. The project is sufficiently large to satisfy the needs of Bethel and the surrounding villages if interconnection costs do not prove prohibitive. The use of hydroelectric potential is in keeping with state policy of encouraging renewable resource development.

II. Project Description.

The proposed project is located at the lower falls on the Kisaralik River approximately 60 miles east of Bethel. The watershed area is 544 square miles. With a dam 340 feet high, the project would provide 36 megawatts and 159 million kilowatt hours of firm energy annually. A stream gage has been

PROJECT TYPE

- ☐ Building Construction (C)
- ☒ Other Improvement (I)
- ☐ Equipment (E)
- ☐ Land (L)
- ☒ Professional Services (P)
- ☐ Other (O)

PROJECT CHARACTERISTICS

- ☒ Totally New Facility
- ☐ Addition to Existing Facility
- ☐ Renovation of Existing Facility
- ☐ Major Maintenance or Repair
- ☐ Supplement Previously Authorized Funds to Enable Completion
- ☐ One of Several Phases
- ☐ Major External Funding Source
- ☐ Other

NO	YES	SITE FEATURES
☒	☐	Site Currently Owned?
☒	☐	All Utilities Available?
☒	☐	Access Already Available?

APPROPRIATION REQUEST

1002	FED. RCPTS.	
1003	G/F MATCH	
1004	GEN. FUND	500,000
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	500,000

GOVERNOR'S RECOMMENDATION

APPROVED ☐ DEFERRED ☐ DISAPPROVED ☐

1002	FED. RCPTS:	
1003	G/F MATCH	
1004	GEN. FUND	100.0
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	100.0

01-1035a (12/79)

OPERATIONAL COST & NO. PERSONNEL INCREASE (DECREASE)		FIRST OPERATING YEAR 1984	ULTIMATE ANNUAL YEAR 1985	PREVIOUS YR--PRIORITY 80-17
FUNDING SOURCE	FED. RCPTS.			AGENCY PRIORITY
	GEN. FUND			81-08
	Project Revenues	150,000	150,000	GOVERNOR'S PRIORITY
TOTAL ANNUAL OPERATIONAL COST		150,000	150,000	
POSITION (FTE)				

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

000089

CAPITAL PROJECT EXPENDITURES (CASH FLOW)	TOTAL	BUDGET YEAR	BUDGET YEAR Plus 1	BUDGET YEAR Plus 2	BUDGET YEAR Plus 3	BUDGET YEAR Plus 4	REMAINING COST
Planning and Engineering	500,000	500,000					
Land							
Construction							
Equipment							
Administration and Other							
Total Annual Expenditure (Capital Cost)	500,000	500,000					

CONTINUATION OF NARRATIVE

installed to verify flow assumptions and a study is underway to verify the suitability of the site. The feasibility of this project will also depend on transmission costs, which will be clarified through a demonstration project underway this year in the Bethel area. Development of this project could be precluded by Wild and Scenic River designation. A Federal Energy Regulatory Commission license will be required for construction.

III. Documentation of Estimated Capital Cost.

The construction cost estimate of $100,000,000 is a very preliminary figure, adjusted for inflation, provided by R. W. Retherford Associates in 1975 as a part of a report for the Alaska Power Administration entitled "A Regional Electric Power System for the Lower Kuskokwim Vicinity". In addition, based on experience with similar projects, $500,000 will be required for detailed feasibility studies and license application.

IV. Operational Expense.

The annual expense associated with operation and maintenance of the project is estimated at $150,000, based on experience with projects of similar size and remote location. These expenses would be paid from revenues derived from the sale of project power.

V. Alternatives Considered.

Alternatives for power generation available to the Bethel area are limited. There is some local oil and gas potential and some geothermal potential. All generation options are being investigated as part of the feasibility assessment currently underway.

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROJECT TITLE Kisaralik Hydroelectric [illegible] PROPOSED PROJECT

000090

7C Analysis of Governor's Decisions

ITEM	AMOUNT	FUNDING SOURCE	EXPLANATION
Haines-Skagway Hydroelectric Project			The Governors intent is to fund a comprehensive analysis of energy supply and demand for the Haines-Skagway area with recommendations as to which forms of renewable sources of energy are most cost-effective for meeting end-use demand.
Agency Request	500.0	G.F.	
Gov. Rec.	100.0	G.F.	

CATEGORY Development AGENCY Alaska Power Authority PROGRAM Economic Development

7C ANALYSIS OF GOVERNOR'S DECISIONS

000091

01-1007C(Rev. 7/77)

PROJECT TITLE	LOCATION(S)	AREA SERVED	ELECTION DISTRICT(S)
Haines/Skagway Hydroelectric Project	Vicinity of Haines & Skagway	Haines and/or Skagway	3

OBJ. NO(S)	OPERATING BUDGET BRU(S)	NAME(S)	BUDGET COMPONENT NUMBERS	START DATE	COMPLETION DATE
5 & 6		Alaska Power Authority	08-71-7-060	June 1979	Sept. 1983

PROJECT NARRATIVE

I. Project Need Statement.

The electric power system in Skagway is comprised of 380 KW of hydroelectric and 1,150 KW of diesel generation capacity. The Haines system is made up of 4,400 KW of diesel generation capacity. Moderate future increases in load requirements are anticipated. The cost of diesel-fired generation is high and susceptible to both inflation and fuel cost escalation. The utilization of the area's hydroelectric potential would provide a renewable source of energy that, after construction, is virtually free from the impact of inflation.

II. Project Description.

Reconnaissance level studies have identified several sites in the area. All are being evaluated further in a feasibility assessment currently underway. The projects range from 5 to 9 MW in installed capacity. An interconnection between Haines and Skagway may be a project feature depending upon project location and transmission costs. The site specific investigations currently underway are designed to verify the suitability of the sites and the cost estimates. The better sites will be evaluated in greater detail.

PROJECT TYPE

- ☐ Building Construction (C)
- ☒ Other Improvement (I)
- ☐ Equipment (E)
- ☐ Land (L)
- ☒ Professional Services (P)
- ☐ Other (O)

PROJECT CHARACTERISTICS

- ☒ Totally New Facility
- ☐ Addition to Existing Facility
- ☐ Renovation of Existing Facility
- ☐ Major Maintenance or Repair
- ☐ Supplement Previously Authorized Funds to Enable Completion
- ☐ One of Several Phases
- ☐ Major External Funding Source
- ☐ Other

SITE FEATURES

NO	YES	
☒	☐	Site Currently Owned?
☒	☐	All Utilities Available?
☒	☐	Access Already Available?

APPROPRIATION REQUEST

1002	FED. RCPTS.	
1003	G/F MATCH	
1004	GEN. FUND	500,000
1005	I A RCPTS.	
	G.O. BONDS	
	TOTAL	500,000

GOVERNOR'S RECOMMENDATION

APPROVED ☒ DEFERRED ☐ DISAPPROVED ☐

1002	FED. RCPTS:	
1003	G/F MATCH	
1004	GEN. FUND	100.0
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	100.0

01-1035a (12/79)

OPERATIONAL COST & NO. PERSONNEL INCREASE (DECREASE)		FIRST OPERATING YEAR 1983	ULTIMATE ANNUAL YEAR 1984	PREVIOUS YR-PRIORITY 80-15
FUNDING SOURCE	FED. RCPTS.			AGENCY PRIORITY 81-09
	GEN. FUND			
	Project Revenues	40,000	40,000	
				GOVERNOR'S PRIORITY
TOTAL ANNUAL OPERATIONAL COST		40,000	40,000	
POSITION (FTE)				

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development 000092

CAPITAL PROJECT EXPENDITURES (CASH FLOW)	TOTAL	BUDGET YEAR	BUDGET YEAR Plus 1	BUDGET YEAR Plus 2	BUDGET YEAR Plus 3	BUDGET YEAR Plus 4	REMAINING COST
Planning and Engineering	440,000	440,000					
Land							
Construction							
Equipment	40,000	40,000					
Administration and Other	20,000	20,000					
Total Annual Expenditure (Capital Cost)	500,000	500,000					

CONTINUATION OF NARRATIVE

III. Capital Cost.

The very preliminary cost estimates are based on a study conducted by CH2M Hill Engineering for the Corps of Engineers in 1979. The estimated construction costs of the various projects range between $7-10 million. In addition, $500,000 is required for detailed feasibility studies and license application.

IV. Operational Expense.

Based on estimates for similar projects, the annual operation and maintenance costs are estimated at 40,000/year for each small project.

V. Alternatives Considered.

In addition to the various hydropower projects being considered, wood-fired steam generation is also being evaluated as an energy option.

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROJECT TITLE Haines/Skagway Hydroelectric Project

35b PROPOSED PROJECT ANALYSIS

REVISED DATE _____

000093

01-1035b (7/79)

7C Analysis of Governor's Decisions

ITEM	AMOUNT	FUNDING SOURCE	EXPLANATION
Mennonite Creek Hydroelectric Project			The Governors intent is to fund this request via the Power Project Loan Fund. Participation by a local utility will be necessary.
Agency Request	200.0	G.F.	
Gov. Rec.	200.0	G.F.	

CATEGORY Development AGENCY Alaska Power Authority PROGRAM ~~Economic Development~~

7C ANALYSIS OF GOVERNOR'S DECISIONS

000094

01-1007C(Rev. 7/77)

PROJECT TITLE	LOCATION(S)	AREA SERVED	ELECTION DISTRICT(S)
Mennonite Creek Hydroelectric Project	Kodiak Island	Port Lions	15

OBJ. NO(S)	OPERATING BUDGET BRU(S)	NAME(S)	BUDGET COMPONENT NUMBERS	START DATE	COMPLETION DATE
5 & 6		Alaska Power Authority	08-71-7-060	Oct. 1979	Sept. 1982

PROJECT NARRATIVE

I. Project Need Statement.

Located on the north end of Kodiak Island, the village of Port Lions depends largely on fishing and fish processing for its economic base. Kodiak Electric Association (KEA) has power generation and distribution facilities at the village. These are comprised of four diesel-electric plants with a combined capacity of 985 KW. Moderate load growth is anticipated. Hydroelectric potential is available and offers a means of displacing diesel fuel and containing power costs.

II. Project Description.

Mennonite Creek, west of the village, has a drainage area of 11 square miles and an estimated average annual flow of 41 cfs. The majority of the drainage basin is fairly flat with many small lakes and ponds that give good natural regulation to the stream. A diversion structure 0.4 miles from tidewater would provide a mean head of 100 feet and divert the flow into a conduit leading to a powerhouse in Port Lions. Approximately 1,800,000 KWH of diesel generation could be displaced. A transmission system will not be required. The project would have 200 KW installed capacity.

PROJECT TYPE

- ☐ Building Construction (C)
- ☒ Other Improvement (I)
- ☐ Equipment (E)
- ☐ Land (L)
- ☒ Professional Services (P)
- ☐ Other (O)

PROJECT CHARACTERISTICS

- ☒ Totally New Facility
- ☐ Addition to Existing Facility
- ☐ Renovation of Existing Facility
- ☐ Major Maintenance or Repair
- ☐ Supplement Previously Authorized Funds to Enable Completion
- ☐ One of Several Phases
- ☐ Major External Funding Source
- ☐ Other

NO	YES	SITE FEATURES
☒	☐	Site Currently Owned?
☒	☐	All Utilities Available?
☒	☐	Access Already Available?

APPROPRIATION REQUEST

1002	FED. RCPTS.	
1003	G/F MATCH	
1004	GEN. FUND	200,000
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	200,000

GOVERNOR'S RECOMMENDATION

APPROVED ☒ DEFERRED ☐ DISAPPROVED ☐

1002	FED. RCPTS:	
1003	G/F MATCH	
1004	GEN. FUND	200.0
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	200.0

01-1035a (12/79)

OPERATIONAL COST & NO. PERSONNEL INCREASE (DECREASE)		FIRST OPERATING YEAR 1982	ULTIMATE ANNUAL YEAR 1983	PREVIOUS YR–PRIORITY 80-11
FUNDING SOURCE	FED. RCPTS			AGENCY PRIORITY 81-16
	GEN. FUND			
	Project Revenues	2,000	2,000	
				GOVERNOR'S PRIORITY
TOTAL ANNUAL OPERATIONAL COST		2,000	2,000	
POSITION (FTE)				

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

000095

CAPITAL PROJECT EXPENDITURES (CASH FLOW)	TOTAL	BUDGET YEAR	BUDGET YEAR Plus 1	BUDGET YEAR Plus 2	BUDGET YEAR Plus 3	BUDGET YEAR Plus 4	REMAINING COST
Planning and Engineering	100,000	100,000					
Land							
Construction	100,000	100,000					
Equipment							
Administration and Other							
Total Annual Expenditure (Capital Cost)	200,000	200,000					

CONTINUATION OF NARRATIVE

III. Capital Cost.

The cost of the project was estimated in 1979 by the Alaska Power Administration at $1 million. In addition, based on experience with other similar projects, $200,000 will be required for preconstruction activities, which would be in the form of a loan to the utility.

IV. Operational Expense.

Operation and maintenance costs were estimated in 1978 by R. W. Retherford Associates at $2,000 annually. These costs would be paid from revenues derived from the sale of project power.

V. Alternatives Considered.

Other than continued dependence on diesel fuel generation, no reasonable alternatives are available to Port Lions at comparable costs.

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROJECT TITLE Mennonite Creek Hydroelectric Project

35b PROPOSED PROJECT ANALYSIS REVISED

7C Analysis of Governor's Decisions

ITEM	AMOUNT	FUNDING SOURCE	EXPLANATION
Larsen Bay Hydroelectric Project			The Governors intent is to fund this request via the Power Project Loan Fund. Participation by a local utility will be necessary.
Agency Request	200.0	G.F.	
Gov. Rec.	200.0	G.F.	

CATEGORY Development AGENCY Alaska Power Authority PROGRAM ~~Economic Development~~

7C ANALYSIS OF GOVERNOR'S DECISIONS

000097

01-1007C(Rev. 7/77)

PROJECT TITLE	LOCATION(S)	AREA SERVED	ELECTION DISTRICT(S)
Larsen Bay Hydroelectric Project	Kodiak Island	Larsen Bay	15

OBJ. NO(S)	OPERATING BUDGET BRU(S)	NAME(S)	BUDGET COMPONENT NUMBERS	START DATE	COMPLETION DATE
5 & 6		Alaska Power Authority	08-71-7-060	Oct. 1979	Sept. 1982

PROJECT NARRATIVE

I. Project Need Statement.

The economic base of Larsen Bay, a Kodiak Island village of approximately 125 permanent residents, is a seasonal fish cannery. The cannery operates a diesel fuel generator which also supplies some adjacent commercial and residential buildings. Other small private generators supply other buildings, including a school. The village would like a full-time power supply and distribution system and relief from rapidly increasing diesel fuel costs. Total demand is estimated at 1,800 KW. A stream flowing north through the village offers hydroelectric potential.

II. Project Description.

The stream would be diverted by means of a small concrete diversion dam at about 800 feet elevation and routed through a 1,500 foot long penstock to a power plant consisting of two 500 KW units. 9,000 feet of transmission line would also be required. The projects annual energy output would be 2.7 million KWH.

III. Capital Cost.

Cost estimates for this project, prepared by the Alaska Power Administration in a May 1978 Appraisal Evaluation, are based on April 1978 prices. The estimated cost is $2.2 million.

PROJECT TYPE

- ☐ Building Construction (C)
- ☒ Other Improvement (I)
- ☐ Equipment (E)
- ☐ Land (L)
- ☒ Professional Services (P)
- ☐ Other (O)

PROJECT CHARACTERISTICS

- ☒ Totally New Facility
- ☐ Addition to Existing Facility
- ☐ Renovation of Existing Facility
- ☐ Major Maintenance or Repair
- ☐ Supplement Previously Authorized Funds to Enable Completion
- ☐ One of Several Phases
- ☐ Major External Funding Source
- ☐ Other

NO	YES	SITE FEATURES
☒	☐	Site Currently Owned?
☒	☐	All Utilities Available?
☒	☐	Access Already Available?

APPROPRIATION REQUEST

1002	FED. RCPTS.	
1003	G/F MATCH	
1004	GEN. FUND	200,000
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	200,000

GOVERNOR'S RECOMMENDATION

APPROVED ☒ DEFERRED ☐ DISAPPROVED ☐

1002	FED. RCPTS:	
1003	G/F MATCH	
1004	GEN. FUND	200.0
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	200.0

01-1038a (12/79)

OPERATIONAL COST & NO. PERSONNEL INCREASE (DECREASE)		FIRST OPERATING YEAR 1982	ULTIMATE ANNUAL YEAR 1983	PREVIOUS YR-PRIORITY 80-13
FUNDING SOURCE	FED. RCPTS.			AGENCY PRIORITY 81-11
	GEN. FUND			
	Project Revenues	15,000	15,000	
				GOVERNOR'S PRIORITY
TOTAL ANNUAL OPERATIONAL COST		15,000	15,000	
POSITION (FTE)				

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development 000098

CAPITAL PROJECT EXPENDITURES (CASH FLOW)	TOTAL	BUDGET YEAR	BUDGET YEAR Plus 1	BUDGET YEAR Plus 2	BUDGET YEAR Plus 3	BUDGET YEAR Plus 4	REMAINING COST
Planning and Engineering	200,000	200,000					
Land							
Construction							
Equipment							
Administration and Other							
Total Annual Expenditure (Capital Cost)	200,000	200,000					

CONTINUATION OF NARRATIVE

Based on the field reconnaissance, no unusual construction problems are expected. Additional preconstruction costs are estimated at $200,000. Construction costs can be financed by revenue bonds sold for the project.

IV. Operational Expense.

Operation and maintenance costs, from the same source, are estimated at $15,000 annually. These costs would be paid from revenues derived from the sale of project power.

V. Alternatives Considered.

No reasonable alternatives other than continued dependence on diesel-fired generation are available to this community.

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROJECT TITLE Larsen Bay Hydroelectric Project

35b PROPOSED PROJECT ANALYSIS REVISED

000099

7C Analysis of Governor's Decisions

ITEM	AMOUNT	FUNDING SOURCE	EXPLANATION
Old Harbor Hydroelectric Project			The Governors intent is to fund this request via the Power Project Loan Fund. Participation by a local utility will be necessary.
Agency Request	200.0	G.F.	
Gov. Rec.	200.0	G.F.	

CATEGORY Development AGENCY Alaska Power Authority PROGRAM Economic Development

7C ANALYSIS OF GOVERNOR'S DECISIONS

000100

01-1007C(Rev. 7/77)

PROJECT TITLE	LOCATION(S)	AREA SERVED	ELECTION DISTRICT(S)
Old Harbor Hydroelectric Project	Kodiak Island	Old Harbor	15

OBJ. NO(S)	OPERATING AGENCY / BUDGET BRU(S)	BUDGET COMPONENT NUMBERS	START DATE	COMPLETION DATE
5 & 6	Alaska Power Authority	08-71-7-060	Oct. 1979	Sept. 1982

PROJECT NARRATIVE

I. Project Need Statement.

Another Kodiak Island village, Old Harbor, was the site of a seasonal fish cannery destroyed by fire. Plans call for rebuilding it or replacing it with a floating processing plant. Power is provided by small diesel generators. Total demand is estimated at 1,800 KW. An alternative to diesel generation is provided by the hydroelectric potential of an unnamed stream tributary to Old Harbor.

II. Project Description.

Features of the plan include a small earthfill diversion dam, buried pipe for a transbasin diversion across a ridge, penstock, powerplant, transmission line and witchyard. The diversion would be at about 500 feet elevation. The powerplant would contain two units totalling 600 KW capable of producing 2.6 million KWH annually. The transmission line would be about 9,700 feet long, partly along an existing road.

III. Capital Cost.

The project is estimated to cost $3,300,000 based on April 1978 price levels. This estimate comes from an appraisal evaluation by the Alaska Power Administration. An additional $200,000 would be required for preconstruction activities. Topographic and geological conditions could substantially change (increase or decrease) costs.

PROJECT TYPE

- ☐ Building Construction (C)
- ☒ Other Improvement (I)
- ☐ Equipment (E)
- ☐ Land (L)
- ☒ Professional Services (P)
- ☐ Other (O)

PROJECT CHARACTERISTICS

- ☒ Totally New Facility
- ☐ Addition to Existing Facility
- ☐ Renovation of Existing Facility
- ☐ Major Maintenance or Repair
- ☐ Supplement Previously Authorized Funds to Enable Completion
- ☐ One of Several Phases
- ☐ Major External Funding Source
- ☐ Other

NO	YES	SITE FEATURES
☒	☐	Site Currently Owned?
☒	☐	All Utilities Available?
☒	☐	Access Already Available?

APPROPRIATION REQUEST

1002	FED. RCPTS.	
1003	G/F MATCH	
1004	GEN. FUND	200.000
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	200.000

GOVERNOR'S RECOMMENDATION

APPROVED ☒ DEFERRED ☐ DISAPPROVED ☐

1002	FED. RCPTS:	
1003	G/F MATCH	
1004	GEN. FUND	200.0
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	200.0

01-1038a (12/79)

OPERATIONAL COST & NO. PERSONNEL INCREASE (DECREASE)		FIRST OPERATING YEAR 1982	ULTIMATE ANNUAL YEAR 1983	PREVIOUS YR-PRIORITY 80-13
FUNDING SOURCE	FED. RCPTS.			AGENCY PRIORITY
	GEN. FUND			
	Project Revenues	20,000	20,000	81-12
				GOVERNOR'S PRIORITY
TOTAL ANNUAL OPERATIONAL COST		20,000	20,000	
POSITION (FTE)				

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development 000101

CAPITAL PROJECT EXPENDITURES (CASH FLOW)	TOTAL	BUDGET YEAR	BUDGET YEAR Plus 1	BUDGET YEAR Plus 2	BUDGET YEAR Plus 3	BUDGET YEAR Plus 4	REMAINING COST
Planning and Engineering	200,000	200,000					
Land							
Construction							
Equipment							
Administration and Other							
Total Annual Expenditure (Capital Cost)	200,000	200,000					

CONTINUATION OF NARRATIVE

Construction of the project could be financed by the Rural Electric Administration.

IV. Operating Espenses.

The Power Administration estimates operation and maintenance costs at $20,000 annually, payable from revenues derived from the sale of project power.

V. Alternatives Considered.

Other than continued use of diesel generators, this may be the only viable alternative available to this community. The Alaska Power Administration is presently expanding the reconnaissance study of the area to investigate alternative sites more distant from the project site recommended in the Power Administration's Preliminary Reconnaissance Report.

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROJECT TITLE Old Harbor Hydroelectric Project

35b PROPOSED PROJECT ANALYSIS REVISED

7C Analysis of Governor's Decisions

ITEM	AMOUNT	FUNDING SOURCE	EXPLANATION
AVEC Villages Hydroelectric Study			The Governors intent is that this funding be appropriated to the Power Project Loan Fund to be used for the development of renewable forms of energy in villages such as the nine villages identified in a recent AVEC study. All forms of renewable energy are to be considered.
Agency Request	300.0	G.F.	
Gov. Rec.	325.0	G.F.	

CATEGORY Development AGENCY Alaska Power Authority PROGRAM Economic Development

7C ANALYSIS OF GOVERNOR'S DECISIONS

000103

01-1007C(Rev. 7/77)

PROJECT TITLE	LOCATION(S)	AREA SERVED	ELECTION DISTRICT(S)
AVEC Villages Hydroelectric Study	9 AVEC Villages	Rural Alaska	13, 15, 16-19

OBJ. NO(S)	OPERATING BUDGET BRU(S)	NAME(S)	BUDGET COMPONENT NUMBERS	START DATE	COMPLETION DATE
3, 5, 6	Alaska Power Authority		08-71-7-060	July 1, 1980	Dec. 30, 1981

PROJECT NARRATIVE

I. Project Need Statement.

AVEC villages presently pay the highest electric energy rates in the nation. Alternative energy resources must be developed where feasible to reduce dependence on diesel generation.

II. Project Description.

The Alaska Power Administration performed a reconnaissance study of AVEC villages in an effort to identify potential feasible hydroelectric resources for development. The report will not be completed until December, however, the Power Administration provided the attached letter to the utility estimating costs to study 9 potential sites (see attached). This cost estimate does not include costs of stream gaging which may cost approximately $10,000 per site. Funding is requested to perform feasibility assessments of the sites.

III. Documentation of Estimated Capital Cost.

Documentation is provided in the attached letter from the Power Administration.

IV. Analysis of Estimate of Operational Expense.

The projects which appear feasible and are constructed will have small operating and maintenance costs (estimated to be $15-20,000/project/year) which will be paid for from revenues generated from the sale of power from the project.

PROJECT TYPE

- ☐ Building Construction (C)
- ☐ Other Improvement (I)
- ☐ Equipment (E)
- ☐ Land (L)
- ☐ Professional Services (P)
- ☒ Other (O) Feasibility Assessments

PROJECT CHARACTERISTICS

- ☐ Totally New Facility
- ☐ Addition to Existing Facility
- ☐ Renovation of Existing Facility
- ☐ Major Maintenance or Repair
- ☐ Supplement Previously Authorized Funds to Enable Completion
- ☐ One of Several Phases
- ☐ Major External Funding Source
- ☐ Other

N/A

NO	YES	SITE FEATURES
☐	☐	Site Currently Owned?
☐	☐	All Utilities Available?
☐	☐	Access Already Available?

APPROPRIATION REQUEST

1002	FED. RCPTS.	
1003	G/F MATCH	
1004	GEN. FUND	300.0
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	300.0

GOVERNOR'S RECOMMENDATION

APPROVED ☒ DEFERRED ☐ DISAPPROVED ☐

1002	FED. RCPTS:	
1003	G/F MATCH	
1004	GEN. FUND	325.0
1005	I/A RCPTS.	
	G.O. BONDS	
	TOTAL	325.0

01-1035a (12/79)

OPERATIONAL COST & NO. PERSONNEL INCREASE (DECREASE)		FIRST OPERATING YEAR 1983	ULTIMATE ANNUAL YEAR	PREVIOUS YR--PRIORITY N/A
FUNDING SOURCE	FED. RCPTS.			AGENCY PRIORITY 81-04A
	GEN. FUND / Project Revenues	Unknown	Unknown	
				GOVERNOR'S PRIORITY
TOTAL ANNUAL OPERATIONAL COST				
POSITION (FTE)				

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development 000104

01-1035a (12/79)

350 PROPOSED CAPITAL

CAPITAL PROJECT EXPENDITURES (CASH FLOW)	TOTAL	BUDGET YEAR	BUDGET YEAR Plus 1	BUDGET YEAR Plus 2	BUDGET YEAR Plus 3	BUDGET YEAR Plus 4	REMAINING COST
Planning and Engineering	300,000	300,000					
Land							
Construction							
Equipment							
Administration and Other							
Total Annual Expenditure (Capital Cost)	300,000	300,000					

CONTINUATION OF NARRATIVE

V. Identification of Alternatives Considered.

The utility can delay action on the projects to wait for possible federal funding and action. Funds are not available from the Rural Electrification Administration for front end studies of projects, and they may not be available for expenditure on capital intensive generation projects. Other alternative energy options will be investigated as part of the study which is proposed.

CATEGORY Power Development AGENCY Alaska Power Authority PROGRAM Economic Development

PROJECT TITLE AVEC Villages Hydroelectric Study

35b PROPOSED PROJECT ANALYSIS

REVISED

000105

PRELIMINARY PROFILE:

Small-Scale Hydroelectric Development In Alaska

September 1979

National Conference of State Legislatures
Energy Program: Small-Scale Hydroelectric Policy Project
1405 Curtis Street, Suite 2300
Denver, Colorado 80202
(303) 623-6600

I. INTRODUCTION

Energy supply is one of the most important issues facing state legislatures today. The critical status of our energy future is receiving increased attention by state legislators as they seek to determine what states are required to do to insure that future energy needs are met with the least amount of harm to existing social, economic and political systems. The concern over our energy future results to a large degree from our present reliance on fossil fuels for our energy needs and the knowledge that those sources are limited in terms of domestic reserves, and unreliable and costly in terms of imported supply.

In the United States, hydroelectric generation now provides about 14-15 percent of the electricity used. A total of 1,430 hydroelectric power plants include approximately 60,000 MW of conventional generating capacity and 10,000 MW of pumped storage capacity. The conventional is 35 percent of the total hydroelectric power considered developable in plants greater than 5 MW. The Army Corps of Engineers report in 1978 estimated that 55,000 MW of additional electrical generating capacity is available for development now at existing dam structures in the United States. 5,100 MW of this total could be achieved through improved efficiency of existing turbine-generator installations. By adding turbine-generators to existing hydroelectric dams, another 15,900 MW could be accounted for in that total figure. Out of the estimated 33,600 MW that could be developed by installing power stations at existing dams, 27,000 MW potential is estimated for sites with the potential of 5 MW or less.

The study also estimates that this potential is the equivalent of replacing oil-fired capacity using 266 million barrels of oil annually or 727,000 barrels of oil per day. This projected savings is seven and a half times the oil saving projected in the President's plans for saving oil by installed solar heating in 2½ million homes by 1985. With the cost of electrical generation by oil and gas fired plants rising, the time delays of 7 to 10 years for a coal fired plant and 12 to 14 years for a nuclear plant increasing, the feasibility of small-scale hydro is at hand for many sites and near for others. Although the development of small-scale hydro will not solve the nation's energy problem, it can make a significant contribution. When combined with the development of other alternative energy resources, small-scale hydro can be viewed as a major solution to the problem of renewable energy for the future.

It is obvious that if this country is to satisfy its future energy needs, the development of alternative energy sources must be addressed. The Small-Scale Hydroelectric Policy Project of the National Conference of State Legislatures is designed to assist selected state legislatures in looking at the benefits that a state can derive from the development of small-scale hydro, and in carrying out a review of state laws and regulations that affect the development of the states' small-scale hydro resource.

In summary, the technology is proven, the sites are there, the need is evident, and the economic feasibility is becoming clearer. However, there are several variables at the state level which critically affect the threshold feasibility level of small-scale hydro. These variables are generally described as legal, institutional, environmental and financial.

II. POTENTIAL RESOURCE

Small-scale hydroelectric power is an indigenous resource that can contribute to Alaska's energy supply by providing a renewable source of clean energy at a reasonable cost. Under the current Department of Energy small hydro program, the definition of small-scale hydro eligible for inclusion in the program was defined by Congress as existing sites not presently used to produce power or where existing capacity could be expanded. In reality, the classification of small hydro is not so precise and a bill has already been introduced in Congress to remove the existing dam structure program eligibility restrictions.

In general, the small hydro concept suggests installations requiring only small dams or diversions, operating essentially as run-of-the-river with little or no storage and minimal change in river regime.

Of the existing sites in the .05 to 25 MW category in Alaska (see Table I), most of them are located near a population cluster. The resource list indicates there are 24 sites in the .05 to 15 MW range with a potential capacity of 77 MW or 305 MWH. In the 15 to 25 MW range, there are 6 existing dams with a potential capacity of 120 MW or 309 MWH. In terms of undeveloped small hydro potential, there are 184 sites in the .05 to 15 MW range with a potential new capacity of 1,053 MW or 4,754 GWH and there are 53 sites in the 15 to 25 MW range with a potential new capacity of 1,014 MW or 4,158 GWH. These figures are the preliminary gross estimates developed by the Army Corps of Engineers for the National Hydropower Study.

Table I

Preliminary Listing, Existing Water Resource Projects with Small Scale [1/] Additional Hydropower Potential [2/], State of Alaska

Census Division	Project Name	Existing Development Capacity (MW)	Existing Development Energy (MWH)	New Potential Capacity (MW)	New Potential Energy (MWH)	Total Capacity (MW)	Total Energy (MWH)
			Potential Additional Capacity Range - 0.5 MW - 15 MW				
Fairbanks	Livengood Dam	0	0	0.21	0.5	0.21	0.5
Juneau	Salmon Creek Dam	0	0	6.36	31.1	6.36	31.1
Juneau	Annex Lake Dam	3.50	6.0	2.05	19.2	5.55	25.2
Juneau	Gold Creek 5	1.60	6.8	1.13	5.2	2.73	12.0
Juneau	Salmon Creek No. 1	1.40	3.0	1.49	9.8	2.89	12.8
Juneau	Salmon Creek No. 2	2.80	5.0	1.68	15.1	4.48	20.1
Ketchikan	Ketchikan Lakes	4.20	14.8	1.05	9.2	5.25	24.0
Ketchikan	Lake Connell Dam	0	0	12.46	37.6	12.46	37.6
Ketchikan	Lake Whitman	4.05	20.0	0	0	4.05	20.0
Kodiak	Uganik	0.03	0.1	4.20	13.6	4.23	13.7
Kodiak	One Mile Creek	0	0	11.99	28.2	11.99	28.2
Outer Ketchikan	Purple Lake	3.00	10.4	2.21	8.1	5.21	18.5
Prince of Wales	Linkum	0.02	0	2.85	8.9	2.87	8.9
Seward	Moose Pass	0	0	0.70	3.2	0.70	3.2
Sitka	Sheckley	0	0	5.70	32.4	5.70	32.4
Sitka	College	0	0	9.78	31.8	9.78	31.8
Sitka	Short	0	0	1.07	3.2	1.07	3.2
Sitka	Bahovel	0	0	1.56	5.2	1.56	5.2
Sitka	Swanson	0	0	1.00	2.6	1.00	2.6
Sitka	Pelican Creek	0.50	2.0	2.19	5.7	2.69	7.7
Skagway-Yakutat	Dewey Lakes	0.38	1.0	5.14	24.0	5.52	25.0
Valdez-Chit.-Whit.	San Juan	0.11	0.1	0.39	2.0	0.50	2.1
Valdez-Chit.-Whit.	Grouse Creek	0	0	0.50	2.1	0.50	2.1
Valdez-Chit.-Whit.	Dayville	0.20	0.2	1.40	6.7	1.60	6.9
Subtotals	24	21.79	69.4	77.61	305.4	99.40	374.8
			Potential Additional Capacity Range - 15 MW - 25 MW				
Ketchikan	Upper Silvis Lake	0	0	17.93	54.1	17.93	54.1
Ketchikan	Beaver Falls	5.00	25.5	17.39	42.1	22.39	67.6
Ketchikan	Beaver	0.07	0.1	18.24	43.6	18.31	43.7
Kodiak	Parks	0	0	20.98	49.3	20.98	49.3
Kodiak	Dry Spruce	0	0	23.51	56.1	23.51	56.1
Wrangell-Petersburg	KeKu	0.03	0.1	22.21	64.1	22.24	64.2
Subtotals	6	5.10	25.7	120.26	309.3	125.36	335.0
TOTALS	30	26.89	95.1	197.87	614.7	224.76	709.8

Notes:
1/ Small scale is defined here as a maximum total existing and/or potential capacity of not more than 25 MW.
2/ Preliminary estimates as of June 1979 from the National Hydropower Study, Corps of Engineers.

III. STATUTORY AND REGULATORY CONCERNS

The NCSL Small-Scale Hydroelectric Project has available a comprehensive seventy-five page report on the legal parameters of small-scale hydroelectric development in Alaska. The following is a summary.

A. Land and Water Ownership

The fundamental task for a small-scale hydroelectric developer is to acquire control over or the right to use the necessary surface and water rights for the project.

1. Land

(a) Federal - the right to use federal lands for a small-scale hydroelectric project depends on the status of the lands involved (national park, monument, forest, etc.). Permission, usually via a lease, must be obtained from the managing agency. These agencies include the Park Service, Forest Service and Bureau of Land Management. The Federal Energy Regulatory Commission also has general authority to dedicate federal lands for small-scale hydro use. The Federal Land Policy Management Act is a statute of general application.

(b) Native Alaskan - Native Regional and Village Corporations will eventually possess $1 billion in liquid assets and over 44 million acres of land. This will potentially make such entities major actors in small-scale hydro. Negotiations to use native lands must be conducted with the relevant corporation. The Bureau of Indian Affairs will often be involved as well.

(c) Private - access to and use of private lands will normally involve a contract of sale or a lease. It should be noted that navigable stream beds are in the public domain even where surrounded by private lands.

(d) State - the Department of Natural Resources (DNR) may sell or lease state lands by public auction. Leases may run for primary terms of up to 55 years. Leased land remains under ultimate state control, and various permits may be required:

- special land use permit
- right-of-way permit
- upland permit
- grazing land permit
- tidelands permit
- shore fisheries permit
- miscellaneous land use permit

(Consult the Directory of State Permits)

Some of the required permits may be obtainable through a master permit application to Department of Environmental Conservation (discussed below).

2. Water

The right to divert (impound) and use water must be obtained from the State by a small-scale hydroelectric developer. Alaska is a prior appropriation state, although some early riparian mining claims may exist. Under the Water Use Act of 1966, the DNR will grant a permit to appropriate if:

- prior rights will not be unduly affected
- the proposed means of diversion are sound
- the proposed use will be beneficial
- the proposed use will be in the public interest

Upon completion of the impoundment and the inception of the use -- perfection of the appropriation -- the permit will be certified.

Policy Concerns

- The major concern in this area is the unsettled status of Alaskan lands pending resolution of the "D-2" legislation. Small-scale hydroelectric development may encounter substantial delays until land ownership and classification is settled.
- A second concern relates to the somewhat uncertain status of vested riparian water rights in Alaskan watercourses. This may create problems regarding obtaining water rights.

B. State Licensing

This section must be read against the background of possible federal pre-emption under the Federal Power Act. Although the U.S. Supreme Court has held the Act to be superior to state procedures, the Federal Energy Regulatory Commission (FERC) has adopted a policy that small-scale hydroelectric developers should comply with state licensing requirements prior to obtaining a federal license. Thus, Alaska's regulatory policies remain relevant to small-scale hydro.

1. Environmental

The Department of Environmental Conservation (DEC) administers a "one-stop" permitting process to coordinate a multiplicity of environmental requirements. Through a master application to the DEC the small-scale hydroelectric developer may obtain virtually all the necessary permits. It should be noted, however, that control over the surface and water rights necessary to the project is a prerequisite. In addition, local approval of the project must be demonstrated separately. Some of the most relevant permits include:

- water pollution control permit - although small-scale hydroelectric projects may result in the release of oxygenated or deoxygenated water and trace metals, the applicability of the Alaska Water Pollution Control Act to small-scale hydro is unclear at this time.

- certificate of reasonable assurance - small-scale hydroelectric projects on navigable watercourses must demonstrate compliance with §401 of the Federal Water Pollution Control Act (FWPCA), as administered by the DEC.

- anadromous fish protection permit - the Department of Fish and Game has the authority to require small-scale hydroelectric projects to protect anadromous fish spawning routes and grounds. This may necessitate construction of fishways and ladders or, in the alternative, the payment of compensation, the dedication and construction of a fish hatchery or the posting of a bond to allow the state to enlarge existing facilities.

2. Local

The extent of local political control over small-scale hydro is unclear, except as to the requirement of compliance with local land use plans or zoning in conjunction with the DEC master permit process. The need for local land use,

building, road or other permits will vary by site and as as to whether the political subdivision is a "home rule" entity. It should be noted that municipalities have jurisdiction over utilities not regulated by the State Public Utility Commission (PUC).

3. Public Utility Commission

The PUC exercises broad authority over utilities in Alaska. While some very small hydro projects may escape regulation, most will need to obtain a "certificate of public convenience and necessity" to operate -- whether privately or publicly-owned. All private small-scale hydroelectric utilities will fall under PUC rate jurisdiction, as well as public small-scale hydroelectric utilities in competition with other existing utilities.

It should be noted that the Public Utility Regulatory Policies Act (PURPA) has a major potential impact with regard to existing small-scale hydroelectric sites, including: expedited licensing, mandatory interconnection and wheeling, mandatory purchase and sale of power contracts with existing utilities, and possible exemption from FERC and PUC jurisdiction.

4. Miscellaneous

The DNR administers Alaska's parks and recreational facilities, as well as the Historic Preservation Act. Small-scale hydroelectric development must be compatible with DNR policies in these areas.

Policy Concerns

- With regard to water pollution, the status of small-scale hydro under the state Water Pollution Control Act should be determined. In addition, a clear designation of "navigable" watercourses is needed to allow small-scale hydroelectric developers to plan with regard to the applicability of the FWPCA.

- The necessity of measures to protect anadromous fish is likely to be quite common. The financial impact on small-scale hydro should be assessed.

- Localities with small-scale hydroelectric potential should be required to include such development in their land use or zoning plans in order to integrate their approval function with the DEC master permit process.

- Exemption of small-scale hydroelectric facilities from PUC jurisdiction may constitute a stimulus to development. The impact of PURPA in this area needs to be clarified.

C. Liability

Liability for seepage, overflow or dam failure may constitute a significant financial burden on small-scale hydro. Insurance coverage for such events may be expensive and difficult to obtain -- especially where the dam owner is held to a strict liability standard. Strict state safety and inspection programs may reduce the perceived risk by insurors.

Policy Concerns

- The state may consider legislatively adopting either the negligence or strict liability standard for small-scale hydroelectric projects.
- The state may adopt adequate safety and inspection programs to improve insurability, as well as modifying state insurance laws to provide reasonable liability insurance coverage.
- The state may consider insuring small-scale hydroelectric projects which are adequately bonded or pass a safety certification inspection.

D. Financial

1. Taxation

There are numerous state and local taxes likely to impact small-scale hydro, including:

- income tax
- corporation tax
- business license tax
- property tax
- sales and use tax

State, municipal and federal property are exempt from general taxation. In addition, electric cooperatives have a unique tax structure.

2. Funding Sources

Both state and federal monies may be available to assist in small-scale hydro. Financial assistance is especially important at the feasibility study stage, where all expenditures are at high risk. The Department of Commerce and Economic Development (DOCED) will have a lead role in this area. Funding sources and actors include:

- water resources revolving loan fund (DOCED)
- alternative power resource revolving loan fund (DOCED)
- Alaska State Development Corporation loans (DOCED)
- Alaska Industrial Development Authority fund (DOCED)
- Alaska Power Authority fund and loans (DOCED)
- Municipal Bond Bank Authority bond issues (Dept. of Revenue)
- Regional Electrical Authority bond issues (13 REA's)
- Alaska Renewable Resources Corporation investment fund (new state corporation)
- Rural Electrification Act funding (federal through non-profit electric cooperatives)
- Alaska Hydroelectric Development Fund (Corps of Engineers)

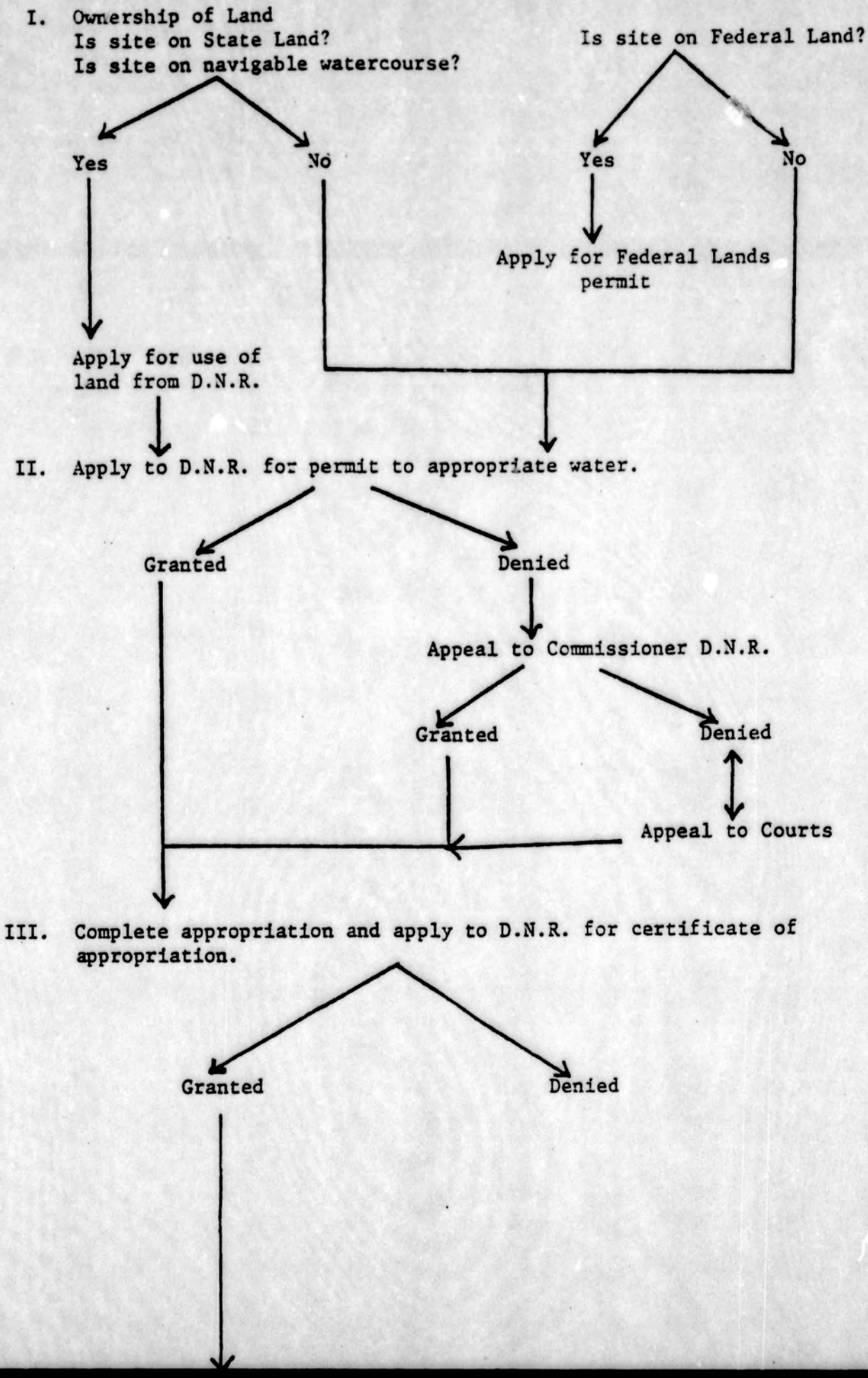
It should be noted that the utility of these funding sources for small-scale hydro has yet to be established. In addition, some of these funds may only be available to publicly-owned or non-profit projects.

Policy Concerns

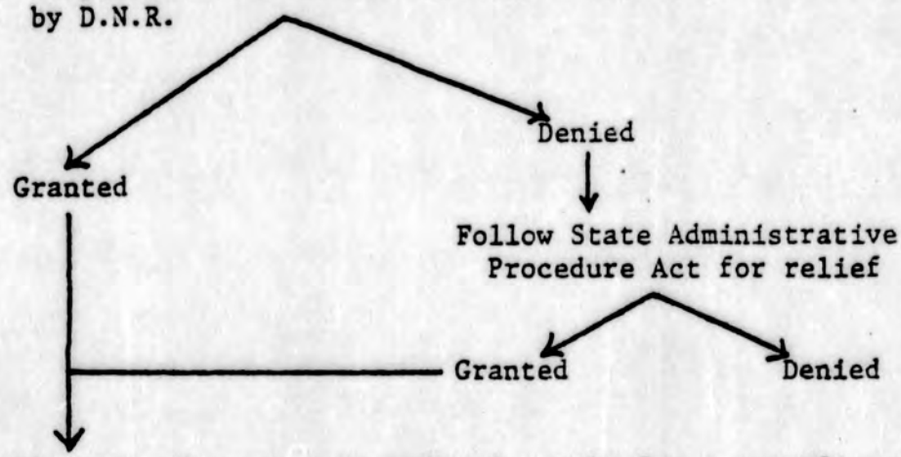
- The effect of state taxation on small-scale hydro should be assessed. Various tax credits and exemptions may be considered as incentives.
- The availability and usefulness of the various funding sources needs to be established and assessed. The administrators of the funds need to be educated with regard to small-scale hydro's benefits and financial needs.

Acknowledgement: The foregoing summarizes a research document prepared under contract to NCSL by the Energy Law Institute of the Franklin Pierce Law Center; Director--Peter Brown.

FLOW DIAGRAM

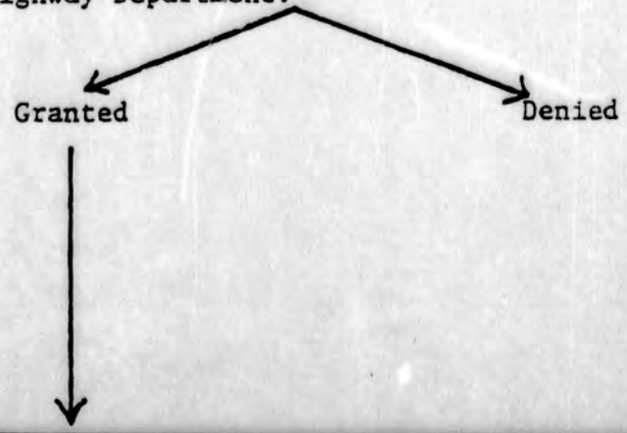


IV. Submit master application to Department of Environmental Conservation.
- Deparment circulates, for comment, the application to all executive departments and affected municipalities.
- Department submits to applicant necessary permit applications for completion.
- Applicant returns completed forms.
- Department returns forms to appropriate agencies.
- Permits may be required for:
    a. Water pollution control from D.E.C.
    b. Certificate of reasonable assurance from D.E.C.
    c. Anadromous fish protection permit from the Department of Fish and Game.
    d. Endangered species and critical habitat permits from Department of Fish and Game.
    e. Construction of fishway, fish ladders and hatcheries from Department of Fish and Game.
    f. Interference with salmon waters permit from Department of Fish and Game.
    g. State Game Refuge Land Use Permit from the Department of Fish and Game.
    h. State Game Sanctuary Permit from Department of Fish and Game.
    i. Parks and recreational facilities use permit from D.N.R.
    j. Compliance with Alaska Historic Preservation Act administered by D.N.R.



V. If retail sales of power contemplated, apply for a certificate of public convenience and necessity from P.U.C.

VI. If necessary, apply for permit for construction of transmission lines from Highway Department.



VII. If necessary, apply for funding from various programs within Department of Commerce and Economic Development or the Alaska Renewable Resources Corporation. (Municipalities have additional opportunity with the Municipal Bond Bank Authority.) Federal funding may also be available.

VIII. Continuing obligations:
- State and local taxes
- Comply with conditions of all permits and licenses
- Obtain liability insurance for dam breach

Acknowledgement: This flow diagram is taken from a report prepared under contract to NCSL by the Energy Law Institute of the Franklin Pierce Law Center; Director--Peter Brown.