

BOARD PACKET

OCTOBER 14, 1983

(Not Including Appendices)

Board Meeting

Alaska Power Authority

Hydro / Wood / Coal / Solar / Wind / Geothermal / Conservation



ALASKA POWER AUTHORITY

October 13, 1983

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SUSITNA HYDROELECTRIC PROJECT Background Information Economic Update and Design Modifications

INTRODUCTION

A license application for the Susitna Hydroelectric Project was submitted in February 1983, based on a feasibility study completed in 1982 and a recommendation by the Alaska Power Authority Board of Directors. That application, now being evaluated by the Federal Energy Regulatory Commission (FERC), must be approved and a license issued before construction can begin.

The Harza-Ebasco Susitna Joint Venture (Harza-Ebasco) is the design contractor for the Susitna project. Their first task was a detailed review of the design concept and cost estimates. This review considered new results of ongoing project studies and revised economic and population projections. Results of the winter geotechnical program and more intense hydrologic studies were especially important.

Results of that project review fall into two areas:

- ° Economic and financial update based on declining oil prices worldwide.
- ° Design refinements and resulting cost savings based on more complete information.

BACKGROUND

As presented in the FERC license application, the Susitna Hydroelectric Project consists of two phases. The first, the Watana dam, is planned as an 885-foot earth and rockfill structure creating a reservoir 48 miles long, with an installed capacity of 1020 megawatts. The second phase is the Devil Canyon dam, a 646 foot high concrete thin arch dam. The Devil Canyon installation would have a capacity of 600 megawatts and a 26 mile long reservoir.

The Watana portion of the project, scheduled to be producing power in 1993, will be a rock embankment with a central impervious

core. Two diversion tunnels (38 feet in diameter, 4100 feet long) are planned to divert the river during construction. Water will pass through six power conduits to an underground powerhouse containing six generating units. Transformers will connect to a surface switchyard where the power will enter the transmission system. The project has been designed with two spillways. The main spillway can discharge water up to the probable maximum flow. The probable maximum flow can be discharged through a separate emergency fuse plug spillway.

The Devil Canyon facility is planned to begin operating in 2002. Its design also includes a diversion tunnel, power intake structure, four penstock tunnels, an underground powerhouse with four generating units, and two spillways.

The Susitna feasibility study concluded that this dam concept was economically feasible and preferable to other alternatives for providing needed electrical energy to the Railbelt. Current work is aimed at refining the design concept, reassessing the project's economic feasibility in light of changing factors, and determining the most cost effective, optimal project under today's conditions.

ECONOMIC AND FINANCIAL UPDATE

The economic and financial update has been prepared to reflect changes in world oil prices and resulting changes in forecasts of Alaskan economic conditions. Higher oil prices provide greater resources to build the Susitna Project. They also affect estimates of population growth and energy demand. Lower oil prices produce the opposite effect. When oil prices dropped, it was necessary to reexamine the assumptions used in the Susitna license application and take an updated look at the economic and financial feasibility.

Changes in some of the major assumptions include:

- ° The mid-range estimate of oil prices used in the license application estimated price per barrel of oil in 1993 to be \$46, rising by 2010 to \$65. More conservative current planning estimates with changes in world oil price range from \$22 to \$50 per barrel in 2010. Reduced oil revenues based on the lower prices will reduce State revenues accordingly.
- ° Population growth will also slow with reduced oil prices. The range of Railbelt population estimates used in the feasibility study was 539,000 to 695,000 in 2010. Updated population forecasts are in the range of 500,000 to 533,000 (using the ISER "Man-in-the-Arctic" program and the "Railbelt Electricity Demand" model).

- ° Less population growth means a lower growth rate for energy demand. The license application estimated a Railbelt need for 6.3 billion to 11.4 billion kilowatt hours in 2010. With changes in assumptions, the update projects a range of 5.8 to 6.5 billion kilowatt hours.

All of these modifications have been considered in reexamining the economic and financial feasibility of the project. The results of the update show that the project remains economically feasible under the revised projections. Using the lowest oil price projections produces the most marginal advantage over thermal alternatives. If oil prices increase at all beyond the lowest alternatives, the economic feasibility of the project will also increase. State decisions on financing the project will affect the cost of electricity from Susitna in comparison with alternative thermal projects.

DESIGN REFINEMENTS

Detailed review of layouts and costs, the winter geotechnical program, and detailed flood hydrology studies have led to several recommended design changes. The total savings due to these changes would be \$421 million. The following design modifications have been recommended for the Watana project.

- ° Reduction in the amount of foundation rock to be excavated by 3.5 million cubic yards.
- ° Change in composition and configuration of the dam to use more materials available from excavation.
- ° Combined approach channel to power intake and main spillway.
- ° Change in orientation of underground caverns and reduction in number of power conduits for the generating units.
- ° Modification of main spillway to discharge Probable Maximum Flood, thus eliminating the fuse plug emergency spillway.
- ° Reduced transmission voltage from Gold Creek to Ester substation to meet Fairbanks' load requirements.

These changes, if adopted, would have these effects:

- ° Net savings by reducing the construction cost for Watana by about \$421 million (about 10 percent).
- ° A potential reduction in construction time for Watana.

- ° Some reduction in adverse environmental impacts.

Cat. 2
Several additional design modifications are also being evaluated. A specific recommendation on these modifications will be made in the future. These changes could result in additional cost savings of up to \$250 million. Modifications to the Watana project could include constructing the powerhouse above ground rather than underground and modifying the power intake structures and conduits; potential savings in the Devil Canyon structure might include modifications to the tunnel downstream from the dam.

Cat. 3
In addition to these design refinements, reduced economic projections have resulted in other potential modifications that are now being studied. The primary one would be downsizing the Watana project to a lower dam height, with accompanying reductions in generation and transmission system requirements. This would bring project energy production more closely in line with current estimates of need for power. These refinements could reduce the capital cost of the project by an estimated \$700 million and could further reduce environmental impacts because of reduced reservoir size.

BOARD ACTIONS

The actions before the Power Authority Board of Directors are to:

- ° Consider and accept results of the economic and financial update.
- ° Approve recommended design refinements and related cost savings.
- ° Consider potential design refinements for future action.
- ° Consider Watana alternatives to better match revised energy demand forecasts.

ALASKA POWER AUTHORITY

BOARD MEETING

8:00 A.M. - 10:00 A.M. Legislative Information Office
Teleconference Center (1024 W. 6th Ave.)

10:30 A.M. - 6:00 P.M. Anchorage Westward Hilton
Kenai-Aleutian Room

October 14, 1983

AGENDA

- ✓ I. Opportunity for Public Comment through teleconferencing network from the Legislative Office Teleconference Center (1024 W. 6th Ave.), to teleconference centers in Juneau, Fairbanks and Soldotna, 8:00 A.M. - 10:00 A.M.

Meeting reconvenes at 10:30 A.M. at the Anchorage Westward Hilton, Kenai-Aleutian Room.

- ✓ II. Approval of the Minutes of the September 27, 1983, Board Meeting in Anchorage.

- III. Consideration of Actions with respect to the Susitna Hydroelectric Project:

- ✓ A. Project Refinements — *Sidney's Review*
- ✓ B. Project Update — *Financial Review*
- C. FY 1984 Budget
- D. FY 1985 Budget
- E. Review of Susitna Access Road

- IV. Consideration of Action with respect to the Balance of the Alaska Power Authority Budget for FY 1985.

- V. Any other Business or Action which might properly come before the Board of Directors.

- VI. Opportunity for Public Comment.

ALASKA POWER AUTHORITY

MINUTES OF THE MEETING

of the Alaska Power Authority
Board of Directors

Anchorage, Alaska

September 26, 1983

- I. Approval of Minutes of the July 7, 1983, Board Meeting in Ketchikan.
- II. Consideration of adoption of criteria for project economic and financial evaluation.
- III. Review of Bradley Lake Project and consideration of developing a Federal Energy Regulatory Commission (FERC) License Application.
- IV. Review of the Susitna Hydropower Project, consideration of budget allocations, and other actions as appropriate.
- V. Consideration of Loan from the Rural Electrification Revolving Loan Fund to Egegik Electric Cooperative.
- VI. Consideration of actions for the Anchorage/Fairbanks Intertie Project.
- VII. Consideration of actions related to Solomon Gulch Construction Claims.
- VIII. Consideration of actions for the Delta Line extension.
- IX. Consideration of action with respect to the FY'85 budget.
- X. Consideration of funding requests from State agencies.
- XI. Consideration of actions with respect to the assumption of the Alaska Power Administration.
- XII. Consideration of action with respect to Swan Lake interim financing.
- XIII. Review of progress on power sales negotiations.
- XIV. Selection of management consultant for audit of the Alaska Power Authority.
- XV. Consideration of action with respect to Bond Counsel.
- XVI. Opportunity for Public Comment.
- XVII. Any other business or action which might properly come before the Board of Directors.

MEMBERS PRESENT:

Mr. David Allison, Esq.

Mr. Robert Huffman, Vice Chairman

Commissioner Dick Lyon, Chairman
Department of Commerce & Economic Development

Mr. Peter McDowell, Director
Office of Management & Budget

Mr. Lee Nunn

Commissioner Esther Wunnicke
Department of Natural Resources

MEMBERS ABSENT:

Commissioner Dan Casey
Department of Transportation & Public Facilities

ITEM I Approval of the Minutes of the July 7, 1983, Board Meeting in Ketchikan.

CHAIRMAN LYON called the meeting to order at 9:15 AM and announced that there would be some changes to the agenda due to the need for Executive Session on three matters. MR. ALLISON moved and COMMISSIONER WUNNICKE seconded that the Board adopt the Minutes of the July 7, 1983, meeting as presented. Hearing no objection, COMMISSIONER LYON ordered the Minutes adopted as presented.

ITEM II Consideration of adoption of criteria for project economic and financial evaluation.

MR. ERIC P. YOULD, Executive Director, explained that the Alaska Power Authority is required by regulation to annually develop new criteria by which projects are evaluated for economic feasibility. The method of evaluation used by the Power Authority is a net present worth life cycle analysis of various alternatives. Critical criteria are; 1) inflation rate; 2) discount rate; 3) fuel escalation rate; 4) debt/equity ratio; 5) cost of debt; and 6) economic life of a project. MR. YOULD suggested that the Board consider eliminating the debt/equity ratio because it is not relevant to the analysis being used. MR. YOULD recommended that the Board adopt the same criteria used last year, except that the inflation rate be changed to 6.5 percent and cost of debt be reduced to 10 percent.

MR. HUFMAN, Chairman of the Finance Subcommittee, reported that the Subcommittee recommended acceptance of inflation rate, discount rate, cost of debt, and economic life and term of loan, and deletion of the debt to equity ratio. He stated that the issue of fuel escalation rate was not resolved. MR. HUFMAN stated the Finance Subcommittee agreed to formalize procedures by picking six nationally recognized experts and use the median fuel escalation rate of the six. MR. ALLISON moved and MR. McDOWELL seconded that the Finance Subcommittee make a recommendation to the Board on the six experts and the question of long-term versus short-term escalation rate. The motion was passed by a unanimous voice vote of all six voting members present.

COMMISSIONER WUNNICKE then moved that the Board approve the economic parameters as presented by staff, with the exception of a future report from the Finance Subcommittee on the fuel escalation rate, and that the debt to equity ratio be deleted from future consideration. MR. HUFMAN seconded the motion. The motion was passed unanimously by all six voting members present.

ITEM III Review of the Bradley Lake Project and consideration of developing a Federal Energy Regulatory Commission (FERC) License Application.

MR. YOULD presented background on the Bradley Lake Project, the Corps of Engineers involvement, and the Power Authority's assumption of the project. MR. JOE PERKINS, Director of Construction, then reviewed the design and engineering aspects of the Bradley Lake Project and changes in the project from the Corps project concept. MR. YOULD then reviewed the project's economics.

MR. YOULD stated that the local utilities have indicated that they are interested in the project and are willing to enter into agreements of intent to purchase power prior to the Power Authority beginning design. He indicated that the staff's recommendation was to authorize Stone and Webster to prepare a FERC License Application by February 1984, at which time the Board could decide whether or not to submit the application and proceed with design. In addition, he also recommended that the Board retain an engineer of record to review Stone and Webster's work. MR. HUFMAN moved that the Board adopt the staff recommendation. MR. ALLISON seconded the motion. MR. NUNN stated that the Board should not limit itself to one option. MR. ALLISON suggested that the Board direct staff to consider both the 90 and 135 megawatt projects. MR. HUFMAN agreed to incorporate MR. ALLISON'S suggestion into his motion and that staff make a firm recommendation on the project capacity in December. The motion was passed unanimously by all six voting members present.

CHAIRMAN LYON asked the Board to consider ITEM V, Consideration of a loan to Egegik Light & Power Company (EL&PC) ahead of ITEM IV.

ITEM V Consideration of loan from the Rural Electrification Revolving Loan Fund to Egegik Light & Power Company (EL&PC).

MR. BENISH briefed the Board on a loan application from EL&PC for the construction of a line extension to serve new HUD housing, 13 commercial enterprises, a health clinic, and two community facilities in the amount of \$130,000.00. MR. BENISH discussed the issues involved in the Board's approval of this loan. They were; 1) because HUD housing was not planned to hook-up to the utility, an emergency situation has developed in which the line extension is necessary for these houses to obtain power for the winter; 2) this is not simply a line extension because it involves rebuilding and relocation of existing line; 3) depreciation of existing plant was not taken into consideration; and 4) updated net worth statement was presented in lieu of a financial statement. The staff's recommendation was approval of the loan despite deficiencies in documentation, because of the apparent financial ability to repay the loan and likelihood of growth.

REPRESENTATIVE ADELHEID HERRMANN stated her support for this project which is in her district. MR. HOMER LEONARD, Owner/Manager

of EL&PC, commented on the purchase of the system from Naknek Electric and the need for the loan to meet the needs of the community.

MR. ALLISON moved that the Board approve Resolution No. 1983-9, a loan in the amount of \$130,000.00 to EL&PC at two percent interest for twenty years. COMMISSIONER WUNNICKE seconded the motion. The motion was passed unanimously by all six voting members present.

CHAIRMAN LYON suggested the Board go into Executive Session. MR. HUFMAN moved that the Board go into Executive Session for two reasons: 1) to discuss issues related to Swan Lake financing and the current status of power sales agreements; and 2) claim settlement related to the Solomon Gulch Hydroelectric Project. MR. NUNN seconded the motion. MR. ALLISON stated that he was opposed to an Executive Session for discussing financial matters. MS. LAURA DAVIS said that the motion should be specific that the Executive Session was necessary to discuss matters that could have a clear adverse financial effect on the Power Authority or the State. MR. BENISH offered a motion that the Power Authority Board of Directors hold an Executive Session for discussion of the Swan Lake financing and the possibility for litigation and other matters related to litigation on the Solomon Gulch claims settlement. MR. HUFMAN and MR. NUNN agreed to adopt this as their motion. MR. ALLISON said he would go into Executive Session and, if he felt the subject matter inappropriate, request the meeting be made public. The motion was passed unanimously by all six voting members present. The Board went into Executive Session at 10:55 AM.

The Board reconvened at 1:50 PM. CHAIRMAN LYON discussed the Executive Session and the rules for such sessions adopted by the Board. He explained that the Board discussed the Solomon Gulch claims settlement, but chose not to discuss the financing package for the Energy Program for Alaska and the status of power sales agreements.

MR. ALLISON moved that the Board approve the settlement authority for claims arising from Solomon Gulch as was requested in the Executive Session and was more specifically stated in Exhibit F, which is part of the confidential record of the Executive Session, all of which will be entered as a matter of public record upon resolution and completion of the settlement negotiation. MR. NUNN seconded the motion. The motion was passed unanimously by all six voting members present. CHAIRMAN LYON requested that the matters concerning the Anchorage/Fairbanks Intertie be moved up on the agenda.

ITEM VI Consideration of actions for the Anchorage/Fairbanks Intertie Project.

MR. YOULD informed the Board that two matters needed Board action: 1) the award of two construction contracts; and 2) authorization to construct a distribution system for Cantwell. MR. PERKINS briefed the Board on construction contracts APA-83-C-0017 and APA-83-C-0018. Contract APA-83-C-0017 is for additions and modifications to the Douglas and Teeland substations on the southern portion of the line. The lowest responsive and responsible bidder was Power Constructors Inc., in the amount of \$1,999,935.00. The engineers estimate was \$2,214,000.00. The staff recommendation was award to Power Constructors Inc. MR. HUFMAN moved and COMMISSIONER WUNNICKE seconded that the Board accept the staff recommendation. The motion was passed unanimously by all six voting members present.

MR. PERKINS briefed the Board on Contract APA-83-R-0018, additions and modifications to the Gold Hill and Healy substations. The lowest responsive and responsible bidder was Alaska International Construction in the amount of \$2,400,000.00. The engineer's estimate was \$2,438,000.00. The staff's recommendation was award of Contract APA-83-R-0018 to Alaska International Construction Inc. MR. HUFMAN moved and COMMISSIONER WUNNICKE seconded that the Board accept staff's recommendation. The motion was passed unanimously by all six voting members present.

MR. YOULD presented background on the inclusion of the Cantwell distribution system in the Anchorage/Fairbanks Intertie appropriation. The cost for a distribution system for Cantwell would be approximately \$850,000.00. The staff's recommendation is that the Power Authority retain Golden Valley Electric Association (GVEA) for design and construction of the distribution system. MR. BUD CARLSON, Chairman of the Cantwell Electrification Committee, urged the Board to approve the distribution system for Cantwell. MR. BOB GILBERTSON, a member of the Cantwell Electrification Committee, addressed the Board about the work of the Cantwell Electrification Committee and urged the Board to proceed with construction. SENATOR PAPPY MOSS expressed his appreciation to all those who have worked on the first leg of a statewide power grid and urged the Board to move forward. MR. MIKE KELLY, General Manager of GVEA, informed the Board that GVEA will provide electricity to Cantwell at Fairbanks' rates and GVEA will operate and maintain the Cantwell distribution system at no cost to the Power Authority. MR. ALLISON moved and MR. NUNN seconded that the Power Authority authorize construction of an electrical distribution system for Cantwell as part of the Anchorage/Fairbanks Intertie Project. The motion was passed unanimously by all six voting members present.

ITEM IV Review of Susitna Hydropower Project, consideration of budget allocations, and other actions as appropriate.

MR. YOULD informed the Board that there were two actions involved with this item: 1) the allocation of the FY'84 budget and consideration of the FY'85 budget and 2) the review of project economics due to changed economic conditions and a review of the scope of the project. MR. McDOWELL suggested that the Board defer action on the Susitna economic issues for a special meeting that would consider only Susitna.

MR. YOULD presented background on the Susitna project and the current project update. A review of the project has resulted in the recommendation of design modifications that will reduce the project cost upon which the Board could act and the consideration of other scope changes that will not require Board action until later in the project.

MR. ALLISON asked if the project update would include a reconsideration of the access route. MR. YOULD stated that access would be considered in the future. COMMISSIONER WUNNICKE asked that the access question be included on the next meeting agenda and reports on access made available to the Board. MR. NUNN suggested that Harza-Ebasco provide information on access for Board consideration. COMMISSIONER WUNNICKE suggested that the staff present information on the access selection to the Project Management Subcommittee rather than the full Board.

MR. ALLISON requested that the staff consider reallocating the FY'84 budget to incorporate more socioeconomic and environmental tasks and reduce management and engineering tasks. CHAIRMAN LYON asked that budget considerations for the Susitna FY'85 budget be deferred to the next meeting. MR. HUFMAN stated that he would like to hold a Finance Subcommittee meeting before the next Board meeting.

COMMISSIONER WUNNICKE suggested that the Board consider Susitna and the full Power Authority budget at the next meeting. CHAIRMAN LYON suggested that the Finance Subcommittee meet on October 13, 1983, and the Board meet on October 14, 1983. MR. ALLISON requested that a portion of the meeting be teleconferenced: CHAIRMAN LYON suggested that the meeting begin with teleconferencing from 8 - 10 AM on October 14, to allow people to voice their opinions on the Susitna project, and that the Board meeting begin at 10:30 AM. COMMISSIONER WUNNICKE asked that the Project Management Subcommittee also meet before the next Board meeting to discuss access.

ITEM VIII Consideration of actions for the Delta Line extension.

MR. YOULD briefed the Board on the transmission line extension to the Tanana Loop agricultural area that was the result of a legislative appropriation, Chapter 106, SLA 1983 (CSHB309), Section 162 for \$145,000.00. The project would involve construction of 4.5 miles

of single phase services that would be contracted to GVEA. MR. HUFMAN moved that the Board approve the design and construction of the Tanana Loop line extension, that the staff enter into an operations and maintenance agreement with GVEA, and suggested the operation and maintenance cost would be born by GVEA. MR. McDOWELL seconded the motion. The motion passed with HUFMAN, WUNNICKE, McDOWELL, NUNN, and LYON voting yes, ALLISON voting no.

ITEM XVII Any other business or action which might properly come before the Board of Directors.

MR. YOULD asked for the Board's guidance on three other appropriations: False Pass (\$600,000.00); Pedro Bay (\$500,000.00); and Nikolski (\$200,000.00). MR. McDOWELL stated that each of these appropriations was carefully considered by the Administration and was intended to be implemented this fiscal year. MS. PATRICIA DEJONG, Director of Project Evaluation, discussed these three projects, the appropriations made for each, and the needs of each community. CHAIRMAN LYON recommended that this item be deferred until a future Board meeting.

CHAIRMAN LYON asked that Items XII and XIII be considered together.

ITEM XII Consideration of action with respect to Swan Lake interim financing.

ITEM XIII Review of progress on Power Sales Negotiations.

MR. BENISH reviewed the negotiations that have been held with the City of Ketchikan on arranging refinancing of the \$35 million Swan Lake Note and the status of the refinancing. MR. YOULD indicated that the City of Ketchikan was willing to adopt a resolution separate from the acquisition agreement with the intent language required by the Power Authority. MR. HANK PRENTISS of Ketchikan spoke on behalf of the City about the refinancing of the \$35 million Note. A discussion of the Swan Lake refinancing and the status of negotiation for Power Sales Agreements on the four project pool ensued.

COMMISSIONER WUNNICKE left the meeting at 4:30 PM.

ITEM XV Consideration of action with respect to Bond Counsel.

MR. HUFMAN presented background on the selection of Bond Counsel for the Power Authority. MR. NUNN stated that the Finance Subcommittee's recommendation was that the Board enter into a contract with Wohlforth and Flint through calendar year 1984 with a Request for Proposal for ~~1985~~ service prepared as soon as the staff can reasonably do so. MR. ALLISON moved that the Board approve the

Subcommittee's recommendation. MR. McDOWELL seconded the motion. The motion was passed by all five voting members present.

ITEM XIV Selection of management consultant for audit of the Alaska Power Authority.

MR. McDOWELL briefed the Board on the evaluation process for selecting a management consultant. The Evaluation Committee, with concurrence of MR. McDOWELL, Chairman of the Audit Subcommittee, selected the Joint Venture of C.T. Main Inc., and Arthur Young and Company. MR. McDOWELL moved that the Board instruct the staff to enter into negotiations with the Main/Young team and if negotiations are not successful, that negotiations begin with the second place firm, Touche Ross and Company. MR. HUFMAN seconded the motion. The motion was passed unanimously by all five voting members present.

CHAIRMAN LYON adjourned the meeting at 5:15 PM.

Chairman
Commissioner Dick Lyon

ATTEST

Secretary
Eric P. Yould

ALASKA POWER AUTHORITY

BOARD MEETING

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PATRICK CORER	GOLDEN ASSOC.
H.E. Prunster	City of Healy
Jeff Weltzin	Tanana Chiefs Conference
Gerard Truts	Regulatory Staff
ROBERT FLINT	WILFORTH - FLINT
Heinz W. Norman	A.P.A.
R. G.	USFWS - Anch AK -
Ronald A. Ryzik	DCED
Bill Blossington	ARECA

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B. K. Bedard APA	334 W 5th St.
Tom Beck Goldens Elliott	1107 W 7th 99512
Ann L. ... Daily News	200 Potter Dr 99502
Eric F. Myers	633 Gambell St./Suite B 99501
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III. CONSIDERATION OF ACTIONS WITH RESPECT TO THE SUSITNA HYDRO-ELECTRIC PROJECT.

A. Action Item A

Consideration of incorporation of certain design refinements into the Susitna Hydroelectric Project.

B. Background

The existing configuration of the Susitna Project was adopted in early 1982 through the Board's acceptance of the Acres American Feasibility Report. In keeping with the then existing level of site information, the project layout, design assumptions, and cost estimate were developed based on worst case scenarios. Additional site explorations have been conducted since the completion of the feasibility study. Also, Harza-Ebasco, our design firm, has brought fresh insight to the development of the project.

Harza-Ebasco has come forward with two groups of refinements to the project configuration. The first group, recommended for immediate incorporation, has been scrutinized and favorably endorsed by the Power Authority's External Review Panel and by the Power Authority's cost estimator (augmented by independent cost estimating expertise). The second group consists of several significant refinements that require additional evaluation before adoption by the Board. The consultant recommends their incorporation into the project subject to the outcome of additional evaluation.

C. Issues

The Board has the opportunity to approve the engineer's recommendations in whole or in part, and thereby reduce the estimated project cost. If approved by the Board, the second group of refinements will have to pass the same evaluation process that the first group passed. The refinements are either neutral or beneficial with regard to environmental impact. An expanded discussion can be found in the appended information.

D. Costs

Cost implications are addressed in the Appendices.

E. Options

1. Delegate the decision to the Executive Director.
2. Adopt the engineer's recommendation(s).
3. Disapprove the proposed refinements in part or in total.

F. Recommended Action

Proceed with option No. 2; adopt the engineer's recommendation(s).

G. Appendices

1. Please refer to the separate binder provided with the September 27, 1983, Board Packet, which provides the following information:
 - a. Report on Recommended Project Refinements. (Previously provided.)
 - b. Report on Potential Project Refinements. (Previously provided.)
 - c. Report of the External Review Panel. (Previously provided.)
 - d. Memorandum on the Project Cost Estimate. (Previously provided.)
2. Summary of Recommended Project Refinements.
3. Summary of Potential Project Refinements.

III. CONSIDERATION OF ACTIONS WITH RESPECT TO THE SUSITNA HYDRO-ELECTRIC PROJECT.

Item B

The Board has requested an update on the project, to include information on the present outlook for the project's economic and financial viability.

This item presents the economic assessment and cost of power approximations. A subsequent presentation will address the financial aspects.

Appendix

Executive Summary of Economic and Financial Update, provided as a separate attachment.

III. CONSIDERATION OF ACTIONS WITH RESPECT TO THE SUSITNA HYDROELECTRIC PROJECT.

A. Action Item C

To allocate the FY 1984 Budget appropriation.

B. Background

The FY 1984 Budget allocation to the Power Authority was presented as two elements.

- * \$22 million to be used to pursue a Federal Energy Regulatory Commission (FERC) License Application.

- * An Additional \$6 million for the same purpose, but with the requirement that the Board of Directors affirmatively act on its full or partial use if needed (See Appendix).

Due to the unforeseen requests for information by the Federal Energy Regulatory Commission (FERC) during FY 1983 and administrative constraints on availability of funds, a significant disruption to the FY 1983 work plan occurred. That disruption had a domino effect on the FY 1984 work plan (see Appendix 2). Presently, the FY 84 \$22 million allocation will not fund all program objectives. Application of a portion of the \$6 million element is appropriate if all objectives are to be preserved.

C. Issues

Should the project be reconfigured; and, if so, should it be funded from the unrestricted account or the restricted account.

D. Costs

If FY 84 Project objectives and Project reconfigurations are to be funded from the unrestricted account, \$3,334,000 would be moved from the restricted to the unrestricted account, leaving \$2,666,000 for future unforeseen requirements (see Appendix 3).

If the Project reconfiguration is to be funded from the restricted account, funds would be released in the unrestricted account for application against the project objectives. However, this would commit the restricted account by \$3,245,000. Under this scenario, an

additional \$89,000 would be moved from the restricted account to the unrestricted account to restore the Power Authority contingencies. This would leave a balance of \$2,666,000 in the restricted account (see Appendix 4, Tables 1 and 2).

If reconfiguration is not pursued, no reallocations between accounts would be necessary.

E. Options

1. Approve reallocation of \$3.334 million from the restricted to the unrestricted budget.
2. Approve reallocation of \$89,000 from the restricted to the unrestricted budget and commit the restricted budget by \$3,245,000 for project reconfiguration.
3. Withhold approval of reallocations.

F. Recommended Action

Approve option No. 1 or option No. 2.

G. Appendices

1. Letter from Governor Sheffield to Chairman Lyon of July 28, 1983.
2. FY 83 program changes and their impact on the FY 84 program.
3. Current and proposed FY 84 budget allocations, reconfiguration from unrestricted budget.
4. Current and proposed FY 84 budget allocations, reconfiguration from restricted account.

III. CONSIDERATION OF ACTIONS WITH RESPECT TO THE SUSITNA HYDRO-ELECTRIC PROJECT.

A. Action Item D

Consideration of the FY 1985 budget to be endorsed by the Board for the Susitna Hydroelectric Project.

B. Background

Three budget levels are advanced. They are: \$75M, which advances the project at a rate consistent with an earliest possible construction start of 1986; \$58.4M, which accommodates a probable 1987 construction start; and \$43M, which supports the Federal Energy Regulatory Commission process and environmental programs, but does not fund project design or significant geotechnical investigations.

C. Issues

Implicit in the Board's approval of one of these three budget levels is the assumption that the project will proceed as previously endorsed. Explicit is the rate at which it will proceed.

Approval of some other budget level, which could range from nothing to something less than \$43M, would bring under examination the assumption that the project would proceed as previously endorsed. The family of options this act would call into play have not been assessed.

D. Costs

A breakdown of the budget is shown in the Appendix.

E. Options

1. Approve the \$75M budget level
2. Approve the \$58.4M budget level
3. Approve the \$43.0M budget level
4. Reconsider the basic assumptions as to pursuance of the project and corresponding budget levels.

F. Recommended Action

Provided upon request.

G. Appendix

September 23, 1983, letter from Eric Yould to Robert Huffman with attachments.

III. CONSIDERATION OF ACTIONS WITH RESPECT TO THE SUSITNA HYDRO-ELECTRIC PROJECT.

A. Item E

The Board had previously asked that the Susitna access route be reassessed. The Power Authority initiated that reassessment, but suspended it when it became evident that a construction management consultant would not be engaged in FY 84. This input was considered essential to the conclusions of the update.

At its meeting of September 27, 1983, the Board requested that a review of the original selection be made, and a status report of the update be provided.

B. Appendices

Please refer to Appendix for additional information.

IV. CONSIDERATION OF ACTION WITH RESPECT TO THE BALANCE OF THE ALASKA POWER AUTHORITY BUDGET FOR FY 85 BUDGET.

A. Action Item

Adoption of Alaska Power Authority FY 85 budget request for submittal to Office of Management & Budget (OMB).

B. Background

The FY 85 budget request is due to OMB on October 17, 1983. Power Authority staff has traditionally prepared the budget request for Board review, modification, and adoption. The Project Management Subcommittee is considering alternative schemes for project approval which could possibly eliminate the need for a separate budget approval in future budget cycles. Power Authority staff is presently preparing a Power Project Development Plan that will be ready in December, 1983. This budget request is consistent with basic concepts which will be presented in that plan.

Since the Power Authority is not yet operating under an approved Power Project Development Plan, it is necessary to bring this request to the Board for direction and approval.

The Finance Subcommittee has reviewed the FY 1985 budget request and has made recommendations for consideration by the full Board. Three different levels of effort and funding presented for each project request and the Finance Subcommittee's recommendations are summarized in the Appendix.

C. Issues

- 1) The Board may wish to speed up or slow down the project development process for any of the individual projects in the capital budget request.
- 2) The draft Audit Subcommittee Report recommended an increase in staff to better meet the Power Authority mandate. This budget request, therefore, reflects necessary increases in operating budget at a time when the Governor is requesting across-the-board decreases in agency operating budgets.

D. Costs

Costs are as indicated in the FY 85 request and as estimated in the cash flow for future years.

E. Options

1. Approve budget as submitted by staff.
2. Approve budget as modified by Finance Subcommittee.
3. Approve budget as modified by Finance Subcommittee with additional modifications.
4. Direct staff to make major modifications subject to review at another Board meeting and submit budget then.

F. Recommended Action

As appropriate.

G. Appendices

1. Summary of funding for levels of effort.
2. Finance Subcommittee's recommendations (to be provided at October 14, 1983, Board Meeting).

Draft FY 85 budget request has previously been provided in a separate binder to the Board.