

**HB**

**103**

<TARGET><BILL>HB 103</BILL><SUBJECT>HB  
103</SUBJECT><COMM>HENE27</COMM></TARGET>

**CS FOR HOUSE BILL NO. 103(FIN)**

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - FIRST SESSION

BY THE HOUSE FINANCE COMMITTEE

Offered:

Referred:

Sponsor(s): HOUSE RULES COMMITTEE BY REQUEST OF THE GOVERNOR

**A BILL**

**FOR AN ACT ENTITLED**

1 "An Act relating to the quorum of the Alaska Energy Authority; relating to the powers  
 2 of the Alaska Energy Authority; relating to the acquisition or construction of a Susitna  
 3 River power project by the Alaska Energy Authority; relating to the definition of  
 4 'feasibility study' in the Alaska Energy Authority Act; providing legislative approval for  
 5 certain loans from the power project fund; and providing for an effective date."

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

7 \* **Section 1.** AS 44.83.040(a) is amended to read:

8 (a) The chair and vice-chair of the Alaska Industrial Development and Export  
 9 Authority shall serve as officers of the Alaska Energy Authority. The powers of the  
 10 Alaska Energy Authority are vested in the directors, and four [THREE] directors of  
 11 the authority constitute a quorum. Action may be taken and motions and resolutions  
 12 adopted by the Alaska Energy Authority at a meeting by the affirmative vote of a  
 13 majority of the directors. The directors of the Alaska Energy Authority serve without

1 compensation, but they shall receive the same travel pay and per diem as provided by  
2 law for board members under AS 39.20.180.

3 \* **Sec. 2.** AS 44.83.080 is amended to read:

4 **Sec. 44.83.080. Powers of the authority.** In furtherance of its corporate  
5 purposes, the authority has the following powers in addition to its other powers:

6 (1) to sue and be sued;

7 (2) to have a seal and alter it at pleasure;

8 (3) to make and alter bylaws for its organization and internal  
9 management;

10 (4) to adopt regulations governing the exercise of its corporate powers;

11 (5) to improve, equip, operate, and maintain power projects and bulk  
12 fuel, waste energy, energy conservation, energy efficiency, and alternative energy  
13 facilities and equipment;

14 (6) to issue bonds to carry out any of its corporate purposes and  
15 powers, including the establishment or increase of reserves to secure or to pay the  
16 bonds or interest on them, and the payment of all other costs or expenses of the  
17 authority incident to and necessary or convenient to carry out its corporate purposes  
18 and powers;

19 (7) to sell, lease as lessor or lessee, exchange, donate, convey, or  
20 encumber in any manner by mortgage or by creation of any other security interest, real  
21 or personal property owned by it, or in which it has an interest, when, in the judgment  
22 of the authority, the action is in furtherance of its corporate purposes;

23 (8) to accept gifts, grants, or loans from, and enter into contracts or  
24 other transactions regarding them, with any person;

25 (9) to deposit or invest its funds, subject to agreements with  
26 bondholders;

27 (10) to enter into contracts with the United States or any person and,  
28 subject to the laws of the United States and subject to concurrence of the legislature,  
29 with a foreign country or its agencies, for the construction, financing, acquisition,  
30 operation, and maintenance of all or any part of a power project or bulk fuel, waste  
31 energy, energy conservation, energy efficiency, or alternative energy facilities or

1 equipment, either inside or outside the state, and for the sale or transmission of power  
2 from a project or any right to the capacity of it or for the security of any bonds of the  
3 authority issued or to be issued for the project;

4 (11) to enter into contracts with any person and with the United States  
5 [,] and, subject to the laws of the United States and subject to the concurrence of the  
6 legislature, with a foreign country or its agencies for the purchase, sale, exchange,  
7 transmission, or use of power from a project, or any right to the capacity of it;

8 (12) to apply to the appropriate agencies of the state, the United States,  
9 and a foreign country and any other proper agency for the permits, licenses, or  
10 approvals as may be necessary, to **acquire, construct,** maintain, and operate power  
11 projects in accordance with the licenses or permits, and to obtain, hold, and use the  
12 licenses and permits in the same manner as any other person or operating unit;

13 (13) to enter into contracts or agreements with respect to the exercise  
14 of any of its powers, and do all things necessary or convenient to carry out its  
15 corporate purposes and exercise the powers granted in this chapter;

16 (14) to recommend to the legislature

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

20 (B) an appropriation from the general fund

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

22 or

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

25 (15) to carry out the powers and duties assigned to it under AS 42.45;

26 (16) to make grants or loans to any person and enter into contracts or  
27 other transactions regarding the grants or loans;

28 (17) to promote energy conservation, energy efficiency, and alternative  
29 energy through training and public education;

30 **(18) to acquire a Susitna River power project, whether by**  
31 **construction, purchase, gift, or lease, including the acquisition of property rights**

1 **and interests by eminent domain under AS 09:**

2 **(19) to perform feasibility studies and engineering and design with**  
3 **respect to power projects.**

4 \* **Sec. 3.** AS 44.83.396(a) is amended to read:

5 (a) A power project that was acquired or constructed **under AS 44.83.080(18)**  
6 **or** as part of the former energy program for Alaska is owned, and shall be  
7 administered, by the authority.

8 \* **Sec. 4.** AS 44.83.990(3) is amended to read:

9 (3) "feasibility study"

10 (A) means a study conducted for the purpose of establishing the  
11 economic and environmental practicality of completing a proposed power  
12 project [UNDER FORMER AS 44.83.181];

13 (B) includes engineering and design work to meet the  
14 requirements for submission of a license application for a proposed new  
15 project to the Federal Energy Regulatory Commission;

16 \* **Sec. 5.** The uncodified law of the State of Alaska is amended by adding a new section to  
17 read:

18 **LEGISLATIVE APPROVAL OF LOANS FROM THE POWER PROJECT FUND.**

19 (a) Provided the Alaska Energy Authority approves a loan for the Haida Energy, Inc.,  
20 Reynolds Creek hydroelectric project, the legislature authorizes the Alaska Energy Authority  
21 to loan an amount not to exceed \$11,000,000 from the power project fund (AS 42.45.010) for  
22 the Haida Energy, Inc., Reynolds Creek hydroelectric project in addition to the loan  
23 authorized by sec. 6, ch. 70, SLA 2010.

24 (b) Provided the Alaska Energy Authority approves a loan for the Cordova Electric  
25 Cooperative Humpback Creek hydroelectric project, the legislature authorizes the Alaska  
26 Energy Authority to loan an amount not to exceed \$5,000,000 from the power project fund  
27 (AS 42.45.010) for the Cordova Electric Cooperative Humpback Creek hydroelectric project.

28 (c) Subsections (a) and (b) of this section constitute legislative approval under  
29 AS 42.45.010(j) for a loan from the fund that exceeds \$5,000,000.

30 \* **Sec. 6.** This Act takes effect immediately under AS 01.10.070(c).

# FISCAL NOTE

**STATE OF ALASKA**  
**2011 LEGISLATIVE SESSION**

Fiscal Note Number \_\_\_\_\_  
 Bill Version CSHB 103(FIN)  
 () Publish Date \_\_\_\_\_

Identifier (file name) HB103-CCED-AIDEA-04-11-11 Dept. Affected DCCED  
 Title Powers of Alaska Energy Authority Appropriation Alaska Industrial Development & Export Authority  
 Allocation Alaska Industrial Development & Export Authority  
 Sponsor Rules by Request of the Governor  
 Requester House Finance Committee OMB Component Number 1234

**Expenditures/Revenues** (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information						
		FY 2012	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
<b>OPERATING EXPENDITURES</b>								
Personal Services	1,125.0							
Travel	0.0							
Services	0.0							
Commodities	0.0							
Capital Outlay	0.0							
Grants								
Miscellaneous								
<b>TOTAL OPERATING</b>	<b>1,125.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

<b>CAPITAL EXPENDITURES</b>								
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<b>CHANGE IN REVENUES</b>								
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**FUND SOURCE** (Thousands of Dollars)

1002 Federal Receipts								
1003 GF Match								
1004 GF								
1005 GF/Program Receipts								
1007 I/A Receipts	1,125.0							
Other (please identify)								
<b>TOTAL</b>	<b>1,125.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

Estimate of any current year (FY2011) cost \_\_\_\_\_

**POSITIONS**

Full-time	8.0							
Part-time								
Temporary								

**Why this fiscal note differs from previous version (if initial version, please note as such)**

This Fiscal Note estimates employee costs for Susitna Project Office and assumes that new staff are AIDEA employees contracted to the Alaska Energy Authority.

Prepared by Amy Adler  
 Division Alaska Energy Authority  
 Approved by Susan K. Bell, Commissioner  
Commerce, Community, and Economic Development

Phone 771-3013  
 Date/Time 4/11/11 5:00 PM  
 Date 4/11/2011

## FISCAL NOTE

STATE OF ALASKA  
2011 LEGISLATIVE SESSION

BILL NO. CSHB103(FIN)

### Analysis

This legislation expands the Alaska Energy Authority's powers to allow AEA to acquire a Susitna River power project.

This fiscal note reflects the costs to AIDEA for the increase in personal services related to AEA's establishment of a project office in pursuit of constructing and owning the Susitna Hydro project.

**PERSONAL SERVICES: \$1,125.0** - Increased to include 8 staff for the first year as follows:

Project Manager Rg 27

Environmental Manager Rg 26

Administrative Assistant Rg 12

Project Accountant Rg 18

Financial/Budget Analyst Rg 24

Public Outreach/Legislation Liaison Rg 23

Procurement Manager Rg 24

Data System Specialist Rg 20

The funding source is an increase to I/A receipts from the Alaska Energy Authority.

See also the related Fiscal Note for the costs to AEA Statewide Project Development component to establish a project office for the Susitna Hydro project.

# FISCAL NOTE

STATE OF ALASKA  
2011 LEGISLATIVE SESSION

Fiscal Note Number \_\_\_\_\_  
Bill Version CSHB 103(FIN)  
( ) Publish Date \_\_\_\_\_

Identifier (file name) HB103-CCED-AEA-04-11-11 Dept. Affected DCCED  
Title Powers of Alaska Energy Authority Appropriation Alaska Energy Authority  
Allocation Statewide Project Development  
Alternative Energy and Efficiency  
Sponsor Rules by Request of the Governor OMB Component Number 2888  
Requester House Finance Committee

## Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information						
		FY 2012	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
<b>OPERATING EXPENDITURES</b>								
Personal Services	0.0		0.0	0.0	0.0	0.0	0.0	***
Travel	0.0		0.0	0.0	0.0	0.0	0.0	***
Services	1,350.0		1,413.5	1,476.1	1,538.1	1,606.8		***
Commodities	0.0		0.0	0.0	0.0	0.0		***
Capital Outlay	413.0		5.0	5.0	5.0	5.0		***
Grants								
Miscellaneous								
<b>TOTAL OPERATING</b>	<b>1,763.0</b>	<b>0.0</b>	<b>1,418.5</b>	<b>1,481.1</b>	<b>1,543.1</b>	<b>1,611.8</b>		<b>***</b>

<b>CAPITAL EXPENDITURES</b>								
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<b>CHANGE IN REVENUES</b>								
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## FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts								
1003 GF Match								
1004 GF								
1061 CIP Receipts	1,763.0		1,418.5	1,481.1	1,543.1	1,611.8		***
1037 GF/Mental Health								
Other (please identify)								
<b>TOTAL</b>	<b>1,763.0</b>	<b>0.0</b>	<b>1,418.5</b>	<b>1,481.1</b>	<b>1,543.1</b>	<b>1,611.8</b>		<b>***</b>

Estimate of any current year (FY2011) cost \_\_\_\_\_

## POSITIONS

Full-time								
Part-time								
Temporary								

Why this fiscal note differs from previous version (if initial version, please note as such)

This Fiscal Note estimates employee costs for Susitna Project Office and assumes that new staff are AIDEA employees contracted to the Alaska Energy Authority.

Prepared by Amy Adler  
Division Alaska Energy Authority  
Approved by Susan K. Bell, Commissioner  
Commerce, Community, and Economic Development

Phone 771-3013  
Date/Time 4/11/11 5:00 PM  
Date 4/11/2011

FISCAL NOTE

STATE OF ALASKA  
2011 LEGISLATIVE SESSION

BILL NO. CSHB103(FIN)

**Analysis**

This legislation expands the Alaska Energy Authority's powers to allow AEA to acquire a Susitna River power project.

This fiscal note reflects the costs to AEA to establish a project office in pursuit of constructing and owning the Susitna Hydro project.

**CONTRACTUAL: \$1,350.0**

**\$1,125.0 Contractual Services** for 8 staff (AIDEA employees) for the first year as follows:

Project Manager - Rg 27  
Environmental Manager - Rg 26  
Administrative Assistant - Rg 12  
Project Accountant - Rg 18  
Financial/Budget Analyst - Rg 24  
Public Outreach/Legislation Liaison - Rg 23  
Procurement Manager - Rg 24  
Data System Specialist - Rg 20

*Note: Personal Services Costs are reflected in the related Fiscal Note for the AIDEA component.*

**\$225.0 Contractual Services** for Building lease, and G&A costs for Project Office. Cost estimates include a cost associated with contract labor personnel.

\$ 189.0      Annual Lease - 4,500 sq. ft. (250'/pp x 14 +1000') x \$3.50 per sq. ft./mo. x 12 mo.'s.  
\$ 36.0      G&A Expense: \$3.6 per person - \$3.6 x 10 (8 staff + 2 contractors).  
\$ 225.0

**EQUIPMENT/FURNITURE: \$413.0** - Increase for first year Project Office set up costs. This cost estimate assumes all equipment and furniture purchases in the first year as well as one time only moving expenses and tenant improvements.

\$ 28.0      IT Equipment \$2.0 per person x 14 (8 staff + 6 contractors). Assumes all equipment purchases in first year for project office (including contract labor needs).  
\$ 385.0      Tenant Improvement \$315.0 (\$70 x 4,500 sq. ft.); Moving Expenses \$21.0; and Furniture \$49.0  
\$ 413.0

*Note: Tenant Improvement costs will vary depending on building configuration and may also be negotiated as part of a long term lease.*

\*\*\* Costs for FY 2017 indeterminate

**CSHB 103(ENE)**  
**Sectional Analysis - Sequential**

**Section 1:** Would expressly authorize the legislature to appropriate amounts in the Railbelt energy fund to capitalize the new Railbelt energy fund, called the Alaska Railbelt energy fund, created by Section 3 of the bill. This would allow amounts to be appropriated and transferred from the existing Railbelt Energy fund into the new fund.

**Section 2:** Would place in the exempt service the executive director and other staff of AEA.

**Section 3:** Would establish the new Railbelt energy fund, called the Alaska Railbelt energy fund of AEA. The legislature may appropriate money from the fund for feasibility studies, license, permit, acquire or construct, or to make grants for power projects and electric transmission lines and interties that serve the Railbelt region.

**Section 4:** Would increase from 3 to 4 the quorum requirement for meetings of the AEA board of directors in reaction to statutory amendments made in 2010. Those amendments increased the size of the AIDEA board from 5 to 7. The AIDEA board serves as the board of AEA. The proposed amendment would correct the quorum for meetings of AEA's board of directors.

**Section 5:** Would empower AEA to hire employees and advisors in the exempt service. This power to hire employees would be equivalent to powers the Alaska Industrial Development and Export Authority (AIDEA) currently possesses.

**Section 6:** Would expand AEA's powers to allow AEA to acquire and construct new projects, and to conduct feasibility studies of new power projects.

**Sections 7:** Would empower AEA to establish subsidiary corporations to support the acquisition, construction, ownership, and operation of power projects, and thereby potentially limit potential liability of AEA or strengthen the financial viability of a project.

**Section 8:** Would enable an AEA subsidiary to exercise powers currently granted to AEA under AS 44.83.090. For example, an AEA subsidiary would be exempt from regulation by the Regulatory Commission of Alaska (RCA) to the same extent as AEA is exempt (but utilities contracting with the AEA subsidiary would not be exempted, and RCA would still need to approve power sales agreements between the AEA subsidiary and the Railbelt utilities).

**Section 9:** Would provide that AEA must exercise for new power projects, existing statutory authority managing power projects. This obligation is currently limited to power projects from the pre-1993, "former energy program for Alaska."

**Section 10:** Would make AS 44.83.396 apply to AEA subsidiaries that own power projects. AS 44.83.393 addresses how AEA administers the power project and contracts for operators, and includes provisions providing for AEA to contract with qualified utilities for the operation of the project. The amendment in Section 10 will impose these same duties on a subsidiary of AEA formed for a power project.

**Section 11:** Would amend the definition of "feasibility study" under AS 44.83.990(3) so that the term is not limited to only pre-1993 power projects.

**Section 12:** Would repeal the existing Railbelt energy fund, AS 37.05.520. This repeal would become effective under Section 15 when the balance of the fund is appropriated to AEA for deposit into the new Alaska Railbelt energy fund (created by Section 3), or appropriated and expended on projects.

**Section 13:** Would provide transitional provisions to address the status of existing employees who perform AEA functions with the Alaska Industrial Development Export Authority. AEA has not possessed the statutory authority to hire its own staff since the reorganization of AEA affected by 1993 legislation (ch. 18, SLA 1993). Since the 1993 legislation, AEA programs have been implemented by AIDEA employees. AEA's executive director, for example, is an employee of AIDEA, but is independent from the executive director of AIDEA. Sections 2 and 5 would authorize AEA to hire its own employees, and thereby assume greater control over the implementation of AEA programs. Section 13 provides for the transition of these employees from AIDEA to AEA.

**Section 14:** Would instruct the revisor of statutes to amend the statutory heading of AS 44.83.040 to reflect that the section would also address AEA employees.

**Section 15:** Would make the repeal of the existing Railbelt energy fund, AS 37.05.520, contingently effective when the balance of the fund is appropriated to AEA for deposit into the new Alaska Railbelt energy fund (created by Section 3), or appropriated and expended on projects.

**Section 16:** Would provide for an immediate effective date, excepting the contingent effective date for repeal of the existing Railbelt energy fund.

Fiscal Note Numbers:  
 Support for Fiscal Note Computations (Thousands of Dollars).  
 Prepared by Alaska Energy Authority  
 Updated January 25, 2011

Component: Component Number:	AIDEA (1234)	AIDEA Facilities (2361)	AIDEA RDU Total	FN 1 of 2	FN 2 of 2	AEA Rural Energy Ops (2600)	AEA PCE (2602)	AEA Owned Facilities (2699)	AEA RDU Total
				AEA Statewide Project Devel., AEE (2888)	AEA Statewide Project Devel., AEE (2888)				
<b>Operating Expenditures:</b>									
71000 Personal Services	(5,578.7)		(5,578.7)	5,638.7	1,125.0				6,763.7
72000 Travel			0.0						0.0
73000 Contractual	341.6		341.6	(2,311.1)	238.0	(2,329.3)	(160.0)	(25.0)	(4,587.4)
74000 Supplies			0.0						0.0
75000 Land & Structures/Equipment			0.0		413.0				413.0
77000 Grants & Claims			0.0						0.0
78000 Miscellaneous			0.0						0.0
<b>Total Operating</b>	<b>(5,237.1)</b>	<b>0.0</b>	<b>(5,237.1)</b>	<b>3,327.6</b>	<b>1,776.0</b>	<b>(2,329.3)</b>	<b>(160.0)</b>	<b>(25.0)</b>	<b>2,589.3</b>
<b>Funding Source</b>									
1002 Federal Receipts			0.0						0.0
1004 General Fund			0.0	1,388.4		(816.7)	(160.0)		411.7
1007 I/A Receipts	(5,379.9)	142.8	(5,237.1)	341.6					341.6
1061 CIP Receipts			0.0	1,512.6	1,776.0	(1,512.6)			1,776.0
1062 Power Project Fund			0.0						0.0
1074 Bulk Fuel Revolving Loan Fun			0.0	60.0					60.0
1102 AIDEA Receipts	142.8	(142.8)	0.0						0.0
1107 AEA Corporate Receipts			0.0	25.0				(25.0)	0.0
1108 Statutory Desig. Program Rcpts			0.0						0.0
1173 Miscellaneous Earnings			0.0						0.0
1210 Renewable Energy Fund			0.0						0.0
<b>Total</b>	<b>(5,237.1)</b>	<b>0.0</b>	<b>(5,237.1)</b>	<b>3,327.6</b>	<b>1,776.0</b>	<b>(2,329.3)</b>	<b>(160.0)</b>	<b>(25.0)</b>	<b>2,589.3</b>
<b>Positions</b>									
Transfer	(42.0)		(42.0)	42.0					42.0
New positions	1.0		1.0	1.0	8.0				9.0
Net position change	(41.0)		(41.0)	43.0	8.0				51.0
<b>Total positions</b>			<b>36.0</b>						<b>61.0</b>

**Analysis:**

**ALASKA INDUSTRIAL DEVELOPMENT & EXPORT AUTHORITY - AIDEA**

**Personal Services: TOTAL \$(5,578.7)**

\$ (5,578.7) Decrease in personal services costs with transfer of 42 employees to Alaska Energy Authority.

\$ - Request one new position for AIDEA - Accountant IV, Range 20, to accommodate anticipated increased work load. Estimated cost is \$110.0  
 No net increase in AIDEA Receipts requested - Cost offset by receipts from AEA for facilities costs. See net change in receipts for AIDEA Facilities Component.  
 Net reduction in position count to AIDEA is 41.

**Contractual Services: TOTAL \$341.6**

\$ 341.6 Contractual cost of AEA Employees providing shared services (Operations Department) to AIDEA.

**\$ (6,237.1) Net Change to Expenditures**

**ALASKA INDUSTRIAL DEVELOPMENT & EXPORT AUTHORITY - Facilities Maintenance**

Currently AIDEA absorbs the building operating costs. This fiscal note estimates the impact to AEA and AIDEA if AEA reimbursed AIDEA for their pro rata share.

Facility Operating Cost = \$3.4 per PCN per year x 42 employees = \$142.8

**Contractual Services:** No net impact to expenditure line. Reimbursement of actual costs impacts only the revenue source.

**Impact to Fund Source:** Reduces AIDEA receipts and Increases I/A receipts. Transfer AIDEA receipt authority to operations component

**ALASKA ENERGY AUTHORITY - Statewide Project Development, Alternative Energy and Efficiency**  
FN 1 of 2

**Personal Services: TOTAL \$ 5,638.7**

Increase in personal services costs with transfer of approximately 42 employee from AIDEA. All employee costs will be accounted for in one component - Statewide Project Development, AEE. This transfer reduces contractual services in several AEA components and increases personal services in this component.

\$	160.0	Approximately 2 FTE's providing support to the AEA PCE Component - GF funds.
\$	2,207.5	Approximately 16 FTE's providing support to the AEA Rural Energy Operations Component - GF and CIP receipts.
\$	2,320.0	Approximately 17 FTE's providing support to the AEA Statewide Project Development & AEE Component - GF and CIP receipts.
\$	891.2	Approximately 7 FTE's who are defined as shared service. This includes 6 positions that report to the Deputy Director of Operations and one engineer that works on both AIDEA and AEA projects.
\$	5,578.7	
\$	60.0	Request one new position for AEA - Loan Officer R20. Request additional BF receipts of \$60.0 with remaining funds through current funding levels.
\$	5,638.7	

**Contractual Services: TOTAL \$ (2,311.1)**

\$	(2,320.0)	Decrease Contractual Services and transfer cost to Personal Services, Approximately 17 FTE's.
\$	(285.1)	Operations - Shared Services. Decrease Contractual Services and transfer cost to Personal Services.
\$	142.8	Facility Operating Cost = \$3.4 per PCN per year x 42 employees = \$142.8
\$	151.2	G&A Cost Currently paid by AIDEA = \$3.6 per PCN per year x 42 employees = \$151.2
\$	(2,311.1)	

**\$ 3,327.6** Net change to expenditures

**ALASKA ENERGY AUTHORITY - Statewide Project Development, Alternative Energy and Efficiency**  
FN 2 of 2

**Personal Services: TOTAL \$ 1,125.0**

Increased to include 8 staff for the first year as follows.

\$	210.0	Project Manager Rg 27
\$	175.0	Environmental Manager Rg 26
\$	70.0	Administrative Assistant Rg 12
\$	100.0	Project Accountant Rg 18
\$	155.0	Financial/Budget Analyst Rg 24
\$	140.0	Public Outreach/Legislative Liaison Rg 23
\$	155.0	Procurement Manager Rg 24
\$	120.0	Data Systems Specialist Rg 20
\$	1,125.0	

**Contractual Services: TOTAL \$ 238.0**

\$	189.0	Annual Lease - 4,500 sq. ft. x \$3.50 per sq. ft./mo. X 12 mo.'s
\$	13.0	Utilities - \$1.3 per person x 10 (8 staff + 2 contractors)
\$	36.0	G&A Expense: \$3.6 per person - \$3.6 x 10 (8 staff + 2 contractors)
\$	238.0	

**Equipment/Furniture: TOTAL \$ 413.0**

\$	28.00	IT Equipment \$2.0 per person per year x 14 (8 staff + 6 contractors). Assumes all equipment purchases in 1st yr for project office (including contract labor needs).
\$	385.00	Tenant Improvement \$315.0 (\$70 x 4,500 sq ft); Moving Expenses \$21.0 and Furniture 49.0
\$	413.00	

**ALASKA ENERGY AUTHORITY - Rural Energy Operations**

Personal Services: No Impact.

Contractual Services: TOTAL \$ (2,329.3)

\$ (2,207.5) Reduce cost contractual costs of employee services and transfer out to Statewide component. Approximately 16 FTE's.  
\$ (121.8) Reduce contractual costs of Operations employees who provide shared services. Transfer cost to Statewide component personal services.  
\$ (2,329.3)

**ALASKA ENERGY AUTHORITY - Power Cost Equalization**

Personal Services: No Impact.

Contractual Services: TOTAL \$ (160.0)

\$ (160.0) Reduce cost contractual costs of employee services and transfer out to Statewide component. Approximately 2 FTE's.  
\$ (160.0)

**ALASKA ENERGY AUTHORITY - Owned Facilities**

Personal Services: No Impact.

Contractual Services: TOTAL \$ (25.0)

\$ (25.0) Reduce cost contractual costs of employee services and transfer out to Statewide component. Approximately 15% of 1 FTE.  
\$ (25.0)

**Summary of Net Increase in GF Request for AEA:**

\$ 76.9 Shared Services - IT Support not previously paid for by AEA  
\$ 40.8 Shared Services -HR Support not previously paid for by AEA  
\$ 284.0 O/H Facility Operating Cost/G&A not previously paid for by AEA  
\$ 411.7

STATE CAPITOL  
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Governor Sean Parnell  
STATE OF ALASKA

January 14, 2011

The Honorable Mike Chenault  
Speaker of the House  
Alaska State Legislature  
State Capitol, Room 208  
Juneau, AK 99801-1182

Dear Speaker Chenault,

Under the authority of Article III, Section 18, of the Alaska Constitution, I am transmitting a bill that would authorize the Alaska Energy Authority (AEA) to move forward on pursuing a large hydroelectric project to supply much needed energy to Interior and Southcentral Alaska. The bill would authorize AEA to acquire, construct, own, and operate new power projects; create a new Alaska Railbelt energy fund as a fund of AEA; repeal the existing Railbelt energy fund (AS 37.05.520) after the balance of the existing fund is appropriated and transferred into the new fund or appropriated and expended for other purposes; address quorum requirements of the AEA board; and allow for the adoption of regulations to govern the procurement of supplies, services, professional services, and construction.

Alaska's State Energy Policy target is to reach 50 percent of its electricity generation through renewable energy by 2025. To achieve this goal, we must move aggressively and invest now to develop capacity for a major hydroelectric project on the Susitna River. This legislation allows AEA to continue with environmental and feasibility studies positioning the State to seek preliminary approval from the Federal Energy Regulatory Commission for a project that will provide half of Southcentral's electricity demand.

Alaska must invest now to create new opportunities for economic development and jobs for Alaskans. A Susitna Dam hydroelectric project will provide an important and much needed supply of renewable energy for Alaskan homes and businesses while creating jobs for Alaskans. A sectional analysis is provided with this packet.

I urge your prompt and favorable action on this important measure.

Sincerely,

A handwritten signature in black ink that reads "Sean Parnell".

Sean Parnell  
Governor

Enclosure

House Bill No. 103

AMENDMENT

# 1

OFFERED IN THE HOUSE  
TO: HB 103

BY REPRESENTATIVES FOSTER AND  
PRUITT

- 1 Page 4, line 22:
- 2 Delete "construction."

AMENDMENT

#2

OFFERED IN THE HOUSE  
TO: HB 103

BY REPRESENTATIVES FOSTER AND  
PRUITT

- 1 Page 3, line 4:
- 2 Delete "authority may use"
- 3 Insert "legislature may appropriate"

AMENDMENT #3

OFFERED IN THE HOUSE  
TO: HB 103

BY REPRESENTATIVE TUCK

- 1 Page 1, lines 1 - 2:
- 2 Delete "relating to the procurement of supplies, services, professional services,
- 3 and construction for the Alaska Energy Authority;"
- 4
- 5 Page 1, line 11, through page 2, line 13:
- 6 Delete all material.
- 7
- 8 Page 2, line 14:
- 9 Delete "Sec. 2"
- 10 Insert "Section 1"
- 11
- 12 Renumber the following bill sections accordingly.
- 13
- 14 Page 7, line 8:
- 15 Delete "Section 13"
- 16 Insert "Section 12"
- 17
- 18 Page 7, line 10:
- 19 Delete "sec. 4"
- 20 Insert "sec. 3"
- 21
- 22 Page 7, line 14:
- 23 Delete "sec. 16"
- 24 Insert "sec. 15"

AMENDMENT

#4

OFFERED IN THE HOUSE  
TO: HB 103

BY REPRESENTATIVE PETERSEN

1 Page 1, line 5:

2 Delete "regarding employees and"

3 Insert "and to"

4

5 Page 5, line 25, following "projects":

6 Insert ";

7 (20) to carry out and be guided by the state energy policy  
8 described in AS 44.99.115"

AMENDMENT #5

OFFERED IN THE HOUSE  
TO: HB 103

BY REPRESENTATIVE PETERSEN

- 1 Page 2, line 23:  
2 Delete "and other staff"  
3
- 4 Page 3, line 22:  
5 Delete "and employees of the authority are"  
6 Insert "of the authority is"  
7
- 8 Page 7, line 3, following "EMPLOYEES."  
9 Insert "(a)"  
10
- 11 Page 7, following line 7:  
12 Insert a new subsection to read:  
13 "(b) Notwithstanding any other provision of law, staff members of the Alaska  
14 Industrial Development and Export Authority who will be transferred as staff to the  
15 Alaska Energy Authority and who are employed as of the effective date of this section  
16 (1) shall immediately be appointed to the classified service upon their  
17 transfer;  
18 (2) may not have a reduction in pay  
19 (A) solely because of the assignment described in this  
20 subsection; or  
21 (B) if the employee is assigned to a position in the classified  
22 service that is classified at a lower rate of pay than that received when the  
23 position was assigned to the exempt service:

1                   (3) shall retain the step status previously held immediately before the  
2 transfer and shall be entitled to receive any merit or cost-of-living salary increases  
3 they would receive had they not been transferred."

AMENDMENT

#6

OFFERED IN THE HOUSE  
TO: HB 103

BY REPRESENTATIVE PETERSEN

1 Page 1, line 4:

2 Following "quorum":

3 Insert "and membership"

4 Following "Authority;":

5 Insert "establishing an Alaska Energy Authority Advisory Board;"

6

7 Page 3, following line 9:

8 Insert a new bill section to read:

9 "\*\* Sec. 5. AS 44.83.030 is amended to read:

10 **Sec. 44.83.030. Membership of the authority.** The directors of the Alaska  
11 Energy Authority are the members of the Alaska Industrial Development and Export  
12 Authority and two members of the advisory board elected under AS 44.83.055."

13

14 Renumber the following bill sections to read.

15

16 Page 3, following line 23:

17 Insert a new bill section to read:

18 "\*\* Sec. 8. AS 44.83 is amended by adding a new section to article 1 to read:

19 **Sec. 44.83.055. Alaska Energy Authority Advisory Board.** (a) The Alaska  
20 Energy Authority Advisory Board is established and is made up of seven members  
21 appointed by the directors of the authority. The advisory board members shall serve  
22 staggered three-year terms and may be removed by the directors of the authority for  
23 cause. The advisory board shall consist of three public members and four other

1 members qualified as follows:

2 (1) one member with expertise in operation of power plants serving  
3 urban areas of the state;

4 (2) one member with expertise in providing energy to rural areas of the  
5 state;

6 (3) one member with expertise in energy efficiency improvements;

7 (4) one member with expertise in consumer and ratepayer advocacy.

8 (b) Each year, the advisory board shall elect two of its members to serve as  
9 voting members of the board of directors of the authority under AS 44.83.030.

10 (c) The advisory board shall advise the board of directors and executive  
11 director of the authority on how to fulfill most efficiently and effectively the corporate  
12 purpose of the authority in the best interest of the residents of the state.

13 (d) The advisory board may create subcommittees to consider specific projects  
14 and programs and may appoint persons not serving on the advisory board to serve on a  
15 subcommittee.

16 (e) The members of the advisory board serve without compensation but shall  
17 receive the same travel pay and per diem as provided by law for members of boards  
18 and commissions under AS 39.20.180."

19

20 Renumber the following bill sections accordingly.

21

22 Page 6, following line 26:

23 Insert a new bill section to read:

24 \* **Sec. 16.** The uncodified law of the State of Alaska is amended by adding a new section to  
25 read:

26 INITIAL APPOINTMENTS AND TERMS. Notwithstanding AS 44.83.055(a), as  
27 enacted by sec. 8 of this Act, the terms of the first members of the Alaska Energy Authority  
28 Advisory Board are as follows:

29 (1) three members shall be appointed for a three-year term;

30 (2) three members shall be appointed for a two-year term; and

31 (3) one member shall be appointed for a one-year term."

1

2 Renumber the following bill sections accordingly.

3

4 Page 7, line 8:

5 Delete "Section 13"

6 Insert "Section 15"

7

8 Page 7, line 14:

9 Delete "sec. 16"

10 Insert "sec. 19"

**HB 103**

**An Act relating to the procurement of supplies, services, professional services, and construction for the Alaska Energy Authority; establishing the Alaska Railbelt energy fund and relating to the fund, relating to and repealing the Railbelt energy fund; relating to the quorum of the board of the Alaska Energy Authority; relating to the powers of the Alaska Energy Authority regarding employees and the transfer of certain employees of the Alaska Industrial Development Export Authority to the Alaska Energy Authority; relating to acquiring or constructing certain projects by the Alaska Energy Authority; and relating to the definition of "feasibility study" in the Alaska Energy Authority Act; providing an effective date.**

**Sectional Analysis**

<b>Section</b>	<b>Analysis</b>
1	Amends AS 36.30.015(f) (the procurement code) to allow AEA to adopt regulations to govern AEA's procurement of supplies, services and construction. AEA regulations will be required to reflect competitive bidding principles; AEA would be given authority similar to other state corporations such as AHFC and KABATA
2	Amends AS 37.05.520 to explicitly allow the legislature to appropriate money from the Railbelt energy fund to a newly created Alaska Railbelt energy fund (AS 42.45.035)
3	Amends AS 39.25.110 to allow AEA to hire an executive director and other staff.
4	Adds new section 42.45.035 creating the Alaska Railbelt energy fund as a separate fund in AEA; Department of Revenue will be the fiduciary; allows AEA to use money in the fund for power projects, transmission lines and interties serving the Railbelt region.
5	Amends AS 44.83.040 (a) by defining that four, not three, AEA directors constitutes a quorum. The Board of Directors was expanded from five to seven members in 2010.
6	Adds new subsection AS 44.83.040 (e) allowing the authority to appoint persons as staff in the exempt service under AS 39.25
7	Amends AS 44.83.080 by allowing AEA to acquire and construct new power projects and to perform feasibility studies, and engineering and design, with respect to power projects
8	Adds new section AS 44.83.085 allowing AEA to create subsidiary corporations for the purpose of acquiring, constructing, owning, maintaining, operating, or financing power projects.
9	Adds new subsection AS 44.83.090 (c) allowing created subsidiaries to exercise powers granted to AEA.

10	Amends AS 44.83.396(a) to include how AEA administers newly acquired power projects in the operation of a power project
11	Adds new subsection AS 44.83.396 (f) to include subsidiary owned projects in the operation of a power project
12	Amends AS 44.83.990(3) by defining feasibility study to include new power projects
13	Repeals the Railbelt energy fund – AS 37.05.520
14	Revisor's instructions
15	Adds new section to uncodified law relating to the transfer of certain employees from AIDEA to AEA by providing a deadline of 12/31/2011
16	Provides a conditional effective date to the repeal of the Railbelt energy fund which will occur when the balance of the fund is appropriated and transferred to the new Alaska Railbelt Energy Fund or appropriated and expended for other purposes.
17	Immediate effective date for all sections except as provided in section 16

Prepared by AEA

January 26, 2011

# FISCAL NOTE

**STATE OF ALASKA**  
**2011 LEGISLATIVE SESSION**

Fiscal Note Number 1  
 Bill Version HB 103  
 (H) Publish Date 1/18/11

Identifier (file name) 1822-CED-AEA-12-10-10  
 Title Powers of Alaska Energy Authority  
 Sponsor Rules Committee  
 Requester Request of the Governor  
 Dept. Affected DCCED  
 Appropriation AIDEA  
 Allocation Alaska Industrial Development & Export Authority  
 OMB Component Number 1234

**Expenditures/Revenues** (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information						
		FY 2012	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
<b>OPERATING EXPENDITURES</b>								
Personal Services	(5,578.7)							
Travel								
Contractual	341.6							
Supplies								
Equipment								
Land & Structures								
Grants & Claims								
Miscellaneous								
<b>TOTAL OPERATING</b>	<b>(5,237.1)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

<b>CAPITAL EXPENDITURES</b>								
-----------------------------	--	--	--	--	--	--	--	--

<b>CHANGE IN REVENUES</b>								
---------------------------	--	--	--	--	--	--	--	--

**FUND SOURCE** (Thousands of Dollars)

	FY 2012	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
1004 GF							
1007 I/A Receipts	(5,379.9)						
1061 CIP Receipts							
1102 AIDEA Receipts	142.8						
1074 Bulk Fuel							
1107 AEA Corporate Receipts							
<b>TOTAL</b>	<b>(5,237.1)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

Estimate of any current year (FY2011) cost \_\_\_\_\_

**POSITIONS**

	FY 2012	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Full-time	(41.0)						
Part-time							
Temporary							

**Why this fiscal note differs from previous version**

Prepared by Sara Fisher-Goad, Deputy Director - Operations  
 Division Alaska Industrial Development & Export Authority  
 Approved by Susan K. Bell, Commissioner  
Commerce, Community, & Economic Development

Phone 907-771-3012  
 Date/Time 1/12/11 5:00 PM  
 Date 1/13/2011

FISCAL NOTE #1

STATE OF ALASKA  
2011 LEGISLATIVE SESSION

BILL NO. HB 103

**Analysis**

This bill empowers the Alaska Energy Authority (AEA) to hire employees. The impact of this legislation to AIDEA's Operating component is that approximately 42 employees will transfer to AEA and decrease AIDEA's cost of personal services. This cost analysis assumes that AIDEA and AEA will maintain certain shared services (Finance, Operations, and Credit Departments).

Personal Services:	\$ (5,578.7)	Transfer of 42 employees to AEA Statewide Component.
Contractual Services:	\$ <u>341.6</u>	Contractual cost of AEA Employees providing shared services. Net
Change	\$ (5,237.1)	

Under this analysis, AIDEA contractual costs increase by the cost of AEA employees providing shared services (Operations Department) to AIDEA. The Finance and Credit departments provide shared services to AEA.

One new Finance position is requested to meet anticipated increased work. The anticipated cost of this position is estimated to be \$110.0. No additional funding is requested to support this position. AIDEA anticipates that this position can be funded with the additional AIDEA receipts gained as a result of billing AEA for their share of the building operating costs, estimated in this analysis to be \$142.8.

(42) Employee transfers to AEA Statewide Component

1 New position - Accountant, Rg 20

(41) Net Positions

Please see cost analysis in AEA's Statewide Project Development & AEE component for more detail as well as a list of the PCN's transferred to AEA.

# FISCAL NOTE

**STATE OF ALASKA**  
**2011 LEGISLATIVE SESSION**

Fiscal Note Number 2  
 Bill Version HB 103  
 (H) Publish Date 1/18/11

Identifier (file name) 1822-CED-AEA-12-10-10  
 Title Powers of Alaska Energy Authority  
 Sponsor Rules Committee  
 Requester Request of the Governor

Dept. Affected DCCED  
 Appropriation AIDEA  
 Allocation Alaska Industrial Development Corporation Facilities Maintenance  
 OMB Component Number 2361

**Expenditures/Revenues** (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information						
		FY 2012	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
<b>OPERATING EXPENDITURES</b>								
Personal Services								
Travel								
Contractual								
Supplies								
Equipment								
Land & Structures								
Grants & Claims								
Miscellaneous								
<b>TOTAL OPERATING</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

<b>CAPITAL EXPENDITURES</b>								
-----------------------------	--	--	--	--	--	--	--	--

<b>CHANGE IN REVENUES</b>								
---------------------------	--	--	--	--	--	--	--	--

**FUND SOURCE** (Thousands of Dollars)

	FY 2012	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
1004 GF							
1007 I/A Receipts	142.8						
1061 CIP Receipts							
1102 AIDEA Receipts	(142.8)						
1074 Bulk Fuel							
1107 AEA Corporate Receipts							
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

Estimate of any current year (FY2011) cost \_\_\_\_\_

**POSITIONS**

Full-time							
Part-time							
Temporary							

**Why this fiscal note differs from previous version**

Prepared by Sara Fisher-Goad, Deputy Director - Operations  
 Division Alaska Industrial Development & Export Authority  
 Approved by Susan K. Bell, Commissioner  
Commerce, Community, & Economic Development

Phone 907-771-3012  
 Date/Time 1/12/11 5:00 PM  
 Date 1/13/2011

FISCAL NOTE #2

STATE OF ALASKA  
2011 LEGISLATIVE SESSION

BILL NO. HB 103

**Analysis**

This bill empowers the Alaska Energy Authority (AEA) to hire employees. Currently AIDEA absorbs 100% of the facility operating costs. This fiscal note estimates the impact to AIDEA if AEA reimbursed AIDEA for their pro-rata share of the facility operating costs based on PCN count.

Facility Operating Cost = \$3.4 per PCN per year x 42 employees = \$142.8.

There is no net impact to the expenditure line as actual building costs remain the same. Increase in I/A receipts reduces AIDEA receipts in this component. AIDEA receipt authority is transferred to the AIDEA operations component.

See related fiscal notes for both AIDEA and AEA Statewide Project Development components for the full impact of this legislation.

# FISCAL NOTE

**STATE OF ALASKA**  
**2011 LEGISLATIVE SESSION**

Fiscal Note Number 3  
 Bill Version HB 103  
 (H) Publish Date 1/18/11

Identifier (file name) 1822-CED-AEA-12-10-10  
 Title Powers of Alaska Energy Authority  
 Sponsor Rules Committee  
 Requester Request of the Governor  
 Dept. Affected DCCED  
 Appropriation Alaska Energy Authority  
 Allocation Statewide Project Development  
Alternative Energy and Efficiency  
 OMB Component Number 2888

**Expenditures/Revenues** (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
		FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
<b>OPERATING EXPENDITURES</b>							
Personal Services	5,638.7						
Travel							
Contractual	(2,311.1)						
Supplies							
Equipment							
Land & Structures							
Grants & Claims							
Miscellaneous							
<b>TOTAL OPERATING</b>	<b>3,327.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

<b>CAPITAL EXPENDITURES</b>							
-----------------------------	--	--	--	--	--	--	--

<b>CHANGE IN REVENUES</b>							
---------------------------	--	--	--	--	--	--	--

**FUND SOURCE** (Thousands of Dollars)

1004 GF	1,388.4						
1007 I/A Receipts	341.6						
1061 CIP Receipts	1,512.6						
1102 AIDEA Receipts							
1074 Bulk Fuel	60.0						
1107 AEA Corporate Receipts	25.0						
<b>TOTAL</b>	<b>3,327.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

Estimate of any current year (FY2011) cost \_\_\_\_\_

**POSITIONS**

Full-time	43.0						
Part-time							
Temporary							

**Why this fiscal note differs from previous version**

Prepared by Sara Fisher Goad, Deputy Director - Operations  
 Division Alaska Energy Authority  
 Approved by Susan K. Bell, Commissioner  
Commerce, Community, & Economic Development

Phone 907-771-3012  
 Date/Time 1/12/11 5:00 PM  
 Date 1/13/2011

FISCAL NOTE #3

STATE OF ALASKA  
2011 LEGISLATIVE SESSION

BILL NO. HB 103

**Analysis**

Note: This is fiscal note 1 of 2 for the AEA Statewide Project Development component. The cost information relevant to the power of AEA to have employees is presented separately from the cost information relevant to the power of AEA to construct and own projects (See fiscal note 2 of 2 Statewide Project Development for cost of AEA to establish a project office for the Susitna Hydro Projects.)

This bill empowers the Alaska Energy Authority (AEA) to hire employees. All AEA employee costs will be accounted for in this component. This increases personal services with the transfer of approximately 42 employees from AIDEA. This transfer reduces contractual services in several AEA components and increases personal services in this component. One new position (Loan Officer Rg 20) is requested to meet anticipated increased work in lending activities. This position will be primarily responsible for AEA loan programs.

**Personal Services: TOTAL \$5,638.7**

\$ 160.0	Approximately 2 FTE's providing support to the AEA PCE Component - GF Funds.
\$ 2,207.5	Approximately 16 FTE's providing support to the AEA Rural Energy Operations Component - GF & CIP.
\$ 2,320.0	Approximately 17 FTE's providing support to the AEA Statewide Pj Devel & AEE Component - GF & CIP.
<u>\$ 891.2</u>	Approximately 7 FTE's who are defined as shared services. This includes 6 positions that report to the Deputy Director of Operations and one engineer that works on both AIDEA and AEA projects.
\$ 5,578.7	Subtotal Personal Services - 42 employees transferred from AIDEA to AEA.
<u>\$ 60.0</u>	Request 50% funding for one new position for AEA - Loan Officer Rg 20.
\$ 5,638.7	

**Contractual Services: TOTAL \$(2,311.1)**

\$(2,320.0)	Decrease Contractual Services and transfer cost to Personal Services. Approximately 17 FTE's.
\$ (285.1)	Operations - Shared Services. Decrease Contractual Services and transfer cost to Personal Svcs.
\$ 142.8	Facility Operating Costs = \$3.4 per PCN per year x 42 employees = \$142.8 (See also AIDEA Facilities Comp).
<u>\$ 151.2</u>	G&A Cost currently paid by AIDEA = \$3.6 per PCN per year x 42 employees = \$151.2.
\$(2,311.1)	

\$ 3,327.6 Net Change in Expenditures

**PCN List (Title, Range, PCN, Dept./Area):**

Transfers from AIDEA:

- 1) PCE Program Administrator Rg 17 - 080411 (PCE)
- 2) Accounting Technician Rg 12 - 080217 (PCE)
- 3) Deputy Director - Operations Rg 27 - 080405 (Operations Shared Services)
- 4) Data Systems Specialist Rg 22 - 080227 (Operations Shared Services)
- 5) HR Specialist Rg 18 - 080455 (Operations Shared Services)
- 6) Administrative Assistant Rg 13 - 080473 (Operations Shared Services)
- 7) Data Processing Tech II Rg 15 - 08X037 (Operations Shared Services)
- 8) Project Manager Rg 22 - 080223 (Operations Shared Services)
- 9) Technical Engineer Rg 25-080229 (Rural Energy Shared Services)
- 10) Deputy Director-Rural Energy Rg 27 - 080206 (Rural Energy)
- 11) Project Manager II Rg 24 - 080231 (Rural Energy)
- 12) Coordinator Rural Community Outreach Rg 24 -080401 (Rural Energy)
- 13) Project Development Specialist Rg 20 -080403 (Rural Energy)
- 14) Warehouse Manager Rg 15 - 080440 (Rural Energy)
- 15) Technical Engineer II Rg 25 - 080443 (Rural Energy)

See Page 3 of 3 for Continued Analysis.

FISCAL NOTE #3

STATE OF ALASKA  
2011 LEGISLATIVE SESSION

BILL NO. HB 103

**Analysis Continued**

**PCN List (Title, Range, PCN, Dept./Area):**

Transfers from AIDEA - continued:

- 16) Assistant Project Manager Rg 22 - 080466 (Rural Energy)
- 17) Rural Electric Utility Worker Rg 20 - 080479 (Rural Energy)
- 18) Project Manager Rg 25 - 080491 (Rural Energy)
- 19) Project Manager Rg 25 - 080498 (Rural Energy)
- 20) Rural Electric Utility Worker Rg 20 - 217010 (Rural Energy)
- 21) Project Assistant Rg 16 - 217011 (Rural Energy)
- 22) Rural Electric Utility Worker Rg 20 - 217012 (Rural Energy)
- 23) Program Manager Bulk Fuel & RPSU Rg 25 - 217014 (Rural Energy)
- 24) Project Manager Rg 22 - 08T019 (Rural Energy)
- 25) Circuit Rider Technician Rg 20 - 08X003 (Rural Energy)
- 26) Executive Director Rg 28 - 080208 (AEA Statewide)
- 27) Executive Assistant Rg 16 - 080219 (AEA Statewide)
- 28) Project Manager Rg 25 - 080222 (AEA Statewide)
- 29) Administrative Assistant Rg 12 - 080410 (AEA Statewide)
- 30) Administrative Assistant Rg 12 - 080434 (AEA Statewide)
- 31) Grants Assistant Rg 15 - 080233 (AEA Statewide)
- 32) Grants Administrator Rg 22 - 080457 (AEA Statewide)
- 33) Project Manager Rg 22 - 080230 (AEA Statewide)
- 34) Project Manager Rg 24 - 080232 (AEA Statewide)
- 35) Deputy Director - AEEE Rg 27 - 080407 (AEA Statewide)
- 36) Project Manager - Energy Data Inventory Rg 22 - 080425 (AEA Statewide)
- 37) Project Manager Rg 24 - 080458 (AEA Statewide)
- 38) Project Manager Rg 24 - 08X007 (AEA Statewide)
- 39) Assistant Project Manager - Wind Rg 22 - 08X028 (AEA Statewide)
- 40) Assistant Project Manager - Hydro Rg 22 - 08X029 (AEA Statewide)
- 41) Assistant Project Manager - GEO/Ocean Rg 22 - 08X033 (AEA Statewide)
- 42) Assistant Project Manager - Energy Efficient Rg 20 - 08X034 (AEA Statewide)

New Position:

- 43) Loan Officer Rg 20

# FISCAL NOTE

**STATE OF ALASKA**  
**2011 LEGISLATIVE SESSION**

Fiscal Note Number 4  
 Bill Version HB 103  
 (H) Publish Date 1/18/11

Identifier (file name) 1822-CED-AEA-12-10-10  
 Title Powers of Alaska Energy Authority  
 Sponsor Rules Committee  
 Requester Request of the Governor  
 Dept. Affected DCCED  
 Appropriation Alaska Energy Authority  
 Allocation Alaska Energy Authority Rural Operations  
 OMB Component Number 2600

**Expenditures/Revenues** (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	Appropriation Required	Information					
	FY 2012	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Personal Services							
Travel							
Contractual	(2,329.3)						
Supplies							
Equipment							
Land & Structures							
Grants & Claims							
Miscellaneous							
<b>TOTAL OPERATING</b>	<b>(2,329.3)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

<b>CAPITAL EXPENDITURES</b>							
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<b>CHANGE IN REVENUES</b>							
---------------------------	--	--	--	--	--	--	--

**FUND SOURCE** (Thousands of Dollars)

1004 GF	(816.7)						
1007 I/A Receipts							
1061 CIP Receipts	(1,512.6)						
1102 AIDEA Receipts							
1074 Bulk Fuel							
1107 AEA Corporate Receipts							
<b>TOTAL</b>	<b>(2,329.3)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

Estimate of any current year (FY2011) cost \_\_\_\_\_

**POSITIONS**

Full-time							
Part-time							
Temporary							

**Why this fiscal note differs from previous version**

Prepared by Sara Fisher Goad, Deputy Director - Operations  
 Division Alaska Energy Authority  
 Approved by Susan K. Bell, Commissioner  
Commerce, Community, & Economic Development

Phone 907-771-3012  
 Date/Time 1/12/11 5:00 PM  
 Date 1/13/2011

FISCAL NOTE #4

STATE OF ALASKA  
2011 LEGISLATIVE SESSION

BILL NO. HB 103

**Analysis**

This legislation allows the Alaska Energy Authority (AEA) to have employees. The impact to the Rural Energy Operating component is a reduction in contractual costs of employee services for an estimated 16 FTE's that were previously AIDEA employees estimated to be \$2,207.5 and a reduction in contractual costs of Operations employees who provide shared services estimated to be \$121.8. These positions are funded by both GF and CIP receipts. Costs are transferred to the Statewide component personal services. Please see the fiscal note analysis for the AEA Statewide Project Development, Alternative Energy and Efficiency component (FN 1 of 2) for more detail.

# FISCAL NOTE

**STATE OF ALASKA**  
**2011 LEGISLATIVE SESSION**

Fiscal Note Number 5  
 Bill Version HB 103  
 (H) Publish Date 1/18/11

Identifier (file name) 1822-CED-AEA-12-10-10  
 Title Powers of Alaska Energy Authority  
 Sponsor Rules Committee  
 Requester Request of the Governor  
 Dept. Affected DCCED  
 Appropriation Alaska Energy Authority  
 Allocation Alaska Energy Authority Power Cost Equalization  
 OMB Component Number 2602

**Expenditures/Revenues** (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information						
		FY 2012	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
<b>OPERATING EXPENDITURES</b>								
Personal Services								
Travel								
Contractual	(160.0)							
Supplies								
Equipment								
Land & Structures								
Grants & Claims								
Miscellaneous								
<b>TOTAL OPERATING</b>	<b>(160.0)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

<b>CAPITAL EXPENDITURES</b>								
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<b>CHANGE IN REVENUES</b>								
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**FUND SOURCE** (Thousands of Dollars)

	FY 2012	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
1004 GF	(160.0)						
1007 I/A Receipts							
1061 CIP Receipts							
1102 AIDEA Receipts							
1074 Bulk Fuel							
1107 AEA Corporate Receipts							
<b>TOTAL</b>	<b>(160.0)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

Estimate of any current year (FY2011) cost \_\_\_\_\_

**POSITIONS**

Full-time							
Part-time							
Temporary							

**Why this fiscal note differs from previous version**

Prepared by Sara Fisher Goad, Deputy Director - Operations  
 Division Alaska Energy Authority  
 Approved by Susan K. Bell, Commissioner  
Commerce, Community & Economic Development

Phone 907-771-3012  
 Date/Time 1/12/11 5:00 PM  
 Date \_\_\_\_\_

**FISCAL NOTE #5**

**STATE OF ALASKA  
2011 LEGISLATIVE SESSION**

**BILL NO. HB 103**

**Analysis**

This legislation allows the Alaska Energy Authority (AEA) to have employees. The impact to the Power Cost Equalization component is a reduction in contractual costs of employee services for an estimated 2 FTE's that were previously AIDEA employees estimated to be \$160.0. These positions are funded by GF receipts. Costs are transferred to the Statewide component personal services. Please see the fiscal note analysis for the AEA Statewide Project Development, Alternative Energy and Efficiency component (FN 1 of 2) for more detail.

# FISCAL NOTE

**STATE OF ALASKA**  
**2011 LEGISLATIVE SESSION**

Fiscal Note Number 6  
 Bill Version HB 103  
 (H) Publish Date 1/18/11

Identifier (file name) 1822-CED-AEA-12-10-10  
 Title Powers of Alaska Energy Authority  
 Sponsor Rules Committee  
 Requester Request of the Governor  
 Dept. Affected DCCED  
 Appropriation Alaska Energy Authority  
 Allocation Alaska Energy Authority Owned Facilities  
 OMB Component Number 2599

**Expenditures/Revenues** (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information						
		FY 2012	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
<b>OPERATING EXPENDITURES</b>								
Personal Services								
Travel								
Contractual	(25.0)							
Supplies								
Equipment								
Land & Structures								
Grants & Claims								
Miscellaneous								
<b>TOTAL OPERATING</b>	<b>(25.0)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

<b>CAPITAL EXPENDITURES</b>								
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<b>CHANGE IN REVENUES</b>								
---------------------------	--	--	--	--	--	--	--	--

**FUND SOURCE** (Thousands of Dollars)

	FY 2012	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
1004 GF							
1007 I/A Receipts							
1061 CIP Receipts							
1102 AIDEA Receipts							
1074 Bulk Fuel							
1107 AEA Corporate Receipts	(25.0)						
<b>TOTAL</b>	<b>(25.0)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

Estimate of any current year (FY2011) cost \_\_\_\_\_

**POSITIONS**

Full-time							
Part-time							
Temporary							

**Why this fiscal note differs from previous version**

Prepared by Sara Fisher Goad, Deputy Director - Operations  
 Division Alaska Energy Authority  
 Approved by Susan K. Bell, Commissioner  
Commerce, Community, & Economic Development

Phone 907-771-3012  
 Date/Time 1/12/11 5:00 PM  
 Date 1/13/2011

FISCAL NOTE #6

STATE OF ALASKA  
2011 LEGISLATIVE SESSION

BILL NO. HB 103

**Analysis**

This legislation allows the Alaska Energy Authority (AEA) to have employees. The impact to AEA Owned Facilities component is a reduction in contractual costs of employee services for an estimated 15% of one engineer position funded by AEA Corporate receipts. Costs are transferred to the Statewide component personal services. Please see the fiscal note analysis for the AEA Statewide Project Development, Alternative Energy and Efficiency component (FN 1 of 2) for more detail.

# FISCAL NOTE

**STATE OF ALASKA**  
**2011 LEGISLATIVE SESSION**

Fiscal Note Number 7  
 Bill Version HB 103  
 (H) Publish Date 1/18/11

Identifier (file name) 1822-CED-AEA-12-10-10 Dept. Affected DCCED  
 Title Powers of Alaska Energy Authority Appropriation Alaska Energy Authority  
 Allocation Statewide Project Development  
 Sponsor Rules Committee Allocation Alternative Energy and Efficiency  
 Requester Request of the Governor OMB Component Number 2888

**Expenditures/Revenues** (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information						
		FY 2012	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
<b>OPERATING EXPENDITURES</b>								
Personal Services	1,125.0		1,181.3	1,240.3	1,302.3	1,367.4		
Travel								
Contractual	238.0		247.8	252.7	252.7	257.1		
Supplies								
Equipment	413.0		5.0	5.0	5.0	5.0		
Land & Structures								
Grants & Claims								
Miscellaneous								
<b>TOTAL OPERATING</b>	<b>1,776.0</b>	<b>0.0</b>	<b>1,434.1</b>	<b>1,498.0</b>	<b>1,560.0</b>	<b>1,629.5</b>	<b>0.0</b>	

<b>CAPITAL EXPENDITURES</b>								
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<b>CHANGE IN REVENUES</b>								
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**FUND SOURCE** (Thousands of Dollars)

1004 GF								
1007 I/A Receipts								
1061 CIP Receipts	1,776.0		1,434.1	1,498.0	1,560.0	1,629.5		
1102 AIDEA Receipts								
1074 Bulk Fuel								
1107 AEA Corporate Receipts								
<b>TOTAL</b>	<b>1,776.0</b>	<b>0.0</b>	<b>1,434.1</b>	<b>1,498.0</b>	<b>1,560.0</b>	<b>1,629.5</b>	<b>0.0</b>	

Estimate of any current year (FY2011) cost \_\_\_\_\_

**POSITIONS**

Full-time	8.0							
Part-time								
Temporary								

**Why this fiscal note differs from previous version**

Prepared by Sara Fisher Goad, Deputy Director - Operations  
 Division Alaska Energy Authority  
 Approved by Susan K. Bell, Commissioner  
Commerce, Community, & Economic Development

Phone 907-771-3012  
 Date/Time 1/12/11 5:00 PM  
 Date 1/13/2011

FISCAL NOTE #7

STATE OF ALASKA  
2011 LEGISLATIVE SESSION

BILL NO. HB 103

**Analysis**

Note: This is fiscal note 2 of 2 for the AEA Statewide Project Development component. The cost information relevant to the AEA project construction portion of this legislation is presented separately from the cost information relevant to the power of AEA to have employees (See fiscal note 1 of 2 for the costs of AEA Statewide Project Development to have employees).

Section 6, 9, and 11 of this bill expands AEA's powers to allow AEA to acquire, construct, and conduct feasibility studies of new power projects. Section 6 of the bill would amend the powers of AEA to add provisions related to new power projects. Sections 9 and 11 of the bill would empower AEA to exercise for new power projects, the existing statutory authority managing power projects which are currently limited to power projects from the pre-1993, "former energy program for Alaska."

This fiscal note reflects the costs to AEA to establish a project office in pursuit of constructing and owning the Susitna Hydro project.

**PERSONAL SERVICES: \$1,125.0** - Increased to include 8 staff for the first year as follows:

Project Manager Rg 27  
Environmental Manager Rg 26  
Administrative Assistant Rg 12  
Project Accountant Rg 18  
Financial/Budget Analyst Rg 24  
Public Outreach/Legislation Liaison Rg 23  
Procurement Manager Rg 24  
Data System Specialist Rg 20

**CONTRACTUAL: \$238.0** - Increase for Contractual services including Lease, Utilities, and G&A costs for Project Office. Utilities and G&A estimates include a cost associated with contract labor personnel.

\$ 189.0	Annual Lease - 4,500 sq. ft. x \$3.50 per sq. ft./mo. x 12 mo.'s.
\$ 13.0	Utilities \$1.3 per person x 10 (8 staff + 2 contractors) first year.
<u>\$ 36.0</u>	G&A Expense: \$3.6 per person - \$3.6 x 10 (8 staff + 2 contractors).
\$ 238.0	

**EQUIPMENT/FURNITURE: \$413.0** - Increase for 1st year Project Office set up costs. This cost estimate assumes all equipment and furniture purchases in the first year as well as one time only moving expenses and tenant improvements.

\$ 28.0	IT Equipment \$2.0 per person per year x 14 (8 staff + 6 contractors). Assumes all equipment purchases in 1st year for project office (including contract labor needs).
<u>\$ 385.0</u>	Tenant Improvement \$315.0 (\$70 x 4,500 sq. ft.); Moving Expenses \$21.0; and Furniture 49.0
\$ 413.0	

**HB 103**  
**Updated Sectional Analysis by the Alaska Energy Authority**  
**14 February 2011**

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**Section 1:** Would amend the procurement code (AS 36.30.015(f)) to empower AEA to adopt regulations to govern AEA's procurement of supplies, services, professional services, and construction. Under the amendment, AEA will be required to adopt regulations governing procurement that must "reflect competitive bidding principles and provide vendors reasonable and equitable opportunities to participate in the procurement process and must include procurement methods to meet emergency and extraordinary circumstances." The amendment will give AEA similar authority over procurement as that currently exercised by the Alaska Housing Finance Corporation, the Knik Arm Bridge and Toll Authority, and the Alaska Retirement Management Board.

**Sections 2, 4, 13, and 16:** Creates a new Railbelt energy fund called the Alaska Railbelt Energy Fund, as a fund of AEA and repeal the existing Railbelt energy fund. **Section 2** would expressly authorize the legislature to appropriate amounts in the Railbelt energy fund to capitalize the new Railbelt energy fund, called the Alaska Railbelt energy fund. This would allow amounts to be appropriated and transferred from the existing Railbelt Energy fund into the new fund. **Section 4** would establish the new Railbelt energy fund, called the Alaska Railbelt energy fund of AEA. AEA will be authorized to use money from the fund to conduct feasibility studies, license, permit, acquire or construct, or to make grants for, legislatively approved power projects and electrical transmission lines and interties which serve the Railbelt region, and an appropriation to the fund that names the project would constitute legislative approval.

**Section 13:** Would repeal the existing Railbelt energy fund, while **Section 16** would make that repeal contingent upon the balance of the fund being appropriated to AEA for deposit into the new Railbelt energy fund called the Alaska Railbelt energy fund, or appropriated and expended on projects.

**Sections 3 and 6:** Would empower AEA to hire employees and advisors in the exempt service. This power would be equivalent to powers the Alaska Industrial Development and Export Authority (AIDEA) currently possesses.

**Section 5:** Would increase from 3 to 4 the quorum requirement for meetings of the AEA board of directors in reaction to statutory amendments made in 2010. Those amendments increased the size of the AIDEA board from 5 to 7. The AIDEA board serves as the board of AEA. The proposed amendment would correct the quorum for meetings of AEA's board of directors.

**Sections 14 and 15:** Are transitional sections related to AEA hiring employees. **Section 14:** would instruct the revisor of statutes to amend the statutory heading of AS 44.83.040 to reflect that the section would also address employees. **Section 15:** would address the status of existing employees who perform energy functions with the Alaska Industrial Development Export Authority. AEA has not possessed the statutory authority to hire its own staff since the reorganization of AEA affected by 1993 legislation (ch. 18, SLA 1993). Since the 1993 legislation, AEA programs have been implemented by AIDEA employees. AEA's executive director, for example, is an employee of AIDEA, but is independent from the executive director of AIDEA. The bill would authorize AEA to hire its own employees, and thereby assume greater control over the implementation of AEA programs.

**Sections 7, 10, and 12:** Would expand AEA's powers to allow AEA to acquire, construct, and conduct feasibility studies of new power projects. **Section 7** would amend the powers of AEA to add provisions related to new power projects. **Sections 10 and 12** would empower AEA to exercise for new power projects, existing statutory authority managing power projects which are currently limited to power projects from the pre-1993, "former energy program for Alaska." AS 44.83.396 (amended by sec. 10 of the bill) addresses how AEA administers the power project and contracts for operators. **Section 11** would make AS 44.83.396 apply to AEA subsidiaries that own power projects. AS 44.83.990(3) (amended by **Section 12**) would define "feasibility study" so that it is not limited to only pre-1993 power projects.

**Sections 8, 9, and 11:** Would empower AEA to establish subsidiary corporations to support the acquisition, construction, ownership, and operation of power projects. **Section 7** would empower AEA to create subsidiary corporations for new power projects, and thereby potentially limit potential liability of AEA or strengthen the financial viability of a project. **Sections 9 and 11** of the bill would enable an AEA subsidiary to exercise powers currently granted to AEA. For example, AS 44.83.090 (amended by **Section 9**) would exempt an AEA subsidiary from regulation by the Regulatory Commission of Alaska to the same extent as AEA is exempt (but would not exempt utilities contracting with the AEA subsidiary). Also, **Section 11** would make AS 44.83.396 apply to AEA subsidiaries that own power projects and address how AEA administers the power project and contracts for operators.

**Section 16:** Would provide for an immediate effective date, excepting the contingent effective date for repeal of the existing Railbelt energy fund.

HB 103 – FERC Oversight (Prepared by the Alaska Department of Law)

FERC Oversight in Licensing Procedures
<p>1. Certain factors related to cost of power FERC evaluates in determining whether to grant a license include:</p> <ul style="list-style-type: none"><li>a. Construction and operational plans.</li><li>b. Whether the project can be operated efficiently.</li><li>c. The local need for power.</li><li>d. The projected cost of power.</li><li>e. Comparison of the lowest cost, reasonable alternative source of power.</li></ul> <p>FERC will not grant a license if not in the public interest based upon economic and other factors.</p>
<p>2. License conditions FERC imposes will impact the cost of power:</p> <ul style="list-style-type: none"><li>a. FERC will impose license conditions (e.g., environmental conditions).</li><li>b. License conditions usually increase the cost of power.</li><li>c. License conditions are mandatory.</li><li>d. FERC will enforce license conditions.</li><li>e. RCA economic regulation would not eliminate license conditions, regardless of impact on power rates.</li></ul>
<p>3. Post licensing activities.</p> <ul style="list-style-type: none"><li>a. FERC will review and enforce compliance with license conditions, including dam safety.</li><li>b. FERC reviews and approves license amendments, e.g. to improve efficiency of project.</li><li>c. FERC oversight might impact efficiency and costs, but is not focused upon economic regulation.</li></ul>

RCA Oversight
<p>1. RCA approves power sales agreements.</p> <ul style="list-style-type: none"><li>a. Decision based on economic and cost of power factors similar to those FERC uses in licensing.</li><li>b. After a power sales agreement is approved<ul style="list-style-type: none"><li>i. RCA may not invalidate power sales under an approved contract, and</li><li>ii. RCA does not economically regulate operations under the contract, but may order renegotiation or dispute resolution.</li></ul></li></ul>
<p>2. RCA Statutory Regulation.</p> <ul style="list-style-type: none"><li>a. Non-economic regulation includes potential investigation of services and facilities of public utility that are unreasonable, unsafe, inadequate, insufficient, or unreasonably discriminatory.</li><li>b. Economic regulation includes:<ul style="list-style-type: none"><li>i. Approval of rates if “just and reasonable,” and “non-discriminatory.”</li><li>ii. Potential investigation of utility management for inefficient or unreasonable practices.</li></ul></li></ul>

Impact of Imposing Rate Regulation on Ability to Obtain Financing.

1. Financing a project at reasonable, economic rates requires minimizing risk of non-payment of the debt.
2. If “rate regulation” is imposed to eliminate the obligation of ratepayers to pay certain expenses (e.g., for cost overruns), another person or entity must pay.
  - a. Placing payment risk on lenders or bond holders will likely either (i) preclude financing, or (ii) increase the cost of financing (increased costs which would pass through to ratepayers).
  - b. Placing payment risk on utilities would generally redirect the obligation to the same persons - - from ratepayers to members for cooperatives, and from ratepayers to tax-payers for municipal utilities.
  - c. Future legislatures could choose to appropriate more funds to the project to cover cost overruns, and protect ratepayers.
3. RCA statutes protect lenders and bond holders of municipal and cooperative utilities, assuring that rates RCA approves will cover debt payments.

**Alaska Energy Authority**  
**Estimated cost comparison from March 2009 report**  
**vs November 2010 Preliminary Decision Document**

March 2009 was an Interim Report. Costs are conceptual.

Roller Compact Concrete and Concrete faced Rockfill dams may be lower cost than embankment design.

\$8.4B number in March 2009 was for the 885' high Watana Dam. The \$4.5 or \$4.9 (expandable) numbers are for 700' high.

	Low Watana Expand (Mar 2009) (\$000)	Low Watana Expand (Nov 2009) (\$000)	Difference (\$000)		Low Watana Non Expand (Nov 2009) (\$000)
Land and Land Rights	121,000	121,000	\$ -		\$ 121,000
Power Plant Structure Improvements	159,000	159,000	\$ -		\$ 115,000
Reservoir, Dams and tunnels	2,449,800	1,718,000	\$ (731,800)	Nov used separate cost line for waterways.	\$ 1,537,690
Waterways	-	677,000	\$ 677,000	March has Waterways in with dam.	\$ 590,000
Waterwheel, Turbines and Generators	324,700	297,000	\$ (27,700)	Mar was an avg from quotes	\$ 297,000
Accessory Electrical Equipment	38,900	41,000	\$ 2,100		\$ 41,000
Misc Power Plant Equipment	28,500	32,000	\$ 3,500		\$ 21,000
Roads, Rails and Air Facilities	599,300	232,000	\$ (367,300)	Removed road and bridge Devil Canyon to Watana that should not be in calc	\$ 232,000
Transmission	648,374	224,000	\$ (424,374)	Removed trans upgrades along intertie and substation work in Anch/Fair. Need to invest req upgrades more.	\$ 224,000
Misc Equipment	9,200	16,000	\$ 6,800		\$ 16,000
Construction Camp	609,100	180,000	\$ (429,100)	Nov est based on smaller workforce & camp const vendor feedback	\$ 180,000
Mitigation	200,000		\$ (200,000)	Ext hard to place a dollar on this. Left over from 1980's. Mitigation is in EE&CM in Nov Rpt	
	<u>\$ 4,987,874</u>	<u>\$ 3,697,000</u>	<u>\$ (1,290,874)</u>		<u>\$ 3,374,690</u>
Contingency (20%)	\$ 997,575	\$ 739,400	\$ (258,175)		\$ 674,938
Subtotal	<u>\$ 5,985,449</u>	<u>\$ 4,436,400</u>	<u>\$ (1,549,049)</u>		<u>\$ 4,049,628</u>
Engineering, Environmental, Const Management	\$ 371,000	\$ 407,000	\$ 36,000		\$ 371,000
Contingency (20%)	\$ 74,200	\$ 81,400	\$ 7,200		\$ 74,200
Subtotal	<u>\$ 6,430,649</u>	<u>\$ 4,924,800</u>	<u>\$ (1,505,849)</u>		<u>\$ 4,494,828</u>

## FERC LICENSING - PUBLIC PROCESSES

This paper outlines public processes applicable to two of FERC's licensing processes: the Alternative Licensing Process (ALP) and the Integrated Licensing Process (ILP). This paper does not outline public processes FERC uses in determining whether to approve a license application.

Exhibit A provides process flow charts for the ALP and ILP. Exhibit B provides a matrix comparing ALP and ILP. Both Exhibits are copied from documents on FERC's website.

### 1. Overview of processes.

- a. Both ALP and ILP include establishing groups of interested parties to participate in the licensing process (referred to as "stakeholders" in this paper). Stakeholders include state and federal resource agencies, tribal organizations, non-governmental organizations, and members of the public.
- b. FERC recommends that communication with stakeholders is critical, regardless of the process selected. In this regard, the applicant's approach and willingness to engage participants is key.
- c. ILP is the presumptive process; FERC must approve using another process.
- d. ALP is described as "collaborative" while ILP is described as "integrated."
- e. ILP "integrated" basically means that the licensing process is integrated with the environmental processes (e.g., NEPA, 401 permit - Clean Water Act, Endangered Species Act.) by FERC and other agencies.
- f. ILP is more regimented (see Exhibit A for detailed process), and has more specific time deadlines. ILP is front loaded; planning ahead and active participation are essential.
- g. ALP is collaborative. For example, the processes and deadlines are developed through collaboration with stakeholders. Communications protocols are established early in the process. Dispute resolution is collaborative; no decision maker if parties fail to reach agreement.
- h. While not imposed by the ILP process, FERC suggests that the applicant may implement open communication/collaborative protocols and other processes similar to ALP.
- i. ILP process gives more deference to state and federal resource agencies.
- j. FERC involvement with all stakeholders early and throughout the process is very helpful.

### 2. Activities before filing notice of intent and pre-application document (pre-application activity).

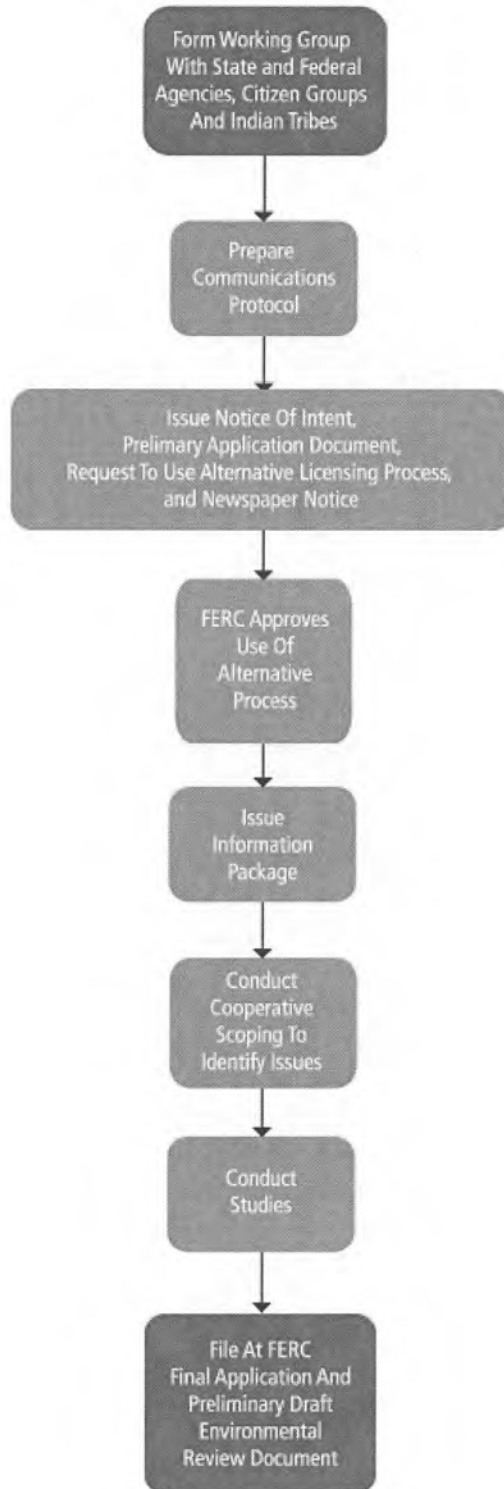
- a. FERC has expressed a willingness to participate in workshops and training sessions with stakeholders about the FERC licensing processes. A FERC staff report based upon inquiries made to stakeholders on the ILP suggests:

- i. Early workshops/training with FERC staff is invaluable to promoting meaningful public participation.
    - ii. FERC involvement early and throughout the process is very helpful.
  - b. The applicant prepares a pre-application document (PAD) which gathers studies and starts organization for environmental processes (the PAD can be structured like an environmental assessment document). Stakeholder comments and participation is helpful.
    - i. The applicant gathers existing studies (“existing, relevant, and reasonably available information”), and requests stakeholders to provide additional studies and identify issues and resource management considerations
  - c. Adopt information/communication protocols – how information will be made available.
    - i. Pre-application outreach meetings.
    - ii. A project website.
    - iii. Document distribution protocol.
    - iv. Perhaps, communication protocol
- 3. Activities before filing License Application (after notice of intent and PAD is filed).
  - a. Scoping.
    - i. Scoping initiates FERC’s process to identify issues to be examined under NEPA. Scoping provides stakeholders an opportunity to review and discuss existing information and conditions, resource management objectives, issues, and the process plan and schedule.
    - ii. FERC holds scoping meetings with stakeholders.
  - b. Study plan development and study plan requests.
    - i. Study plan development involves developing a detailed approach for filing information gaps needed to address issues and identify mitigation opportunities identified during consultation and scoping and for resolving disagreements over studies and study methods.
    - ii. Informal study plan workshops may be scheduled before the release of the proposed study plan.
    - iii. Stakeholders can review and request additional studies.
    - iv. Study plan meetings may be held to resolve disputes.
  - c. FERC’s pre-environmental impact statement meetings with stakeholders.
  - d. Preliminary licensing proposal.
    - i. Applicant under ILP process files preliminary license proposal 150 days before filing license application.
    - ii. Stakeholders given opportunity to comment.
    - iii. Agencies prepare draft terms and conditions for inclusion in License Application

# EXHIBIT A

## PROCESSES FOR HYDROPOWER LICENSES Alternative Licensing Process

### Applicant's Pre-Filing Process



# PROCESSES FOR HYDROPOWER LICENSES

## Alternative Licensing Process

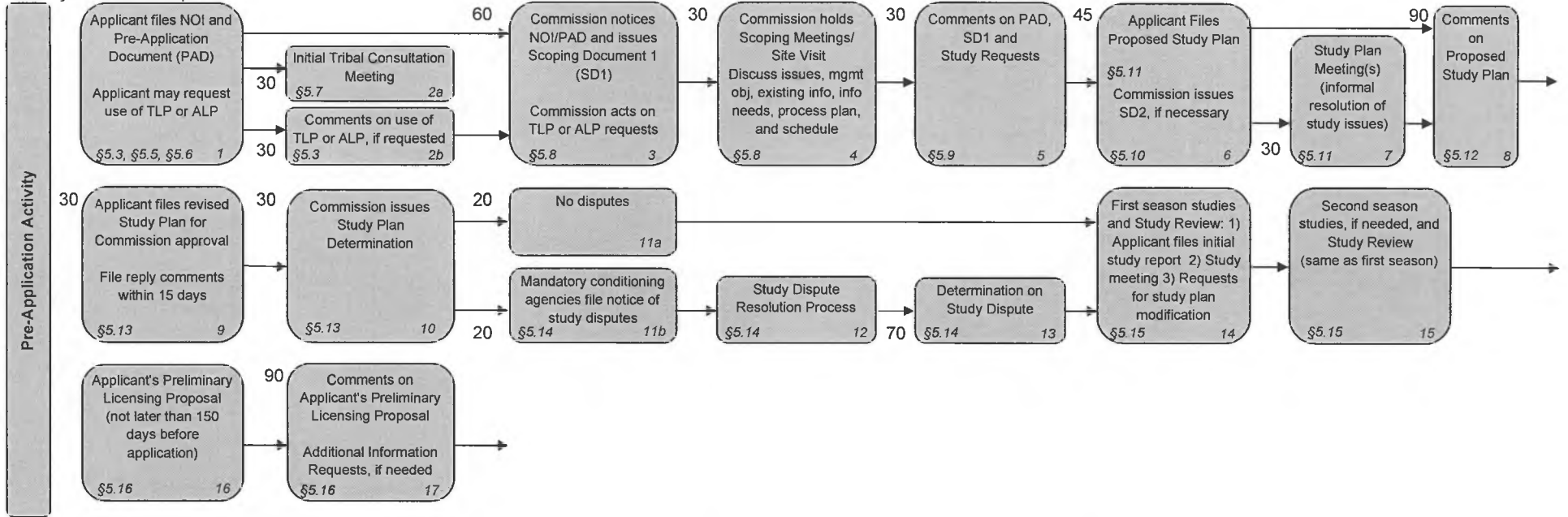
### FERC Application Process



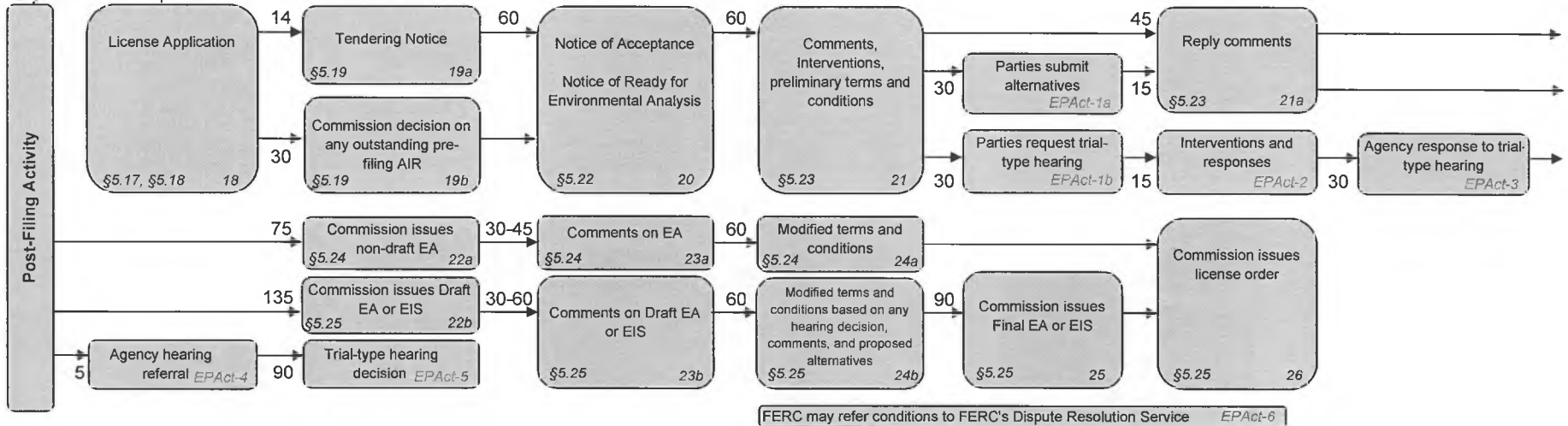
# Integrated Licensing Process

## (Section 241 of the Energy Policy Act of 2005)

5.5-5 years before expiration for relicense



2 years before expiration for relicense



\*Section 241 of the Energy Policy Act of 2005 in pink.

## EXHIBIT B

### Matrix Comparing Two Licensing Processes

	<b>Integrated Licensing Process (ILP)</b>	<b>Alternative Licensing Process (ALP)</b>
Consultation w/ Resource Agencies and Indian Tribes	- Integrated	- Collaborative
FERC Staff Involvement	- Pre-filing [beginning at filing of Notice of Intent (NOI)]  - Early and throughout process	- Pre-filing (beginning at filing the NOI)  - Early involvement for National Environmental Policy Act (NEPA) scoping as requested
Deadlines	- Defined deadlines for all participants (including FERC) throughout the process	- Pre-filing: deadlines defined by collaborative group  - Post-filing: defined deadlines for participants
Study Plan Development	- Developed through study plan meetings with all stakeholders  - Plan approved by FERC	- Developed by collaborative group - FERC staff assist as resources allow
Study Dispute Resolution	- Informal dispute resolution available to all participants  - Formal dispute resolution available to agencies with mandatory conditioning authority  - Three-member panel provides technical recommendation on study dispute  - OEP Director opinion binding on applicant	- FERC study dispute resolution available upon request to agencies and affected tribes  - OEP Director issues advisory opinion
Application	- Preliminary licensing proposal or draft application and final application include Exhibit E (environmental report) with form and contents of an EA	- Draft and final application with applicant-prepared environmental assessment or third-party environmental impact statement

Additional Information Requests	<ul style="list-style-type: none"> <li>- Available to participants before application filing</li> <li>- No additional information requests after application filing</li> </ul>	<ul style="list-style-type: none"> <li>- Available to participants primarily before application filing</li> <li>- Post-filing requests available but should be limited due to collaborative approach</li> </ul>
Timing of Resource Agency Terms and Conditions	<ul style="list-style-type: none"> <li>- Preliminary terms and conditions filed 60 days after Ready for Environmental Analysis (REA) notice</li> <li>- Modified terms and conditions filed 60 days after comments on draft NEPA document</li> </ul>	<ul style="list-style-type: none"> <li>- Preliminary terms and conditions filed 60 days after REA notice</li> <li>- Schedule for final terms and conditions</li> </ul>

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HB 103  
REGULATION BY RCA

Prepared by the Alaska Department of Law, 15 February 2011

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Statutory Bases for Regulation/Exemption from Regulation:

1. AS 44.83.090(b) – AEA is not subject to jurisdiction by RCA, but that does not diminish RCA jurisdiction over utilities that purchase power from AEA projects. E.g., absent other exemption, RCA must approve a power sales agreement before a utility could purchase from an AEA power project. AS 42.05.431(b).

- a. AEA exemption is similar to treatment given other political subdivisions.

- AS 42.05.711(b) – a public utility owned by and operated by a political subdivision is not subject to RCA regulation under AS 42.05 (with limited exceptions) unless: (a) the governing body elects to be subject to AS 42.05, or (b) the political subdivision would directly compete with another utility.

2. AS 44.83.090(a) – mandates provisions that must be included in AEA power sales agreements. The contract must provide for payment of operating and maintenance costs, interest and amortization of bond debt, AEA monitoring of project, full disclosure of all cost factors so rates will be determined on basis of true cost data; periodic revision of rates based upon accurate cost data; security and default provisions.

- AS 44.83.396(e) – mandates that AEA when it contracts for operation of a power project, review and approve annual budgets for operation and maintenance, and assure that the project is being operated efficiently and in a manner consistent with national standards for industry and agreements with bondholders.

- a. These statutory mandates largely duplicate what RCA does under economic regulation for power sales to ratepayers.

- AS 42.05.381 & AS 42.05.431(a) require rates be just and reasonable, and not discriminatory. Rates based upon costs. RCA generally reviews costs after project is constructed, but may review before construction (e.g., South Anchorage facility). RCA does not monitor construction of projects.

AS 42.05.291 & AS 42.05.511 provide authority for RCA to investigate management, services and facilities for efficiency, safety, etc.

- b. The statutory mandates on AEA alleviate the need for what would include duplicative RCA regulation.
3. AS 42.05.431(b) – A wholesale power agreement between public utilities is subject to prior approval by RCA. This provision applies to utilities purchasing from AEA, absent another exemption.
  4. AS 42.05.431(c) – provides that wholesale power and related agreements arising out of certain projects owned, or originally owned, by AEA are not subject to RCA review or approval until all long-term debt for the project is paid off.
    - a. Applies to Bradley Lake Hydroelectric Project, and the original Four Dam Pool Hydroelectric Project (currently Lake Tyee and Swan Lake owned by the SEAPA joint action agency).
    - b. Valid, approved power sales agreements will almost certainly be necessary to support financing a project.
    - c. The exemption of RCA review of wholesale power sales agreements for past projects eliminated the time necessary for RCA review and approval, including time that might have been involved with litigation challenging RCA's decision.
  5. AS 42.05.431(b) – After RCA approves a wholesale power agreement and the agreement is in effect, RCA may not invalidate a sale under that contract. If sales under the contract make rates unjust or unreasonable, RCA can order parties to the agreement to negotiate or exercise dispute resolution mechanisms in the contract.
  6. AS 42.05.431(a) – includes provisions that municipal and cooperative utilities may include rate covenants in bond and debt instruments, and RCA may not reject a rate necessary to satisfy debt covenants relating to rates.
    - a. This provision reduce scope of economic regulation and thereby offers assurances to creditors that the utility's debt will be repaid.
    - b. Application of this or similar provisions will likely be necessary for AEA financing of large projects.

# **Susitna Hydroelectric Project**

## **Project Evaluation**

*Interim Memorandum*

**FINAL**

**Prepared for:**

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*March 16, 2009*

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## Executive Summary

A hydroelectric project on the Susitna River has been studied for more than 50 years and is again being considered by the State of Alaska as a long term source of energy. In the 1980s, the project was studied extensively and a license application was submitted to the Federal Energy Regulatory Commission (FERC). The project was cancelled in 1986 due to a variety of reasons. In 2008, the Alaska State Legislature authorized the Alaska Energy Authority (AEA) to perform an update of the project. That authorization also included an Integrated Resource Plan (IRP) to be performed by others to evaluate the ability of this project and other sources of energy to meet the long term energy demand for the Railbelt region of Alaska. Hydroelectric power is of particular interest to the IRP because it provides stable electricity rates due to renewable river flow, rather than the fluctuating rates of fossil fuel-generated electricity.

HDR was contracted by AEA to update the 1980s cost estimate, energy estimate, and schedule and to evaluate the economics of the project. This report summarizes the results of that study. Based largely on the 1986 FERC license application, the following project development alternatives have been reviewed and updated.

- **Watana.** This alternative consists of the construction of a large storage reservoir on the Susitna River at a site named Watana, with an 885-foot-high rock filled dam, and a powerhouse containing 6 turbines with a total installed capacity of 1,200 megawatts (MW).
- **Low Watana.** This alternative consists of the Watana dam constructed to a lower height of 700 feet, along with a powerhouse containing 4 turbines, with a total installed capacity of 600 MW.
- **Watana/Devil Canyon.** This alternative consists of the full-height Watana development, plus a second reservoir located downstream at a site called Devil Canyon. This downstream reservoir would re-regulate river flow and be impounded by a 646-foot-high concrete dam. The Devil Canyon powerhouse would have an installed capacity of 680 MW. After the FERC license is issued, these 2 dams and powerhouses would be constructed sequentially without delays. The combined Watana/Devil Canyon developments would have an installed capacity of 1,880 MW.
- **Staged Watana/Devil Canyon (low height Watana, plus Devil Canyon, plus full-height Watana).** This alternative would ultimately result in the same configuration as the previous alternative, but the Watana dam would be initially constructed to the lower height and the Watana powerhouse would only have 4 out of the 6 lower-head turbine generators installed. The Watana construction crew would demobilize and move downstream to construct the Devil Canyon dam and powerhouse, then either demobilize again, delay further construction, or return upstream to complete the Watana dam to its full height and install the remaining 2 units. The staged capacity of Watana would increase from 600 MW to 1,200 MW for a total project capacity of 1,880 MW.
- **Devil Canyon.** This alternative consists of the Devil Canyon dam, without Watana dam, with a Devil Canyon powerhouse containing 4 turbines, with a total installed capacity of 680 MW. Note that Devil Canyon was intended to be a regulating dam, paired with the

Watana reservoir. Without the larger upstream Watana reservoir, the Devil Canyon alternative would have minimal storage for providing power in winter.

Energy for each of the project alternatives was estimated. Susitna project hydrology, along with reservoir, waterway, and turbine-generator performance data were developed. Model inputs including daily flow for the period of record, reservoir capacity curves, spillway capacity, and tailwater curves were updated, based largely on the 1980's studies, license application, and amendment.

Cost estimates for each alternative were updated. These updates were based on the original 1983 FERC application, including its preliminary design, quantities and associated cost estimate, with several modifications from a 1986 license amendment. For the water-to-wire turbine-generator equipment cost estimates, budget pricing was requested directly from manufacturers. A contingency of 20 percent of direct construction costs was set, which is typical for preliminary design. Project licensing, environmental studies, engineering design and construction management, were estimated at 11 percent of direct construction costs. Cost estimates were developed using conservative assumptions and further review of existing infrastructure and industry practices may reduce costs.

The project schedule was updated to reflect changes in federal and state regulations, including several significant environmental legislation acts and modifications to the FERC licensing process. Based on the modern Integrated Licensing Process (ILP), obtaining the FERC license for Susitna is expected to require an ambitious sustained effort, with issuance of the license expected in approximately 8 years. The licensing process would involve extensive public outreach, stakeholder involvement, and coordination of fishery, botanical, wildlife, cultural resource, and other supporting studies. This approach would by necessity be much more comprehensive than the license process in the 1980's. To expedite the overall schedule to bring the project on line, environmental field studies and engineering design would be developed in parallel with the license application.

Preliminary economic analyses were also developed for each project alternative to determine the average cost of electricity per kilowatt hour. These economic analyses were based on the updated estimates of cost, energy, and schedule for each of the project alternatives, thereby identifying the economically preferred alternative. For this preliminary analysis, the following major assumptions were used to compare each alternative:

1. No inflation
2. 100 percent financing with no capital contribution by the State
3. Bond interest rate is 5 percent with a term of 50 years
4. All energy will be sold
5. Debt coverage ratio of 1.25
6. Ongoing O&M and capital expenditures costs and schedule as estimated in Section 3.3 of this report.

These assumptions provide the basis for a relative comparison between the alternatives.

The results of this study are summarized in Table 1. The Watana/Devil Canyon alternative is the most cost effective per unit of energy. The Devil Canyon alternative does not provide a stable winter energy supply although its cost per kWh is lower than the other alternatives.

<b>Table 1 Summary</b>						
<b>Alternative</b>	<b>Ultimate Capacity (MW)</b>	<b>Construction Cost (\$billion)</b>	<b>Energy (billion kWh/yr)</b>	<b>Schedule (years)</b>	<b>Cost per kWh (\$)</b>	
					<b>First 50 Years</b>	<b>Second 50 Years</b>
Watana	1,200	8.4	3.1	15 - 16	0.22	0.01
Low Watana	600	6.9	2.4	14 - 15	0.20	0.01
Watana/Devil Canyon	1,880	11.7	7.2	15 - 20	0.14	0.01
Staged Watana/Devil Canyon	1,880	12.8	7.2	14 - 23	0.18	0.01
Devil Canyon	680	5.0	2.9	14-15	0.13	0.02

Hydroelectric power has many economic and environmental benefits including long-term rate stabilization. Because the cost of the water to power a hydroelectric turbine is essentially free the cost per kilowatt hour is related to the construction and maintenance costs of the dam and powerhouse facilities. As we have seen recently, the price of fossil fuels can fluctuate dramatically over time whereas the cost of hydroelectric power decreases once the initial investment has been repaid and remains low and stable for the life of the project. Consequently the economic risk associated with hydroelectric power is substantially lower than thermal power. Additionally, the life cycle carbon dioxide production of hydroelectric facilities is orders of magnitude less than thermal power plants.

## **1 Background**

The Susitna River has its headwaters in the mountains of the Alaska Range about 90 miles south of Fairbanks. It flows generally southwards for 250 miles before discharging into Cook Inlet just west of Anchorage. Contained entirely within the south central Railbelt region, the Susitna River is situated between the two largest Alaska population centers of Anchorage and Fairbanks.

The Bureau of Reclamation first studied the Susitna River's hydroelectric potential in the early 1950s, with a subsequent review by Corps of Engineers in the 1970s. In 1980, the Alaska Power Authority (APA; now the Alaska Energy Authority) commissioned a comprehensive analysis to determine whether hydroelectric development on the Susitna River was viable. Based on those studies, the APA submitted a license application to the Federal Energy Regulatory Commission (FERC) in 1983 for the Watana/Devil Canyon project on the Susitna River. The license application was amended in 1985 for the construction of the Staged Watana/Devil Canyon project at an estimated cost of \$5.9 billion (1985 dollars).

Developing a workable financing plan proved difficult for a project of this scale. When this existing difficulty was combined with the relatively low cost of gas-fired electricity in the Railbelt, the declining price of oil throughout the 1980s, and its resulting impacts upon the State budget, the Power Authority's Board of Directors terminated the project in March 1986.

At that point, the State of Alaska had appropriated approximately \$227 million to the project from FY79-FY86, of which the project had expended \$145 million to fund extensive field work, biological studies, and activities to support the FERC license application. Though the Power Authority concluded that project impacts were manageable, the license application was withdrawn and the project data and reports were archived to be available for reconsideration sometime in the future.

In 2008, the Alaska State Legislature, in the FY 2009 capital budget, authorized the AEA to reevaluate the Susitna Hydro Project. The authorization also included a Railbelt Integrated Resource Plan (IRP), which will evaluate various sources of electrical power to satisfy the long term energy needs for the Railbelt portion of Alaska. To date the IRP has not yet been completed.

The Susitna and other hydroelectric projects are of particular interest to the AEA and the State because hydroelectric power, unlike gas-fired electricity, is not tied to the fluctuating price of fuel, and can provide long-term rate stability, which in turn allows for long-term growth planning.

### **1.1 Project Scope**

The scope of this new study was to collect and review pertinent information from the original studies and license application from the 1980's. Using this past work as a basis, this reevaluation estimated project energy and projects costs; developed a project schedule; and, using this

information, evaluated in 2008 dollars the economics for the development alternatives generally described in the 1983 FERC license application.

Both the initial FERC license application and this reevaluation analyzed several project alternatives:

- **Watana.** This alternative consists of the construction of a large storage reservoir on the Susitna River at a site named Watana, with a new rock filled dam 885-foot-high, with a powerhouse containing 6 turbines, with a total installed capacity of 1,200 megawatts (MW).
- **Low Watana.** This alternative consists of the Watana dam constructed to a lower height of 700 feet, along with a powerhouse containing 4 turbines, with a total installed capacity of 600 MW.
- **Watana/Devil Canyon.** This alternative consists of the full-height Watana development, plus a second reservoir located downstream to re-regulate river flow, impounded by a new 646-foot-high concrete dam, at a site named Devil Canyon. The Devil Canyon powerhouse would have an installed capacity of 680 MW. After the FERC license is issued, these 2 dams and powerhouses would be constructed sequentially without delays. The combined Watana/Devil Canyon developments would have an installed capacity of 1,880 MW.
- **Staged Watana/Devil Canyon (low height Watana, plus Devil Canyon, plus full-height Watana).** This alternative would be the same as the previous alternative, but the Watana dam would be initially constructed to the lower height and the Watana powerhouse would only have 4 out of the 6 lower-head turbine generators installed. The Watana construction crew would demobilize and move downstream to construct the Devil Canyon dam and powerhouse, then either demobilize again, delay further construction, or return upstream to complete the Watana dam to its full height and install the remaining 2 units. The staged capacity of Watana would increase from 600 MW to 1,200 MW for a total project capacity of 1,880 MW.
- **Devil Canyon.** This alternative consists of the Devil Canyon dam, without Watana dam, with a Devil Canyon powerhouse containing 4 turbines, with a total installed capacity of 680 MW. Note that Devil Canyon was intended to be a regulating dam, paired with the Watana reservoir. Without the larger upstream Watana reservoir, the Devil Canyon alternative would have minimal storage for providing power in winter.

A total of 7 alternatives were evaluated. Only the 5 alternatives listed above are presented in this report. A Watana alternative with 6 turbines and a Devil Canyon alternative with 6 turbines were evaluated and found to have higher construction and capital costs with only a minimal increase in energy thus resulting in higher energy costs when compared to the same alternatives with 4 turbines. Thus the 6 turbine options for these alternatives were eliminated from further consideration.

Preliminary energy, cost, and schedule estimates for the 5 analyzed alternatives are described in Sections 2 through Section 4, economic evaluation in Section 5, and regulatory and environmental issues in Section 6.

## **2 Preliminary Energy Estimate**

### **2.1 Hydrologic Analysis**

To develop an updated energy estimate for the Susitna hydroelectric project the existing hydrologic record was updated. At the time the original study was issued in 1983 the hydrologic record contained data from 1950 to 1981. The project team recreated that record from synthesized gage record hydrology for the Watana/Devil Canyon dam sites, transposed from raw daily flow data from United States Geological Survey (USGS) gauge 1529000 at Gold Creek using a straight drainage area proration, and found correlation between the new record and the annual average flow from the original study. Based on this hydrology, a full record was developed for the period from 1950 to 2007. The hydrology of the upper Susitna Basin is dominated by melt water from snow and glaciers in the spring and summer, and substantial freezing during the winter months. As a result, a majority of the flow occurs between mid-April and mid-October.

A review of current literature indicates a lack of consensus on the manner in which precipitation and runoff might be affected by the impacts of either natural variability and/or potential man-made global climate changes. For this report we assume that future hydrologic conditions will be similar to those of our recent past experience.

### **2.2 Energy Model Analysis**

Energy for each of the project alternatives was estimated using Computer Hydro-Electric Operations and Planning Software (CHEOPS), a proprietary energy modeling software. Hydrology was updated in conjunction with project civil, mechanical, and electrical performance data. In addition to daily flow, model inputs included: reservoir capacity and area curves, based on the 1985 FERC amendment; tailwater curves; spillway capacity, with minimum and maximum operation; and evaporation coefficients, all based on the 1985 FERC amendment. Total reservoir evaporation was estimated between 1 and 3 inches per month in summer, with negligible evaporation during the winter when frozen.

Equipment performance was based on manufacturer data obtained in 2008 specifically for this project. Average generic turbine performance curves were then developed for the model, peaking at 95 percent range of efficiency and 92 percent at full gate. Generator performance curves were also developed, peaking at 98 percent. The six 200-MW Watana turbines were rated at a design head of 680 feet and a minimum operating head of 545 feet. The four 170-MW Devil Canyon turbines were rated at 600 feet and a minimum operating head of 450 feet.

For the Watana/Devil Canyon alternative, the target elevations from the 1985 FERC amendment were used to simulate reservoir operation. In that paired configuration, the Devil Canyon power plant provides the base load while the Watana plant is used for peaking power. Alternative scenarios were also run for the Low Watana and Watana operating without Devil Canyon. In these cases, the target elevations for the Watana reservoir were designated to maximize for

winter generation. For the Low Watana alternative, four turbine generators would be installed; each rated at about 150 MW. Other key assumptions for the model included:

- Environmental flow constraints from 1985 as a baseline, despite the fact that new environmental regulations may change requirements on minimum flow and ramping rates
- Energy demand will be sufficient to consume all the energy produced by the project
- A forced outage factor of 1.5 percent for both Devil Canyon and Watana
- Transformer losses of 2 percent of the total generation
- Sedimentation should not have a significant impact on reservoir operation, though 1985 studies indicated 12 percent of the dead storage in the Watana Reservoir will be lost due to sedimentation after 100 years of operation, and no sedimentation rates have been included in the present model
- Firm energy is based on the low water year of the 57-year hydrologic record

The resulting preliminary energy estimates are presented in Figure 2.1 and Figure 2.2 and summarized in Table 2.1. Detailed input and results of these energy analyses are provided in Appendix A.

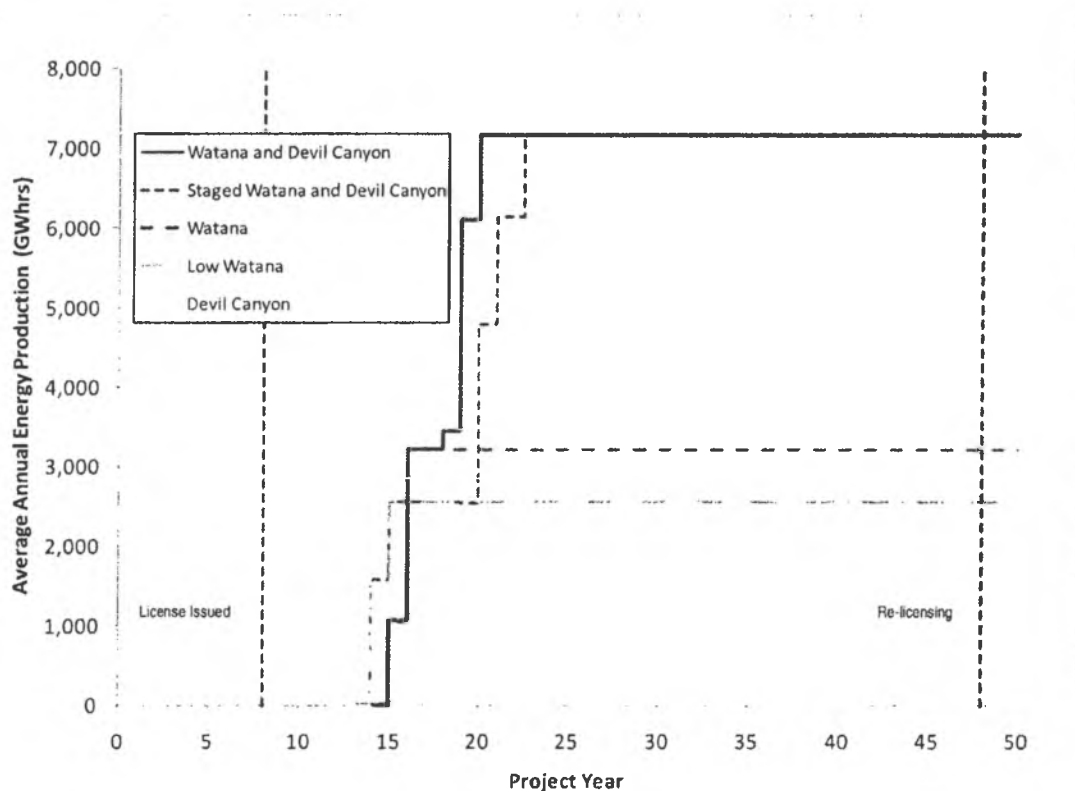


Figure 2.1 Energy Estimates for Susitna Project Alternatives

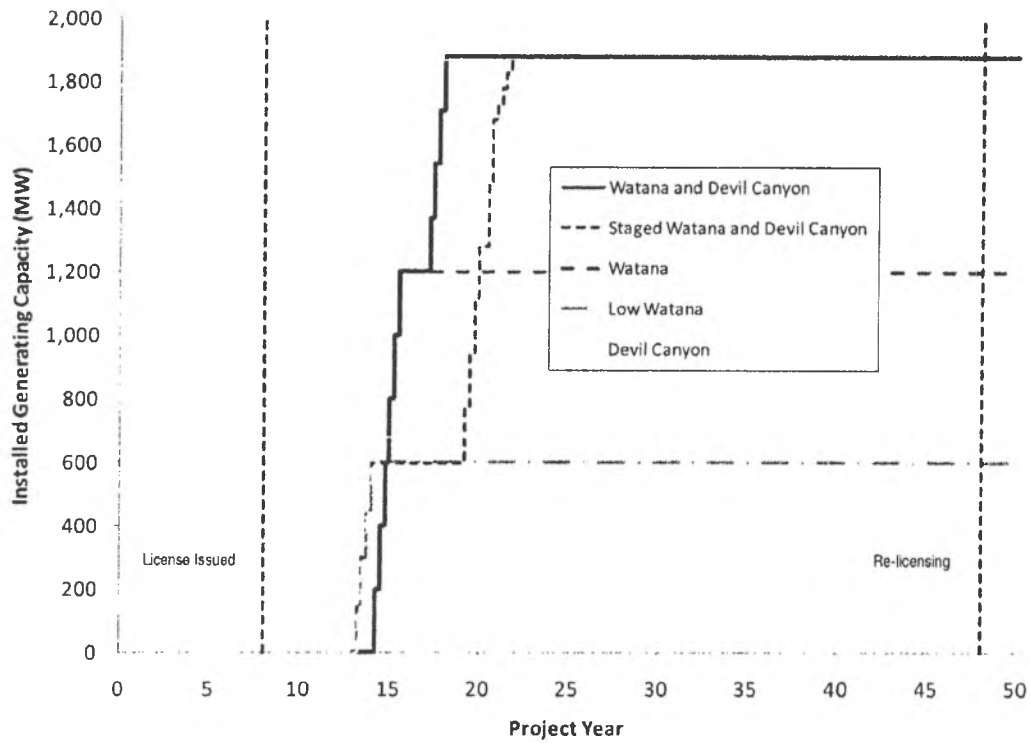


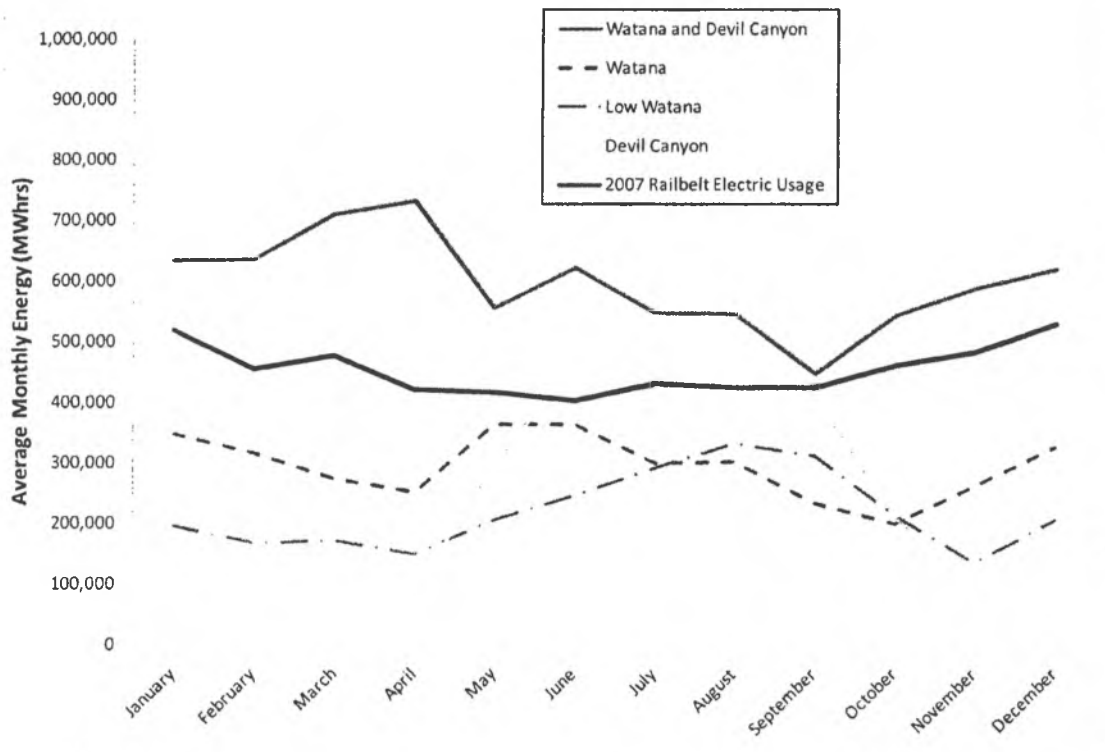
Figure 2.2 Capacity for Susitna Project Alternatives

Table 2.1 Preliminary Energy Estimate		
Alternative	Estimated Average Annual Energy (Billion kWh/year)	Estimated Firm Energy* (Billion kWh/year)
Watana	3.2	1.8
Low Watana	2.6	1.4
Watana/Devil Canyon	7.2	4.1
Staged Watana/Devil Canyon	7.2	4.1
Devil Canyon	2.9	2.3

\*Firm energy is based on the low water year of the 57-year hydrologic record

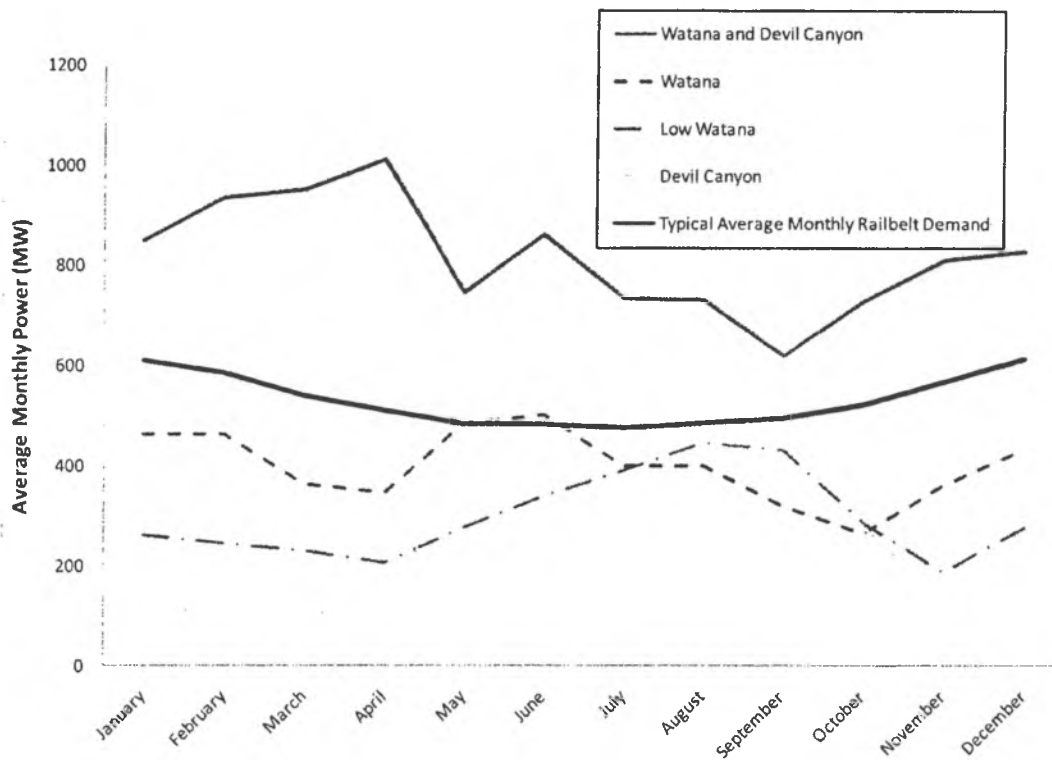
The energy production for the project alternatives will be influenced by seasonal flow variations. The Susitna development was originally designed as a cascade system to store energy for use

during the winter. The Watana reservoir provides storage capacity and peaking power with the Devil Canyon powerhouse providing base load power. This allows for water to be stored in the Watana reservoir during the spring and summer floods and run through the Devil Canyon powerhouse during the winter months. As can be seen in Figure 2.3 and Figure 2.4, the Devil Canyon reservoir alone does not provide enough storage capacity to allow for substantial energy to be generated during the winter months.



\*Railbelt electricity usage obtained from the U.S. Department of Energy

Figure 2.3 Seasonal Energy for Susitna Alternatives with Rule Curve to Maximize Winter Generation



\*Railbelt electricity demand obtained from the U.S. Department of Energy, 2007

**Figure 2.4 Seasonal Capacities of Susitna Alternatives with Rule Curve to Maximize Winter Generation**

### **3 Preliminary Cost Estimate**

#### **3.1 Original Cost Estimate**

To develop an updated cost estimate for the Susitna hydroelectric project as conceptualized in the 1980s, project documents from that era, including project descriptions, drawings, and cost estimates were researched. A detailed cost estimate, prepared in the original feasibility study in 1982, was located. The estimate for the Watana/Devil Canyon alternative totaled \$5.0 billion (in 1982 dollars). Also located was a 1986 study estimate for the staged Watana/Devil Canyon alternative at \$5.5 billion (1986 dollars). These 2 original estimates were compared and found to be very similar, except for the intervening escalation and a few line-item differences; for example, an environmental mitigation line item was included in the 1986 cost estimate as part of licensing, but this item was not listed the 1982 estimate. Other changes from 1982 to 1986 included an increase in contingency from 17.5 percent to 20 percent and an increase in engineering from 12.5 percent to 15 percent.

#### **3.2 Updated Cost Estimate**

2008 cost estimates for each alternative were created based on quantities from the original 1982 estimate with a few modifications from the 1986 estimate. U.S. Cost, a company specializing in cost estimates for large projects, developed the unit prices for 2008. Cost estimates were developed using conservative assumptions; further review of existing infrastructure and industry practices may reduce costs.

For the water-to-wire turbine-generator equipment estimates, budget pricing was requested directly from manufacturers. The water-to-wire equipment includes: turbines, generators, turbine shutoff valves, and other miscellaneous mechanical/electrical equipment, and installation. A data sheet of head, flow, and power ratings was prepared for the 10 potential turbine-generators at Watana and Devils Canyon. The invitation was sent to Alstom, VA-Tech, Voith Siemens, and Toshiba; and pricing, performance, delivery, dimensions, and weights were requested. Of these, 3 budgetary offers were received, evaluated, and incorporated into the 2008 estimate. Transformer prices were also quoted from ABB.

A contingency of 20 percent of direct construction costs was used, which is typical for preliminary design. Use of this contingency was judged acceptable due to the advanced stage of the engineering studies performed in the 1980s. Project licensing, environmental studies, engineering design, and construction management were estimated at 11 percent of direct construction costs including contingency. A figure of 12 percent is typical, though due to economy of scale, the percentage has been adjusted slightly, pending more detailed design and service estimates in the future.

The unit prices in this report are typical for large projects in the United States. Variations in cost will likely be covered within the 20 percent contingency used in this estimate. The 2 largest line item construction costs are the gravel fill for the Watana dam and the concrete for the Devil Canyon. If the unit prices for these items were undervalued by as much as 25 percent each, the

effect on the total construction costs would only be 2 percent. The approach used for this report was to apply the unit prices consistently to the various alternatives. This approach allows a common platform from which to establish priority among the alternatives. Although future refinement of the estimated unit costs may affect the final economics of the project it should not affect the ranking of the alternatives amongst themselves.

The resulting preliminary construction cost estimate is shown in Table 3.1. Detailed construction cost estimates are provided in Appendix B.

In addition to construction costs, the project will incur other costs such as financing costs and interest before construction is complete. These costs are assumed to be rolled into the long term bonds that will be issued for each alternative. The sum of construction costs and financing costs, plus other related costs that are included in the debt service, are the capital costs of the project. The capital costs shown in Table 3.1 reflect the total debt that would be issued for each alternative.

<b>Table 3.1 Preliminary Cost Estimate</b>		
<b>Alternative</b>	<b>Estimated Construction Cost (billions)</b>	<b>Estimated Capital Cost (billions)</b>
Watana	\$8.4	\$10.5
Low Watana	\$6.9	\$8.3
Watana/Devil Canyon	\$11.7	\$14.5
Staged Watana/Devil Canyon	\$12.8	\$15.9
Devil Canyon	\$5.0	\$6.0

### 3.3 Operations and Maintenance Cost Estimate

The economic analysis for this project will require estimates of operations and maintenance costs (O&M) and capital expenditures. The annual costs for these items are based on the following assumptions:

- Annual operation and maintenance for the power facilities is estimated at \$10 million per year for each of the alternatives. This annual cost is based on other hydroelectric projects of comparable size and location. For the roads and other infrastructure, it is assumed that once the construction is completed, a portion of the maintenance would be subsidized by the project, equating to approximately \$5 million per year and is the same for each of the alternatives.
- Capital expenditures will occur on the following schedule:

- Every 20 years, the turbine runners will require replacement due to cavitation. The replacement cost is estimated at approximately \$5 million per turbine.
- Every 20 years, the governors will require upgrades. The replacement cost is estimated at approximately \$0.5 million per turbine.
- Every 40 years, the generator rotor and stator will require rewinding. This work is estimated at approximately \$10 million per turbine.
- Every 40 years, the transformers will require rehabilitation. This work is estimated at approximately \$0.4 million per transformer. Watana has 9 transformers and Devil Canyon has 12, plus one spare transformer for each dam.
- Every 50 years, the spillways will require structural repairs. A total of \$12.5 million is assumed for each dam or \$25 for the two-dam alternatives.
- Every 50 years, the transmission lines will require rehabilitation. A total of \$10 million is assumed for each project alternative.
- Every 50 years, the dam structures will require rehabilitation. A total of \$25 million is assumed for each dam, or \$50 million for two dams.
- The project FERC license will expire after 50 years from issuance. Five years before this expiration, a relicensing effort will begin, and both environmental and regulatory work will be required. A total of \$100 million is assumed spread evenly over this 5 year period.

## **4 Preliminary Project Schedule**

An updated schedule was developed for each of the project alternatives. These schedules extend from approval, through licensing, design, construction, and commissioning. The primary purpose of this schedule is to provide a timeline for estimated cost cash flow and estimated energy revenue to determine economic feasibility. This schedule assumes that:

- Construction times are estimated based on 1982 FERC license application.
- The licensing process from start to FERC order is estimated at 7 to 10 or more years. We have set a reasonable target of 8 years for the proposed project analysis, provided that the effort is begun immediately, ambitiously, fully funded, and conducted in parallel with environmental studies, engineering, and with active public outreach and cooperation by stakeholders.
- The FERC License Application will be based on the 1986 application, updated to reflect more than 20 years of regulatory changes and modern engineering and construction methods.
- Any environmental studies will be based on 1980 and 1986 studies, updated to reflect present site conditions, public interests, wildlife, and recreational needs.
- Construction will begin immediately upon issuance of the license.
- Roads and staging will be state permitted outside the FERC project and will begin several years before FERC license, including pioneer and permanent roads, airports, bridges, construction camps, staging areas, and towns. Building roads in this way is the quickest way to meet the projected timeline although there is some uncertainty whether permits could be obtained to construct these facilities before the project license is issued.
- Construction of diversion dams and tunnels will begin on issuance of the license, with upstream and downstream coffer dams and tunnels to divert the Susitna River during construction of main dams at Watana/Devil Canyon.
- Spillway construction will follow diversion dam and tunnel construction, and will include site preparation, approach channels, control structures, gates, stoplogs, chute, and flip buckets for main and emergency spillways.
- The full-height dam construction at Watana will require an 885-foot-high rock-fill dam following site preparation, grouting, and installation of a pressure relief system.
- The main dam construction at Devil Canyon will include a thin-arch concrete dam, preceded by site preparation, foundations, abutments, and thrust blocks. Rock-fill saddle dam construction will follow grouting and pressure relief system.
- The powerhouse and transmission will include power intake, tunnels/penstock, surge chamber, tailrace, powerhouse, turbine/generators, mechanical/electrical systems, switchyard, control buildings, and transmission lines.
- Reservoir filling will be based on the latest hydrologic data for inflow and turbine data for outflow.

- Devil Canyon construction will commence immediately upon completion of Watana for the Watana/Devil Canyon alternatives.

The resulting estimate of generation of first power and full power is shown in Table 4.1. Detailed schedules for all of the alternatives are provided in Appendix C.

<b>Table 4.1 Power Generation Time Estimates</b>		
<b>Alternative</b>	<b>Generation of first power (years)*</b>	<b>Generation of full power (years)*</b>
Watana	15	16
Low Watana	14	15
Watana/Devil Canyon	15	20
Staged Canyon      Watana/Devil	14	23
Devil Canyon	14	15

\*From start of licensing

## **5 Economic Analysis**

An economic analysis was developed for each of the project alternatives. This analysis used the energy, cost, and schedule information prepared in previous tasks to determine the cost of electricity per kilowatt hour (kWh) for each of the project alternatives, thereby identifying the economically preferred alternative.

For this preliminary analysis, the following major assumptions were used to compare each alternative:

7. No inflation
8. 100 percent financing with no capital contribution by the State
9. Bond interest rate is 5 percent with a term of 50 years
10. All energy will be sold
11. Debt coverage ratio of 1.25
12. Ongoing O&M and capital expenditures costs and schedule as estimated in Section 3.3 of this report.

These assumptions provide the basis for a relative comparison between the alternatives. AEA proposed the first 4 assumptions and the fifth assumption regarding debt coverage ratio is the same ratio as used in the 1980s studies. These assumptions will be modified as the study progresses so that the Susitna alternatives will be evaluated on the same basis as other power generation alternatives in the IRP.

The financial markets are currently under a great deal of stress and it is unlikely that bonds could be sold today under the assumptions noted above. However, it is anticipated that the bond market will be functioning normally at the time when substantial capital inputs are required for construction. Future analyses should consider potential financing mechanisms, such as those related to carbon markets or offset investments under a cap-and-trade program as proposed by the Obama-Biden Administration.

The assumption of no capital contribution by the State requires that construction financing or bridge loans are available until construction is complete and power generation begins. The bridge loan is assumed to roll over each year and convert into long-term debt at the beginning of the first full year of operation. The interest rate on the bridge loan is assumed to be 5 percent annually. Debt payments are assumed to start in the first full year of operation.

It is unlikely that the AEA-proposed 100 percent financing with no capital contribution by the State or another party could be achieved. The licensing and construction period for a major hydroelectric facility is very long and even if construction financing were available for these activities the lenders would in all likelihood require at least interest payments until electric generation started. Since the project would not have an income stream until generation starts, the State or another entity would be liable for the interest payments. An assumption of no capital

contributions or grants by the State of Alaska or the federal government results in a high cost of energy for a Susitna hydroelectric project. Grants from these entities could substantially reduce the cost of energy during the period when debt is being repaid.

A debt coverage ratio (DCR) of 1.25 requires that the net operating income be 1.25 times greater than the annual debt payments. A 1.25 ratio was used in the 1985 Susitna report and it is assumed that this ratio could be negotiated with the bond underwriters in the future. The surplus revenues generated by this DCR are placed in a reserve fund and the fund increases each year with accrued interest and an annual contribution from the DCR until such time as the reserve fund in year X plus the net income in year X+1 are large enough to pay off all the remaining debt. Thus the reserve fund decreases the length of time when debt payments are required.

As noted in Section 3.3 of this report, capital expenditures will be required during the life of the project following completion of construction activity for such activities as replacing turbine runners, rewinding generators, FERC relicensing, etc. These costs are assumed to be paid from a reserve fund that accrues modest amounts of surplus cash sufficient to cover the ongoing capital expenditures through the first 100 years of the project. The spreadsheet model seeks the minimum cost of energy that is sufficient to meet these capital expenditures and operations and maintenance costs. It is anticipated that through proper design and operations of the project there will be minimal loss of energy, if any, while these repair and replacement activities are ongoing. The analysis assumes no change in annual power generation for plant maintenance or repair and replacement.

Figure 5.1 shows the cost of electricity for each of the project alternatives from year 1 through year 100. The Watana-only alternatives average about \$0.24 per kWh of electricity for the bond payment time interval, falling to about \$0.01 per kWh after debt service is eliminated. The Low Watana alternative debt service is paid off sooner than the Watana alternative so the average cost of electricity for the first 50 years is lower for the Low Watana alternative.

The Watana/Devil Canyon alternative or the Staged Watana/Devil Canyon alternative result in higher costs for electricity than the other alternatives in the first few years of generation since much larger capital costs are incurred and there is limited power generation in the first few years compared to the capital expenditures. The DCR magnifies this peak electricity cost since net operating revenues must be 1.25 times the annual debt service and these alternatives are slowly increasing their generating capacity. A similar cost increase was identified in the 1980s studies.

When full generating capacity is achieved for the Watana/Devil Canyon alternative or the Staged Watana/Devil Canyon alternative, the cost of electricity is substantially lower than for the Watana-only alternatives at about \$0.15 to \$0.16 per kWh (Figure 5.1). However, for the Staged Watana/Devil Canyon alternative, the substantially-higher cost of energy during the first years of generation results in the average cost per kWh during the first 50 years being about \$0.18 per kWh (Table 5.1). The Watana/Devil Canyon alternative has an average cost of electricity of about \$0.14 per kWh for the first 50 years. Energy costs drop to slightly more than \$0.01 per kWh for both of the multiple dam alternatives after the bonds are paid off.

The Devil Canyon alternative has a cost of power that is slightly lower (\$0.13 per kWh) than the Watana/Devil Canyon alternative during the first 50 years and slightly higher cost of power after the debt is paid. As noted earlier in this report the Devil Canyon alternative has limited winter generation capacity, although the cost of energy is lower than the other alternatives.

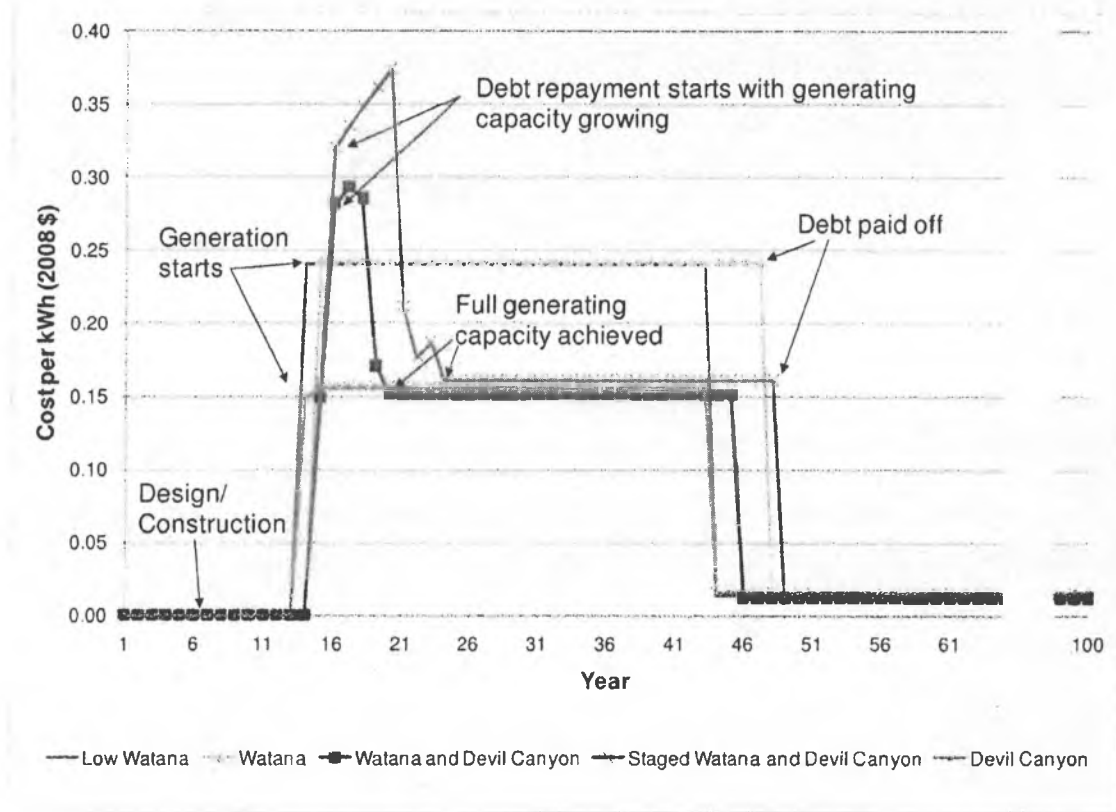


Figure 5.1 Cost of Electricity per Kilowatt Hour for Susitna Hydroelectric Alternatives

Based on the average cost of electricity during the first 50 years of the project and the second 50 years (Table 5.1), the Watana/Devil Canyon alternative or the Devil Canyon alternative would be preferred over the other alternatives, with the Watana/Devil Canyon alternative having slightly lower costs after the debt service period. If winter electricity is an objective of this project then the Watana/Devil Canyon alternative is preferable to the other alternatives. The average cost of electricity during the first 50 years is calculated as the average cost, starting with the first year of generation, and continuing through year 50. The average includes some years when the cost of electricity is very low following payment of the debt.

<b>Table 5.1 Average Cost of Electricity Per Kilowatt Hour</b>		
Alternative	Cost Per Kilowatt Hour (2008 dollars)	
	First 50 Years	Second 50 Years
Watana	\$0.22	\$0.01
Low Watana	\$0.20	\$0.01
Watana/Devil Canyon	\$0.14	\$0.01
Staged Watana/Devil Canyon	\$0.18	\$0.01
Devil Canyon	\$0.13	\$0.02

A sensitivity analysis was performed to estimate the effect of varying interest rates on the cost of power. Table 5.2 shows the average cost per kWh during the first 50 years for each alternative. A reduction in the interest rate from 5 percent to 3.5 percent results in a decrease of 3 cents to 5 cents per kWh depending on the alternative. However, an increase in the interest rate to 6.5 results in increases of six to nine cents per kWh.

<b>Table 5.2 Average Cost of Electricity Per Kilowatt Hour at Varying Interest Rates</b>			
Alternative	Cost Per Kilowatt Hour, First 50 Years (2008 dollars)		
	3.5%	5%	6.5%
Watana	\$0.17	\$0.22	\$0.31
Low Watana	\$0.15	\$0.20	\$0.28
Watana/Devil Canyon	\$0.11	\$0.14	\$0.20
Staged Watana/Devil Canyon	\$0.14	\$0.18	\$0.25
Devil Canyon	\$0.10	\$0.13	\$0.18

Figure 5.2 through Figure 5.11 provide additional detail on each of the 5 alternatives that were evaluated. There are 2 graphs presented for each alternative. The first graph displays the cost per kilowatt hour for the first 100 years of the project and the second graph displays the construction cost expenditures in each year and the total cost of debt in any year. The vertical scales are the

same across all 5 alternatives (i.e., \$0 to \$0.40 per kWh for cost of electricity and \$0 to \$16 billion for construction expenditures and total debt) so that the relative difference between alternatives is more apparent.

The Devil Canyon alternative has the lowest total debt structure of the 5 alternatives, followed by the Low Watana alternative and then the Watana alternative. The Watana/Devil Canyon alternative has a lower total debt structure than the Staged Watana/Devil Canyon alternative because the construction period is shorter and the total capital costs are lower.

Table outputs for the models and a discussion of the model parameters are provided in Appendix D.

5.1 Watana

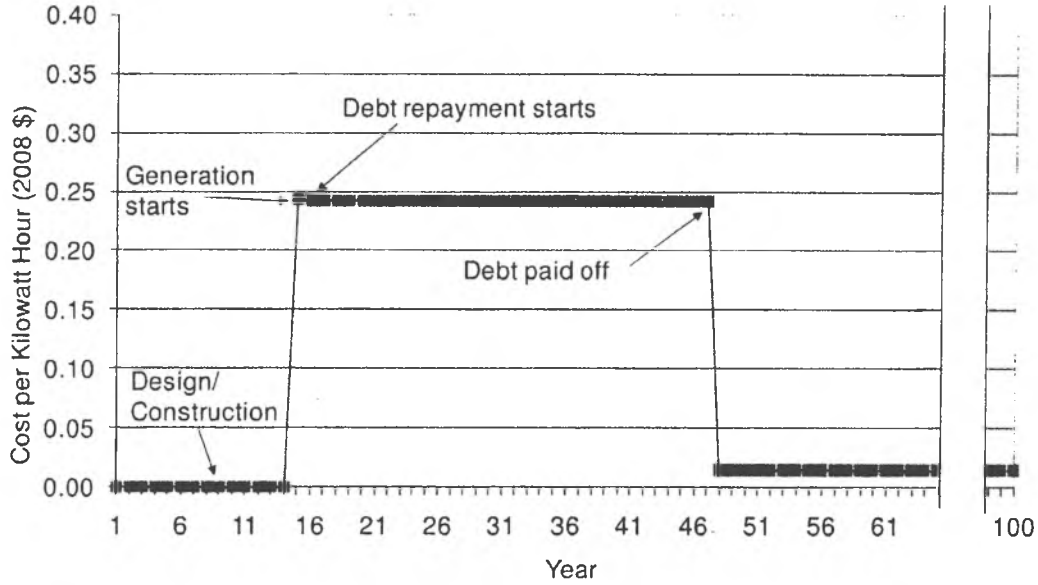


Figure 5.2 Watana Cost of Electricity

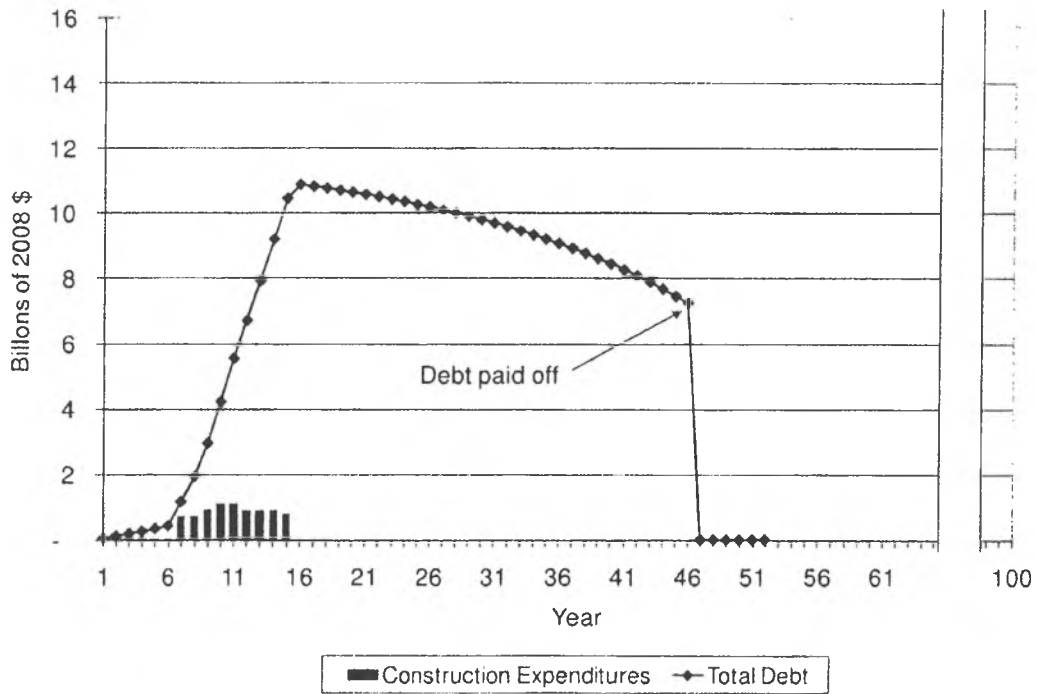


Figure 5.3 Watana Annual Construction Expenditures and Total Debt

5.2 Low Watana

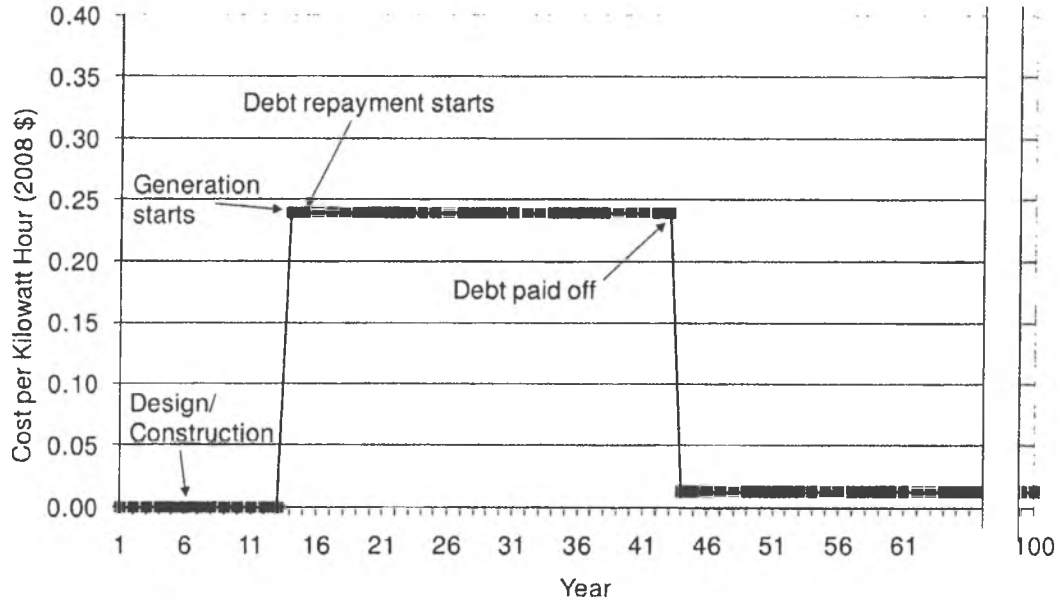


Figure 5.4 Low Watana Cost of Electricity

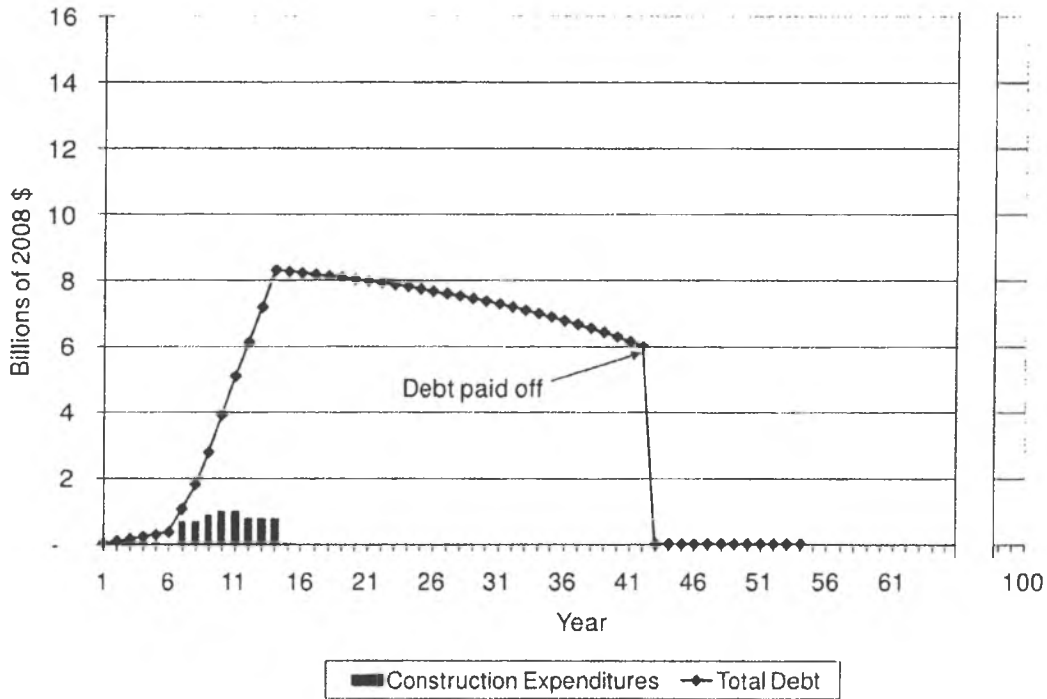


Figure 5.5 Low Watana Annual Construction Expenditures and Total Debt

5.3 Watana/Devil Canyon

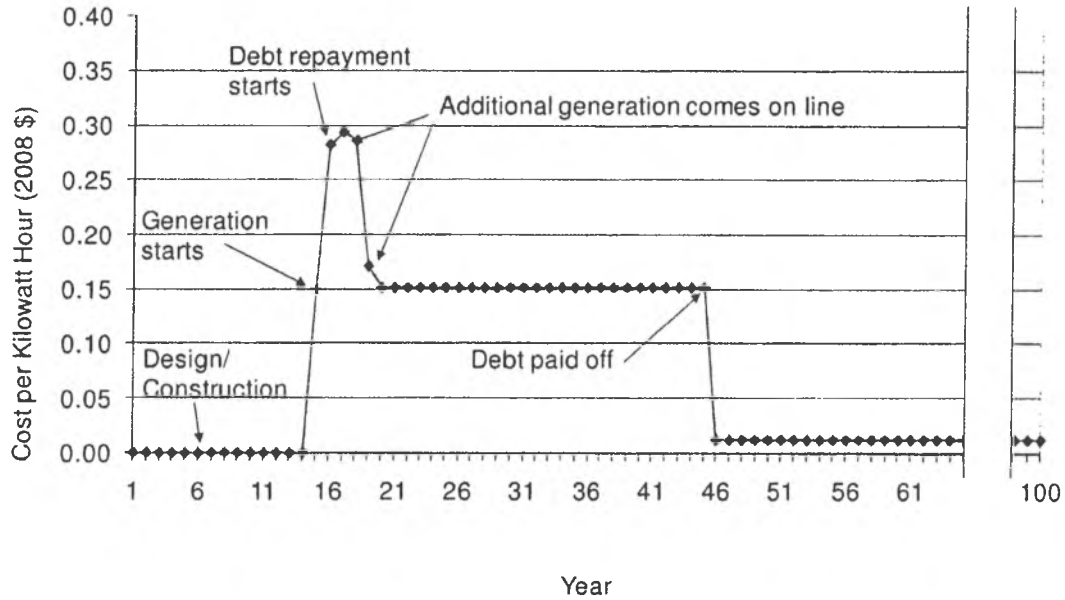


Figure 5.6 Watana/Devil Canyon Cost of Electricity

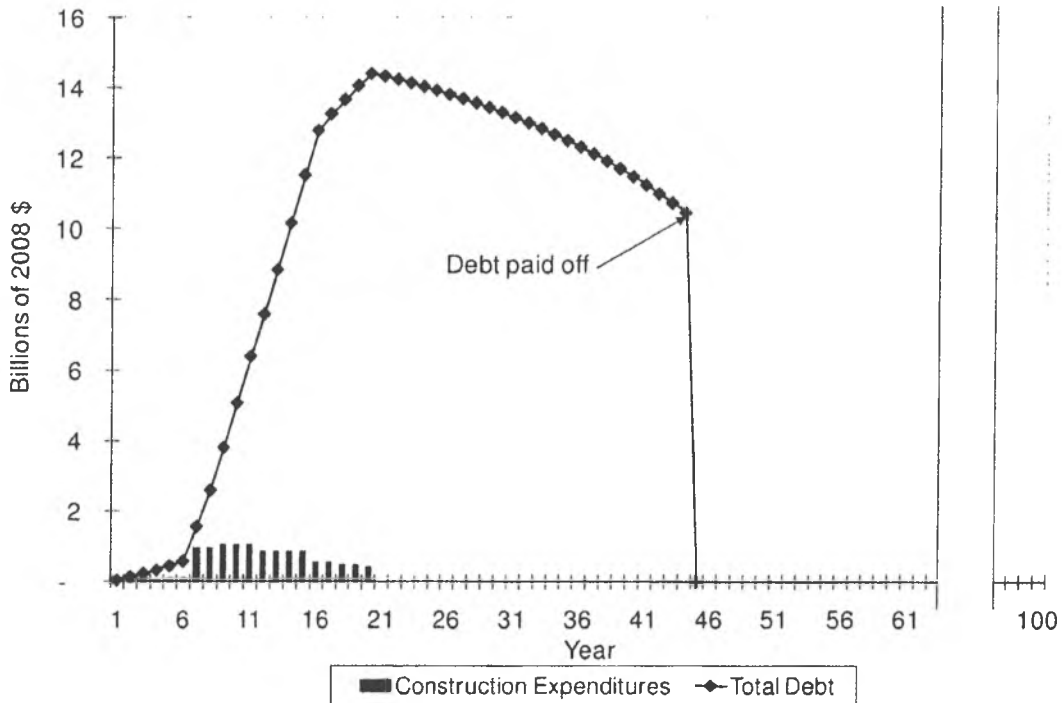


Figure 5.7 Watana/Devil Canyon Annual Construction Expenditures and Total Debt

5.4 Staged Watana/Devil Canyon

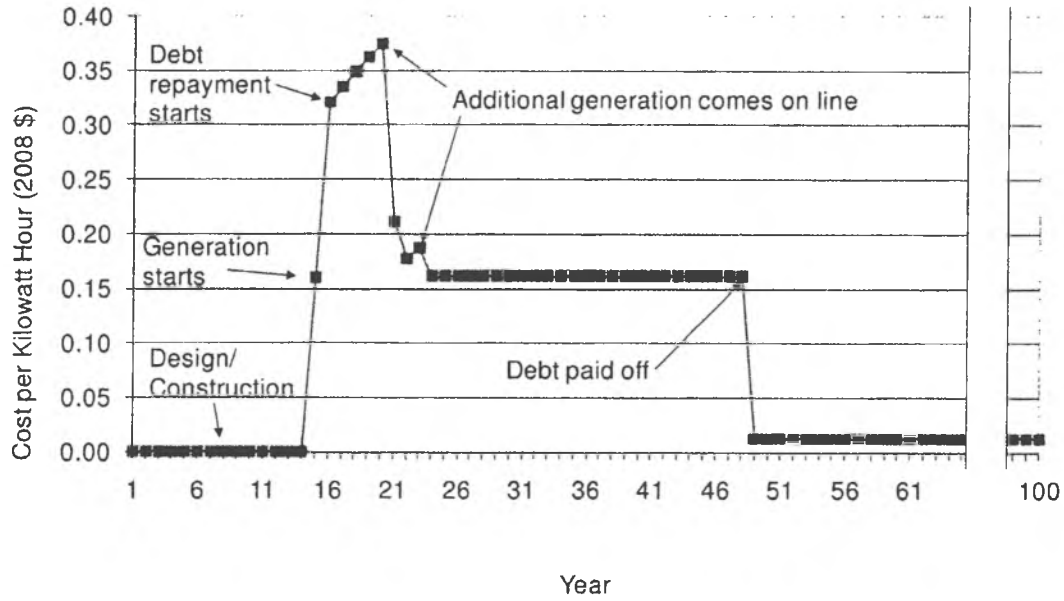


Figure 5.8 Staged Watana/Devil Canyon Cost of Electricity

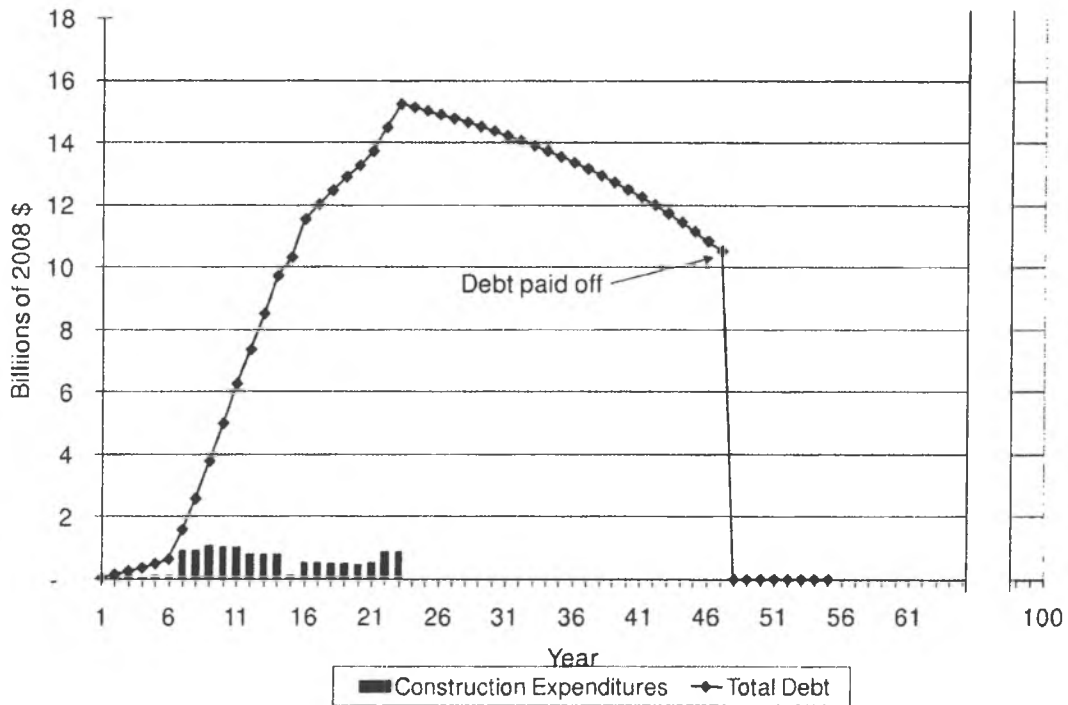


Figure 5.9 Staged Watana/Devil Canyon Annual Construction Expenditures and Total Debt

5.5 Devil Canyon

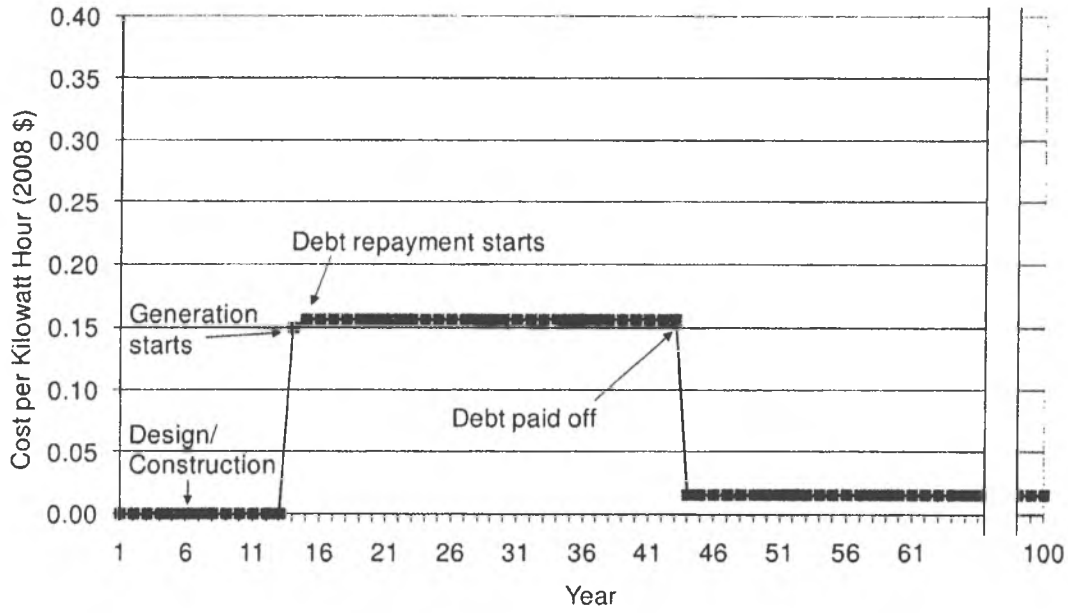


Figure 5.10 Devil Canyon Cost of Electricity

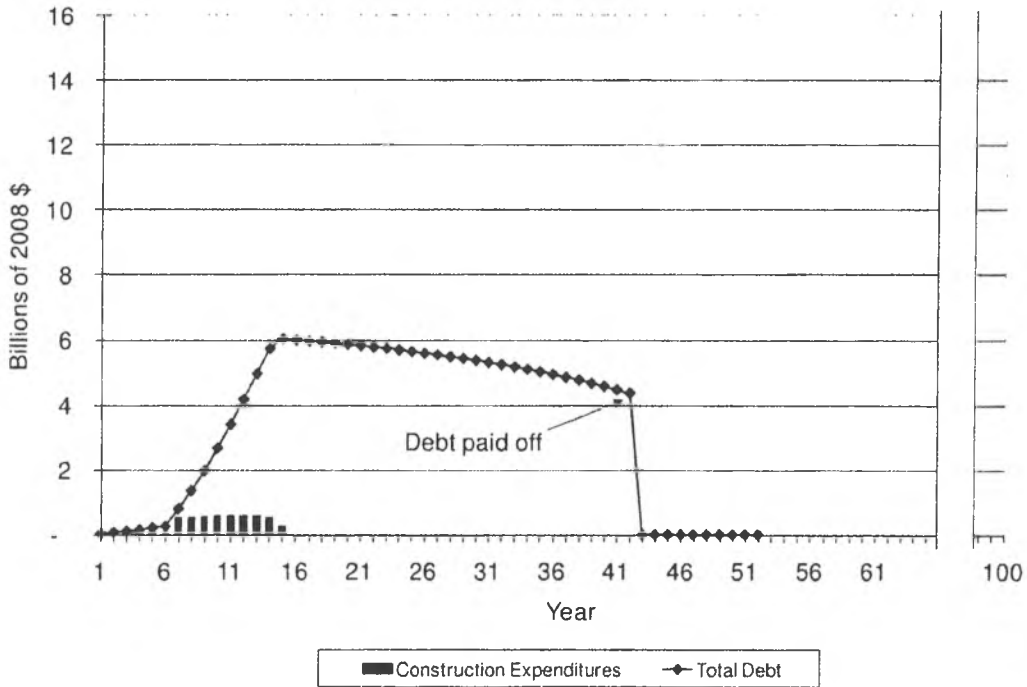


Figure 5.11 Devil Canyon Annual Expenditures and Total Debt

## **6 Regulatory and Environmental Issues**

After the Susitna project was discontinued in 1986 a database of 3,573 documents was created. In September 2008, the 87 most-relevant documents were scanned into HDR's files, of which 18 were summarized. A synthesis of the 7 most-pertinent documents was completed. Because not all of the documents were summarized, some relevant information has likely been overlooked; however, most information was included in the synthesis.

These documents contain information on potential impacts of the proposed project and mitigation proposals for those impacts. Specifically, the documents deal with fisheries resources, botanical resources, wildlife resources, and cultural resources in the potential project area. The documents divide the Susitna River Basin into 4 geographic regions:

- Impoundment zones
- Middle Susitna River
- Lower Susitna River
- Access roads and transmission lines

The potential impacts and mitigation options are discussed for each category in each geographic region as much as possible. It is important to note that not all categories will be impacted in all geographic regions. Mitigation for the proposed impacts is divided into the following categories: avoidance, minimization, rectification, reduction, and compensation. Avoidance is always the preferred mitigation, though it is not usually feasible. Compensation is the only mitigation option for many of the impacts.

### **6.1 Fisheries Impacts**

The fisheries resources have the potential to be impacted the most due to the project. In the impoundment zones, 82 miles of riverine habitat will be transformed into reservoir habitat. The potential exists for the displacement of approximately 20,000 Arctic grayling larger than 8 inches in length from the creation of the reservoirs.

Most of the potential impacts will occur in the middle Susitna River. There will be impacts due to changes in water quality, thermal activity, the water's suspended sediment load, reservoir draw-down fluctuations, impoundment zone inundation, flow regime, and fish habitat. These impacts will result in both positive and negative effects on fish populations. For example, the increase in winter water temperatures will lead to the creation of more overwintering habitat and thus greater fish survival; however, the cooler spring water temperatures will slow fish growth.

Mitigation for these impacts is proposed by compensation through land acquisition, habitat modification, and reservoir stocking.

## **6.2 Botanical Impacts**

The project area contains 295 vascular plant species, 11 lichen genera, and 7 moss taxa. Low Watana inundation will permanently remove 16,000 acres of vegetation. Devil Canyon inundation will permanently remove 6,000 acres of vegetation. Watana inundation will permanently remove an additional 16,000 acres of vegetation. There will be a total of 38,000 acres of vegetation permanently removed. Most of the vegetation inundated will be spruce forest. An additional 836 acres of vegetation will be permanently removed due to access road construction. The transmission corridor will comprise a total of 11,000 acres. Of that area, only a negligible fraction of vegetation will be totally removed due to intermittent placement of control stations, relay buildings, and towers.

There will be limited botanical impacts downstream from the reservoirs. These involve changes to the vegetation due to a more stable environment. Due to flow regulation there will no longer be major flooding events, which destroy the riparian vegetation; instead, rather, there will be succession of the riparian vegetation and colonization of new floodplains. The increase in winter water temperatures will decrease the amount of ice scouring that occurs, which will result in effects similar to those caused by the decrease in flooding.

Botanical resource mitigation will consist largely of compensation for permanently removed vegetation.

## **6.3 Wildlife Impacts**

Within the Susitna River Basin there are 135 bird species, 16 small-mammal species, and 18 large-mammal and furbearing species. There will be 5 classes of potential impacts to terrestrial vertebrates:

- Permanent habitat loss, including flooding of habitat and covering with gravel pads or roads
- Temporary habitat loss and habitat alteration resulting from reclaimed and revegetated areas such as borrow pits, temporary right of ways, transmission corridors, and from alteration of climate and hydrology
- Barriers, impediments, and hazards to movement
- Disturbances associated with project construction and operation
- Consequences of increased human access not directly related to project activities

Mitigation for the proposed impacts involve mostly compensation since there will be permanent habitat loss for most species.

#### **6.4 Cultural Resource Impacts**

Within the proposed project area, 297 historic and prehistoric archaeological sites were located. An additional 22 sites were already on file. Sites located within 500 feet of the reservoir's maximum extent may be indirectly impacted due to slumping from shoreline erosion. Indirect impacts may also result from vandalism due to increase in access to the sites. The project has the potential to impact 140 sites. None of these sites will occur in the proposed road corridor or transmission lines. The majority of these sites are relatively small prehistoric sites.

Mitigation for the lost cultural resources will mostly occur through data recovery. Preservation would also be used for some sites. Options to consider include construction of protective barriers to minimize erosion, controlled burial, or fencing of the site to restrict access.

Currently, there are a variety of federal, state, and local land use plans that encompass the Susitna Basin.

#### **6.5 Carbon Emissions**

According to the United Nations working group on carbon emissions from freshwater reservoirs the worst case carbon emissions from a reservoir in a boreal climate is 6.7<sup>1</sup> grams per square meter per year. For the Watana/Devil Canyon alternative this equates to 465,000 metric tons of carbon per year or 0.065 metric tons per MWhr. The US Department of Energy reports the average carbon emissions due to electric generation for the State of Alaska to be 0.626<sup>2</sup> metric tons per MWhr. Operation of the Susitna project has the potential to eliminate up to 4 million metric tons of carbon production per year.

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<sup>1</sup> United Nations Educational, Scientific and Cultural Organization. Scoping Paper: Assessment of the GHG Status of Freshwater Reservoirs. April 2008

<sup>2</sup> [http://www.eia.doe.gov/cneaf/electricity/st\\_profiles/alaska.html](http://www.eia.doe.gov/cneaf/electricity/st_profiles/alaska.html)

## 7 Summary

Table 7.1 provides an estimate of capacity, construction cost, energy, schedule, and cost per kWh for each of the alternatives. Environmental and regulatory issues are substantial and will require comprehensive investigation, though no fatal flaws are apparent based on this initial review. All of these estimates are preliminary, pending more detailed engineering, environmental, and regulatory studies.

Table 7.1 Summary						
Alternative	Ultimate Capacity (MW)	Construction Cost (\$billion)	Energy (billion kWh/yr)	Schedule (years)	Cost per kWh (\$)	
					First 50 Years	Second 50 Years
Watana	1,200	8.4	3.1	15 - 16	0.22	0.01
Low Watana	600	6.9	2.4	14 - 15	0.20	0.01
Watana/Devil Canyon	1,880	11.7	7.2	15 - 20	0.14	0.01
Staged Watana/Devil Canyon	1,880	12.8	7.2	14 - 23	0.18	0.01
Devil Canyon	680	5.0	2.9	14-15	0.13	0.02

Hydroelectric power has many economic and environmental benefits including long-term rate stabilization. Because the cost of the water to power a hydroelectric turbine is essentially free the cost per kilowatt hour is related to the construction and maintenance costs of the dam and powerhouse facilities. As we have seen recently, the price of fossil fuels can fluctuate dramatically over time whereas the cost of hydroelectric power decreases once the initial investment has been repaid and remains low and stable for the life of the project. Consequently the economic risk associated with hydroelectric power is substantially lower than thermal power. Additionally, the life cycle carbon dioxide production of hydroelectric facilities is orders of magnitude less than thermal power plants.

## **8 Recommendation**

The Watana/Devil Canyon alternative is the most cost effective per unit of energy. The Devil Canyon alternative does not provide a stable winter energy supply although its cost per kWh is lower than the other alternatives.

A primary assumption of this report is that all power from these alternatives can be used at the time it is produced. Determination of the need for this power will be dependent upon further studies in conjunction with the Railbelt IRP.

**Appendix A**  
**Energy Analysis**  
**Input and Results**

For the purposes of this submittal, the appendices have been attached as PDFs.

**Appendix B**  
**Detailed**  
**Cost Estimates**

For the purposes of this submittal, the appendices have been attached as PDFs.

**Appendix C**  
**Detailed Schedules**

For the purposes of this submittal, the appendices have been attached as PDFs.

**Appendix D**  
**Economic Analysis**  
**Input and Results**

For the purposes of this submittal, the appendices have been attached as PDFs.

HB \_\_\_\_\_

An Act creating the Susitna Power Authority

Sec. 44.89.010 Purpose

The purpose of the authority created in this chapter is to develop and own and operated electric power and transmission and related facilities in the Susitna Basin.

Sec. 44.89.020 Establishment of authority

(a) There is established a Susitna Power Authority. The authority is a public corporation and an instrumentality of the State within the Department of Commerce and Community Development, but the authority has a separate and independent legal existence from the state. The exercise of authority of the powers in this chapter is considered an essential governmental function of the state.

(b) The authority may not be terminated as long as it has bonds, notes, or other obligations outstanding. Upon termination of the authority, its rights and property pass to the state.

Sec. 44.89.030 Board of directors of authority

(a) The authority shall be governed by a board of directors consisting of the following:

(1) Five members, appointed by the governor for which shall have experience in electric utility, management, finance, construction or operations;

(2) Members shall serve for staggered terms of 5 years, and may be reappointed to additional terms. The Initial board members terms for three of the seats shall be for two, three and four years each. All appointments for members thereafter shall be for a five year term. Such members may only removed for cause.

(b) If a vacancy occurs in a public members seat, the governor shall make an appointment, effective immediately, for the unexpired portion of that members term.

Sec. 44.89.040 Operation of authority

(a) The powers of the authority are vested in the board.

(b) The members constitute a quorum.

(c) The board shall elect a chairman, and other officers, to serve at the pleasure of the board.

(d) Action may be taken on the affirmative vote of 3 board members.

(e)The public members of the board shall receive a stipend of \$300 a day while performing business of the authority.

Sec. 44.89.050 Executive Director

The authority shall employ an executive director who may not be a member of the board. The executive director shall serve at the pleasure of the board. The board shall establish the duties and compensation of the executive director.

Sec. 44.89.060 Employment of personnel; exception from State Personnel Act.

The executive directory may hire employees of the authority. The board shall prescribe the duties and compensation of authority employees.

Sec. 44.89.070 Legal Advisor

The authority may retain legal counsel to advise the authority on legal matters, or may contract with the department of law for legal counsel.

Sec. 44.89.080 Powers and duties

(a)Except as otherwise explicitly made applicable to the authority, the performance of the authority's duties and the exercise of its powers, including its powers to issue bonds and otherwise incur debt, shall be governed exclusively by the chapter . In furtherance of its purposes, the authority may

(1)own, acquire, construct, develop, create, construct, equip, operate, maintain, extend and improve any and all assets of any kind related to the generation and transmission of electricity within the Susitna River Basin.

(2)sue and be sued;

(3)adopt a seal;

(4)adopt, amend, and repeal regulations under AS44.62 and establish bylaws.

(5)make and execute agreements, contract, and all other instruments with any public or private person, government unit, corporation, cooperative, municipality or other business entity lawfully conducting business in the United States for the exercise of its powers and functions under this chapter and for the analysis, licensing, financing, design, construction, maintenance, improvement or operation of facilities, properties, or projects of the authority, including making and executing contracts with any person, firm, corporation, governmental agency, or other entity of the purpose

(A)incurring indebtedness, obtaining investments in the authority's projects, acquiring or

granting lump sum payments for services in advance or in arrears, grants and other financing; and

(B) entering into public-private partnerships or service contracts in any form;

(6) in its own name acquire, lease sell, rent or convey real and personal property;

(7) issue and refund bonds in accordance with this chapter, in order to pay the cost of any electrical generation, transmission and related facilities; the authority may also secure payment of the bonds as provided in this chapter;

(8) incur other indebtedness, including lines of credit and indebtedness to the Rural Utilities Services, or any other governmental agency, and secure that indebtedness as provided in this chapter;

(9) apply for and accept gifts, grants, or loans from a federal agency or an agency or instrumentality of the state, or from a municipality, private organization, or other source, including obtaining title to state, local government, or privately owned land, directly or through a department of the state having jurisdiction of the land;

(10) fix and collect charges for the generation and transmission of electricity, and related services, including any necessary costs preliminary to construction.

(11) bring civil actions, refer criminal actions to the appropriate authority, and take other actions or enter into agreements with law enforcement or property owners or managers to enforce property rights or other rights of the authority.

(12) pledge, encumber, transfer, or otherwise obligate revenue derived by the authority from any source, including charges for the generation and transmission of electricity, and related facilities or services;

(13) deposit or invest its funds, subject to agreements with bondholders;

(14) procure insurance against any loss in connection with its operation;

(15) contract for and engage the services of consultants, experts, financial, engineering and technical advisors that the authority considers necessary for the exercise of its powers and functions under this chapter;

(16) apply for, obtain, hold, and use permits, licenses, or approvals from appropriate agencies of the state, the United States, a foreign country and any other proper agency in the same manner as any other person;

(17) perform reconnaissance studies and engineering, survey, and design studies with respect to the facilities for the generation and transmission of electricity and appurtenant facilities;

(18) exercise powers of eminent domain or file a declaration of taking as necessary for any facilities for or related to the generation and transmission of electricity;

(19) confer with municipalities, other governments, and electrical cooperatives, concerning electrical generation and transmission facilities;

(20) do all acts and things necessary to carry out the powers expressly granted or necessarily implied in this chapter; nothing in this chapter limit's the powers of the authority that are expressly granted or necessarily implied.

(b) the authority shall

(1) prepare an annual report of its operations to include a financial and income statement, a statement of changes in financial position, a reconciliation of changes in equity accounts, a summary of significant accounting principles, an auditor's report, comments regarding the year's business, and prospects for the next year; the report shall be completed by the twentieth day of the regular session of the Legislature, to the Legislative Budget and Audit Committee and the presiding offices of each house of the Legislature.

(2) be exempt from AS 37.07 (Executive Budget Act);

(3) establish a personnel management system for hiring employees and setting employee-benefit packages;

(4) establish procedures, rules, and rates governing per diem and travel expenses of the employees of the authority in substantial conformity to statutes, procedures, rules, and rates applicable to state employees of similar state entities;

(5) coordinate the exercise of its powers to plan, design, construct, operate and maintain electrical generation and transmission and related facilities;

(6) have the exclusive authority to determine and fix charges for the generation and transmission of electricity and related services that it owns, constructs or operates;

(7) be exempt from the AS 36.30 (State Procurement Act);

(8) be exempt from regulation under AS 42 (Public Utilities);

(9) be exempt from AS 35.

Sec. 44.89.090 Assets funds and revenue of the authority

(a) The Department of Revenue shall separately account for all funds, assets and revenue of the authority.

(b)The deposit or investment of money in the authority's funds may be made by the board. The interest earned on or profits derived from the deposit, investment, or sale of an investment by the authority are funds of the authority.

#### Sec. 44.89.100 Bonds of the Authority

(a)Notwithstanding any other provision of law, the authority may borrow money and issue and refund bonds on which the principal and interest are paid out of an secured by the gross revenue derived by the authority for the ownership, use, and operation of its facilities and services, and other revenue of the authority under this chapter and any other revenue or money that the legislature may appropriate, except a state tax or license. Before issuing bonds, the authority shall submit to the state bond committee a secription of the bond issue and a preliminary prospectus, offering circular, or official statement relating to the bond issue., and shall contain a finding on the affect of the state or its political subdivisions to market bonds.

(b)The bonds of the authority may be sold in the amount or series at the time determined by its board of directors. Bonds or a series of bonds may not be sold if the effective interest rate over the life of the bonds exceeds 11 percent a year or a rate of interest that is 125 percent of the rate of the Bond Buyer Index of 20 Municipal Bond Average Yields for the week previous to the date of the sale of the bonds, whichever is higher.

(c )The authority may issue bonds in an aggregate amount not to exceed \$12,000,000,000, plus the cost of issuance.

(d)The amount of refunding bonds that can be issued by the authority and bond premiums may not be included in the aggregate amount, but may be in addition the the amount authorized by (c ) of this section.

#### Sec. 44.89.110 Trust indentures and trust agreements; funds and reserves.

(a)in the discretion of the authority, an issue of bonds may be secured by a trust indenture or trust agreement between the authority and a corporate trustee, by a secured loan agreement or other instrument, or by a resolution giving powers to a corporate trustee, by means of which the authority may

(1)make agreement with the trustee or the holders of the bonds that the authority determines to be necessary or desirable, including agreements as to the

(A)application, investment, deposit, use and disposition of

(i)the proceeds of bonds of the authority;

(ii) money or other property of the authority;

(iii) money or other property in which the authority has an interest;

(B) fixing charges for the generation and transmission of electricity and related facilities and services;

(C) assignment by the authority of its rights in in any contract with respect to its facilities or services or in a mortgagee or other security interest created with respect to its facilities;

(D) terms and condition under which the authority may issue additional bonds;

(E) vesting in a trustee of rights, powers, duties, money, or property in trust for the benefit of the bondholders, including the right to enforce payment, performance and all other rights of the authority of the authority or of the bondholders, under a lease, contract, power sales agreement, contract of sale, mortgage, security agreement, or other trust by injunction or other proceeding or by taking possession by agent or otherwise, and operating electrical generation and transmission and facilities and services and applying the same in accordance with the trust agreement;

(2) pledge, mortgage, or assign money leases agreement, property, or other rights of assets of the authority either presently in hand or to be received in the future, or both; and

(3) provide for any other matters that affect the security or protection of the bonds.

(b) Notwithstanding any other provision of this chapter, the trust agreement must contain an agreement by the authority that the authority will at all time maintain charges sufficient to

(1) pay the costs of operation and maintenance of its facilities and the principal of and interest on bonds issued under the trust agreement as the bonds severally become due and payable;

(2) provide for debt service coverage as considered necessary by the authority for the marketing fits bonds; and

(3) provide for renewals, replacements, and improvements of its facilities , and to maintain reserves required by the terms of the trust agreement.

(c) For the purpose of securing one or more issues of its bonds, the authority may establish one or more special funds, called "capital reserve funds", and shall pay into those funds the proceeds of the sale of its bonds and any other money that is available to the authority of the purposes of those funds. The funds shall be established only if the authority determines that the establishment would enhance the marketability of the bonds. All money held in a capital reserve fund, except as provided in this section, shall be used

as required solely for the (1) payment of the principal of and interest on bonds or of the sinking fund payments with respect to those bonds, (2) the purchase or redemption of bonds, or (3) the payment of a redemption premium required to be paid when those bonds are redeemed before maturity. However, money in a fund may not be withdrawn from the fund at any time in an amount that would reduce the amount of the fund to less than the capital reserve requirement set out in (d) of this section, except for the purpose of making, with respect to those bonds, payment, when due, of principal, interest, redemption premiums, and the sinking fund payments for the payment of which other money of the authority is not available. Income or interest earned by or increment to a capital reserve fund due to the investment of the funds of any other amounts in the fund may be transferred by the authority to other funds or accounts of the authority to the extent that the transfer does not reduce the amount of the capital reserve fund below the capital reserve fund requirement.

(d) If the authority decides to issue bonds secured by a capital reserve fund, the bonds may not be issued in the amount in the capital reserve fund is less than the amount of the capital reserve fund requirement, if any, established by resolution of the authority, unless the authority at the time of issuance of the obligation, deposits in the capital reserve fund from the proceeds of the obligations to be issued or from other sources an amount that, together with the amount then in the fund, will not be less than the capital reserve fund requirements.

(e) In computing the amount of a capital reserve fund for the purposes of this section, securities in which all or a portion of the fund is invested shall be valued by some reasonable method established by the authority by resolution. Valuation on a particular date shall include the amount of any interest earned or accrued to that date.

(f) If the authority decides to issue bonds secured by a capital reserve fund, the bonds may not be issued until 30 days after the authority has mailed notification to the state bond committee and the Legislative Budget and Audit Committee by certified mail of its intention to establish a capital reserve fund to secure the bond issue. The notification must include the amount of the capital reserve fund to be established, the amount of bonds proposed to be issued, and the total cost for which the bonds are to be issued. The notification shall be accompanied by an estimate by the authority of the need to withdraw money from the capital reserve fund during the term of the bond issued, the amount that may be necessary to withdraw, and the time at which withdrawals are estimated to be needed. By January 30 of each year, the authority shall prepare, and provide to the state bond committee and the Legislative Budget and Audit Committee, a revised estimate, considering the same factors, and a statement of all withdrawals that have occurred from the date of issuance of the bonds to the end of the preceding calendar year.

(g) Nothing in this section creates a debt or liability of the state.

(h) Notwithstanding any other provision of law, the authority may establish other funds and reserves as the board of directors may determine reasonable and prudent for the issuance of bonds or for the conduct of the business and affairs of the authority. The interest

earned on or profit derived from these funds and reserves shall be the property of the authority.

#### Sec. 44.89.120 Validity of pledge.

It is the intention of the legislature that a pledge made in respect of bonds shall be perfected and shall be valid and binding from the time the pledge is made, that the money or property so pledged and after that received by the authority shall immediately be subject to the lien of the pledge without physical delivery or further act, and that the lien of the pledge shall be valid and binding against all parties having claims of any kind in tort, contract, or otherwise against the authority irrespective of whether the parties have noticed. Neither the resolution, trust agreement, or any other instrument by which a pledge is created need be recorded or filed under the provisions of the uniform Commercial Code in order to be perfected or to be valid, binding, effective against the parties. This section does not affect title to or conveyances of real property and does not limit the applicability of AS 40.17.080(b).

#### Sec. 44.89.130 Nonliability on bonds

(a) Neither the members of the board nor a person executing the bonds of the authority is liable personally on the bonds or is subject to personal liability or accountability by reason of the issuance of the bonds.

(b) The bonds issued by the authority do not constitute an indebtedness or other liability of the state or of a political subdivision of the state other than the authority, but shall be payable solely from the income, receipts, or other money or property of the authority. All documents published by the authority or to which the authority is a signatory and used in or for the issuance of bonds by the authority must state that they are prepared by or for the authority.

(c) The authority may not pledge the faith or credit of the state or of a political subdivision of the state other than the authority, and the issuance of a bond by the authority does not directly, indirectly, or contingently obligate the state or a political subdivision of the state to apply money from, levy, or ledge any form of taxation to the payment of the bond or to make payments due on the bonds from any source of funds not pledged for repayment of the bonds.

#### Sec. 44.89.140 Pledge of State.

The state pledges to and agrees with the holders of bonds issued under this chapter and with a federal agency that loans or contributes money in respect to electrical generation and transmission and related facilities that the state will not limit or alter the rights and powers vested in the authority under this chapter to fulfill the terms of a contract made by the authority with the holders or federal agency or in any way impair the rights and

remedies the holders under the bonds, together with the interest on them, with interest on unpaid installments of interest, and all costs and expenses in connection with an action or proceeding by or on behalf of the holders, are fully met and discharged. The authority may include this pledge and agreement of the state, insofar as it refers to holders of bonds of the authority, in a contract with the holders and, insofar as it relates to a federal agency, in a contract with the federal agency.

#### Sec. 44.89.150 Exemption from taxation

The real and personal property of the authority and its assets, income and receipts are declared to be the property of a political subdivision of the state and are exempt from all taxes and special assessments of the state or a political subdivision of the state. All Bonds of the authority are declared to be issued by a political subdivision of the state and for an essential public and governmental purpose. The bonds, the interest on the bonds, the income from the bonds and the transfer of the bonds, and all assets, income, and receipts pledged to pay or secure the payment of the bonds or interest on the bonds are, at all times, except from taxation by or under the authority of the state, except for inheritance and estate taxes and taxes on transfers by or in contemplation of death. Nothing in this section affects or limits an exemption from license fees, property taxes, or excise, income, or other taxes provided under any other law, nor does it create a tax exemption with respect to the interest of any business enterprise or other person, other than the authority in any property, assets, income, receipts, project, or lease, regardless of whether financed under this chapter.

#### Sec. 44.89.160 Bonds legal investments for fiduciaries

The bonds of the authority are securities in which all public officers and bodies of the state and all municipalities and municipal subdivisions, all insurance companies and associations and other persons carry on any insurance business, all banks, bankers, trust companies, savings banks, savings associations, including savings and loan associations and building and loan associations, investment companies and other persons carry on banking business all administrators, guardians, executors, trustees, and other fiduciaries, and other persons who are now or may afterward be authorized to invest in bonds or other obligations the state may properly and legally invest money, including capital in their control or belonging to them. Notwithstanding any other provision of law, the bonds of the authority are also securities that may be deposited with any public officer or body of the state and all municipalities and municipal subdivisions for any purposes for which the deposit of bonds or other obligations the state is now or may afterward be authorized.

#### Sec. 44.89.170 Audit

The legislative auditor annually shall audit, or cause to have audited, the financial records of the authority. The form and content of the financial records shall be in accordance with generally accepted accounting procedures. The financial records shall be available to the legislative auditor any any reasonable time., do

Sec. 44.89.180 State appropriations not effected.

The chapter does not prevent the state from making appropriations for or in aid of the acquisition, design, construction, or operation of electrical generation and transmission and related facilities.

Sec. 44.89.190 Insurance

The authority shall keep in force public liability insurance in an amount reasonably calculated to cover potential claims for bodily injury, death or disability, and property damage that may arise from or be related to its operation and activities, naming the state as an additional insured.

Sec. 44.89.200 Safeguarding of money

The authority all maximize revenue from and deposit all money in depositories under guidelines issued by the commissioner of revenue and otherwise safeguard the money under guidelines as the commissioner of revenue may from time to time issue..

Sec. 44.89.210 Fidelity bond

The authority shall obtain a fidelity bond in an amount determined by the board, for the member of the board any official responsible for authority accounts and finances. A bond must be in effect for the tenure of the bonded person.  
[use terms of 19.75.321]

Sec. 44.89.220 Bond terms

(a)the bonds of the authority mature at the time fixed by the board. The bonds may be subject to redemption before their fixed maturities as determined by the board, or the the authority's executive directed when delegated that responsibility on AS 44.89.230, and with the premium fixed by the board, but a bond many not be subject to redemption before its fixed maturity date unless the right to redeem that bond is expressly mention on

the face of the bond. The bonds

(1) may be denominations determined by the board;

(2) may be issued in coupon form or in fully registered form, and may be registrable as to principal or both principal and interest, and under regulations and condition the board provides;

(3) are payable as to principal and interest at the place determined by the board;

(4) shall be signed on behalf of the authority as the board may direct; the signatures may be facsimile signatures; each of the interest coupons, if any, attached to the bonds shall be signed by the facsimile signatures of the officials as the board may direct;

(5) shall have the seal of the authority impressed, printed, or lithographed on them; and

(6) shall be issued under and subject to the terms, condition, and covenants, providing for the payment of the principal and interest on the bonds and the other terms, conditions, covenants, and protective features safeguarding this payment and relating to the operations, maintenance or capital improvements as found necessary by the board, which covenants may include a provision requiring the setting aside and maintenance of certain reserves to secure the payment of the principal and interest or for operations, maintenance or capital improvements.

(b) The board may select a trustee or trustees for the holders of the bonds or any series of the bonds, for the safeguarding and disbursement of any of the money in any of the funds created under this chapter or for the duties of authentication, delivery, and registration of the bonds as the board may determine. The board shall fix the rights, duties, powers, and obligations of the trustee or trustees.

(c) In determining the matters and questions relating to the issuance and sale of the bonds and the fixing of the maturities, terms, condition, covenants, and other subjects of the bonds as provided in (a) and (b) of this section, the decisions of the board shall be those found to be reasonably necessary for the best interests of the authority and the construction, operation and maintenance of its facilities, and those that will accomplish the most advantageous sale of the bonds, giving due regard to (1) necessary or normal costs of maintenance and operation; (2) renewals and replacements of and repairs to the toll facilities; (3) all improvements to electrical generation and transmission and related facilities; (4) the future growth and expansion of all of the facilities; and (5) the possibility of additional revenue bond financing for electrical generation and transmission and related facilities. A decision of the board as expressed in any bond resolution is final when any bonds have been issued under the bond resolution.

(d) A bond resolution may provide that the bonds issued must contain a recital that the bonds are issued under this chapter, and any bonds containing this recital are conclusively considered to be valid and to have been issued in conformity with this chapter.

(e)The validity of the authorization and issuance of bonds is not affected by any proceeding for the acquisition or construction of the additions, improvements, or facilities for which the bonds have been issued or by any contract in connection with the acquisition or construction.

#### Sec. 44.89.230 Bond resolution

(a)When issuing bonds of the authority, the board shall adopt the bond resolution and approve all other documents and proceedings necessary for the issuance, sale , and delivery of the bonds or any part or series of them. The bond resolution shall fix the aggregate principal amount and denomination, date, maturities, place or laces of paymen, rights of redemption, if any terms, form, condition, and covenants of the bonds or each of them. The board shall also determine and provide for the date and manner of sale of the bonds, and shall provide where the notice of sale, if any, is to be published.

(b)The board may delegate to the authority's executive director the authority to approve final principal maturities and dates, interest rates, redemption rights, and interest payment dates under the terms and conditions the board determines by resolution.

#### Sec. 44.89.240 Enforcement by holder

The holder of any bonds or the trustee for the holders of bonds or any series of them, may by appropriate proceedings in state court, compel the transfer, setting aside, and payment of money and the enforcement of all of the terms, conditions, and covenants as required and provided in AS 44.89.220 and AS 44.89.230 and in the bond resolution.

#### Sec. 44.89.250 Bond negotiability

The bonds and the coupons attached to them are fully negotiable instruments under the laws of the state.

#### Sec. 44.89.260 Refunding

(a)The bonds or any part of them may be refunded at or before their maturity by the issuance of refunding revenue bonds of the authority if, in the opinion of the board, refunds is advantageous to and in the best interest of the authority.

(b)The board shall adopt the resolution authorizing refunding and all other documents and proceedings necessary for the issuance, exchange or sale, and delivery of the bonds.

All provisions of AS 44.89.100-.160 except AS 44.89.100(c) and AS 44.89.220-.270 applicable to revenue bonds are applicable to the refunding bonds and to the issuance, sale, or exchange of the bonds, except as otherwise provided in this section.

(c) Refunding bonds may be issued in a principal amount sufficient to provide money for the payment of all bonds to be refunded by them, and in addition, for the payment of all expenses incident to the calling, retiring, or paying of the outstanding bonds, and the issuance of the refunding bonds. These expenses include, without limitation,

(1) the difference in amount between the pay value of the refunding bonds and any amount less than par for which the refunding bonds are sold;

(2) any amount necessary to be made available for the payment of interest on the refunding bonds from the date of sale of the bonds to the date of payment of the bonds to be refunded or to the date on which the bonds to be refunded will be paid under the call of the bonds or agreement with holders of the bonds;

(3) the premium, if any, necessary to be paid in order to call or retire the outstanding bonds; and

(4) the interest accruing on the outstanding bonds to the date of the call or retirement and other costs of issuance and refunding.

#### Sec. 44.89.270 Bonds as legal investments

Bonds of the authority, including electrical generation and transmission and related facilities bonds, are legal investments for all banks, trust companies, savings banks, savings and loan associations, and other persons carrying on a banking business, all insurance companies and other persons carrying on an insurance business, and all executors, administrators, trustee, and other fiduciaries. The bonds may be accepted as security for deposits of all money of the state and its political subdivisions.

#### Sec. 44.89.280 Exemption from local regulation

Notwithstanding any contrary provision of law, the activities of the authority are exempt from land use planning, zoning, permitting, or other similar governmental powers of political subdivision of the state.

#### Sec. 44.89.290 Statutory construction

This chapter shall be liberally construed in order to carry out the purposes for which it was enacted. All existing laws in conflict with this chapter are superseded as necessary to accomplish the purposes of this chapter.

Sec. 44.89.300 Definitions

(a)“Electrical generation and transmission and related facilities“, for purposes of this chapter means facilities for the generation of electricity from renewable sources, including hydroelectric, wind power and geothermal, and facilities for the transmission of electricity from any source whatsoever, and any other facilities reasonably necessary to accomplish the generation and transmission of such electricity.



January 26, 2011

The Honorable Neal Foster  
The Honorable Lance Pruitt  
Co-Chairs, House Energy Committee  
Alaska State Legislature  
State Capitol Rm 434  
Juneau, Alaska 99801-1182

RE: HB 103, "An Act relating to procurement for the Alaska Energy Authority; establishing the Alaska Railbelt energy fund and relating to the fund; relating to and repealing the Railbelt energy fund; relating to the quorum of the board of the Alaska Energy Authority; relating to the powers of the Alaska Energy Authority regarding employees and the transfer of certain employees of the Alaska Industrial Development Export Authority to the Alaska Energy Authority; relating to acquiring or constructing certain projects by the Alaska Energy Authority; relating to the definition of 'feasibility study' in the Alaska Energy Authority Act; and providing for an effective date."

Dear Representatives Foster and Pruitt:

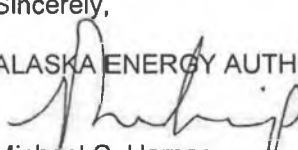
On January 18, 2011, House Bill 103 (Companion Bill SB 42) was introduced by request of the Governor and referred to the House Special Committee on Energy. Alaska's Energy Policy target is to reach 50 percent of its electricity generation through renewable energy by 2025. A new large hydroelectric project is needed to achieve this goal. This legislation would authorize the Alaska Energy Authority (AEA) to move forward on pursuing such a project to supply electricity to the railbelt region of the state. In November 2010, AEA released its "Preliminary Decision Document" identifying the Susitna Hydroelectric project as the recommended project to pursue.

HB 103 authorizes AEA to 1) acquire, construct and own new power projects 2) hire staff in exempt service 3) adopt regulations establishing its own procurement process 4) create subsidiary corporations for the purpose of acquiring, constructing, owning, maintaining and operating power projects and 5) defines the Board of Director's quorum as four of seven members.

We respectfully request you to schedule HB 103 for a hearing in your committee and we urge favorable action on this bill. A copy of HB 103, the sectional analysis and a summary of the seven related fiscal notes are attached. We will be happy to meet with you and other members of the committee to provide any other information you may require. Thank you for considering our request.

Sincerely,

ALASKA ENERGY AUTHORITY

  
Michael C. Harper  
Acting Executive Director

Four

Attachments (3)

**3/8/11 TESTIMONY ON HB 103: POWER PROJECT: ALASKA ENERGY TO HOUSE SPECIAL COMMITTEE ON ENERGY BY BECKY LONG, TALKEETNA**

I thought that it would be valuable for the Committee to hear a synopsis of the Alaska Energy Authority (AEA) meetings from a public viewpoint. I attended the recent AEA open house/presentations on Railbelt Large Hydro in Talkeetna, Palmer, and Anchorage and have notes from a friend from the Fairbanks meeting. The meetings focused on the comparisons between the Chakachomna and the Susitna hydro proposed projects and detailing why Susitna is the recommended choice.

There was a good turnout at the meetings showing high interest amongst the public. The Fairbanks and Talkeetna meetings each had about 150 people attending, Palmer had around 80 and Anchorage had around 120 people. The public wrote questions on AEA file cards after the presentation. There was no opportunity for the public to comment officially.

I kept track of the questions asked from the file cards. 43 questions were asked in Fairbanks, 42 in Anchorage, 43 in Palmer and 101 questions in Talkeetna. At all the meetings, there were very good questions asked. I divided the questions into subject content overall for all the meetings.

The most asked question, 17%, was why the Susitna Dam is the only alternative being offered to fulfill the 50% renewable energy mandate and why isn't AEA pursuing energy efficiency, solar and wind in future plans. The February 2010 Railbelt Electrical Efficiency Landscape in Alaska study was quoted often. The study showed that a 50% improvement in the Railbelt's electrical efficiency could generate an increase up to \$947 million in economic output, \$290 million in wages, \$53 million in business income and 9350 new jobs and would mean up to 425 megawatt reduction in electrical demand through efficiency could occur. However, AEA consistently said that Su Hydro is the only answer to 50% renewable by 2025.

The second most asked question, 12%, had to do with project funding, state financing, and ratepayers' future costs. People were very interested in the financial implications of this mega project and the state's return on such an investment. A concern was that there will be so much state financial commitment to one project and will other important renewable projects be neglected? ***Already we see that besides the \$10 million 2010 legislative appropriation, AEA wants \$65 million to pursue Susitna hydro feasibility studies and licensing application. The Governor's budget right now for other renewable energy projects is a pitiful \$41.5 million.*** Also cost overruns were a concern.

The third most asked question regarded the public process. AEA consistently replied that they would not have the authority to pursue Susitna unless HB 103 is passed. They also consistently said there will be a lot of chances for the public to comment during the Federal Energy Regulatory Commission licensing process. People were particularly concerned in Talkeetna, that the state process through the AEA and the legislature has occurred without public comment. Why has there been no public process on the state level? Yes, there is a huge federal public process on down the line, but the momentum is now to commit significant state resources to this mega project.

Fisheries questions were asked a lot along with seismic, sedimentation, dam configuration, wildlife, climate change, access, threats to human safety, studies from the 1980's, and hydrology.

I realize that there are data gaps, and AEA is studying those gaps. Some particular questions that AEA and HDA consultants could not answer were on dam failure, that is if the dam breaks how long before

the flood reaches Trapper Creek and Talkeetna. Other specific study needs are on reservoir induced seismicity for the Susitna Reservoir, genetic studies of the 100 king salmon found above the dam, sedimentation studies, spring migration of caribou, economic impact studies on Talkeetna, archaeological studies, and effects on spring ice flow.

I guess it is probably obvious that I oppose the Susitna Dam, so I won't go into that.

In conclusion, I know that AEA and its consultants have a large body of knowledge that puts a positive spin on fisheries, seismic, hydrology, and environmental impacts; but even they admit there are a lot of unanswered questions. And we, the members of the public, have a lot of our own knowledge and experience about river altering projects. **And we know there are always unforeseen consequences beyond what the scientists can predict, and we have to live with the consequences. Nothing alters a river as totally as a dam.**

Thank you for this chance to testify.



**D. Douglas Johnson**  
PROJECTS DIRECTOR, ALASKA

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April 12, 2011  
Reps. Bill Stoltze and Bill Thomas, House Finance Co-Chairmen  
State Capitol Rooms 515 and 505  
Juneau, AK, 99811

Re: HB 103

Dear Chairmen,

I am writing in support of the elements of HB 103 that give the Alaska Energy Authority (AEA) a greater degree of autonomy in their ability to resource appropriately. As a developer of renewable energy projects in Alaska, ORPC needs the assistance of AEA's professional staff and resources to further our nascent industry and support the development of our projects here in Alaska. HB 103 provides AEA an independent framework for more efficiently and effectively supporting its mission of lowering the cost of energy to Alaskans.

Thank you for your time and service. I look forward to advancing this new form of energy with your help.

Sincerely,

D. Douglas Johnson

**Alaska Ratepayers, Inc.**  
**P. O. Box 210556**  
**Anchorage, AK 99521**  
**907-952-1502**  
**Affordable and Predictable Electric Rates for Alaska**

**REVISED TESTIMONY** Feb. 24, 2011 by Richard G. Wilson on behalf of Alaska Ratepayers, Inc. before the House Energy Committee on HB 103/SB 42 on Feb. 24, 2011:

Based on further research following submitting testimony on Feb 17, 2011 (attached), Alaska Ratepayers finds that amending HB 103/SB 42 to add certain powers to AEA will fall short of meeting the goals of ratepayers: affordable, predictable electricity.

Instead, **a separate Susitna Power Authority is required**. A substitute bill to HB 103/SB 42 with the required powers is attached ("Susitna Power Authority"). We previously provided this draft to the Committee and understand it is in Committee packets.

Our reasoning follows:

Building Susitna (Watana) Hydro has been determined by the State of Alaska as the only way of reaching the goal of 50% renewable sources of electric energy by 2050.

Because Alaska Power Authority statutory authority to build and own projects was eviscerated in 1993, forward motion awaits action by the Legislature to reenact authority in the Executive Branch. The proposed House Bill 103 (SB 42) adds certain authority to the current Alaska Energy Authority, but falls short.

**Alaska needs to create a separate Susitna Power Authority, with its own Board and staff, and with fully restored project development and financing powers.** Typically an authority sponsoring a major hydro development project, like some of our State entities, has a Board with fixed terms and project appropriate qualifications; ability to pay competitive compensation and efficiently secure its resources.

Alaska Ratepayers' research concludes this authority is necessary for the Board of the Susitna Power Authority to accomplish the following:

- Focus effort, and avoid distractions that a multi-function agency must deal with
- Narrow the mission to delivering Susitna electricity affordably and timely
- Clarify and simplify management, financial, and bonding responsibilities
- Enable timely completion, avoiding unnecessary project delays
- Achieve lowest cost energy to ratepayers
- Comply with large hydro industry best practices standards

- Models used by BC Hydro and New York Power Authority are typically used, creating an autonomous hydro authority empowered to efficiently design, responsibly secure permits, and deliver low cost electricity. **This avoids wasteful delays, saves money, and ultimately brings rates down.**
- **Transmission projects too.** Planning, designing and licensing Watana dam is under way and will take several years. But critical transmission line improvements (reliability) are needed now. These near term projects require the same legislative authority as are required to build a hydroelectric dam. So postponing or phasing in required authority does not make economic sense.

In its three years Alaska Ratepayers has found we can all learn from visiting other hydro projects in the U. S. and Canada. We recommend arranging a legislative visit to two or three large hydro projects to confirm or deny our findings.

One might wonder about our credibility in offering such bold recommendations. Alaska Ratepayers is a volunteer group of Alaskans who give their time--with no outside funding--to see a landmark improvement in lives of our neighbors and their children. Our members' experience includes decades of service in public administration as electric utility board members, State commissioners, lawyers, city managers and project developers, as well as decades of business experience in engineering, resource development, fisheries and other forms of business.

We are available to work with the Committee Chairs on specific authorizing language and thank you for allowing us to present ratepayer views.

Attached: "Susitna Power Authority," Alaska Ratepayers' draft substitute bill to HB 103/SB 42

**From:** Denis Ransy [<mailto:conga33@hotmail.com>]  
**Sent:** Tuesday, March 08, 2011 8:35 AM  
**To:** LIO Mat-Su  
**Subject:** Testimony for HB 103, House Energy Committee 3 pm 3/8

Hello, Mat Su LIO.

Could you please forward my testimony on HB 103 to the House Special Committee on Energy members for their committee hearing today at 3 pm.

Thank you,  
Denis Ransy, Talkeetna

To the House Special Committee on Energy:

I oppose HB 103 because it would authorize AEA to move forward with the licensing process for a Susitna Dam. I oppose the Susitna Dam for the following reasons.

1. There are three earthquake faults nearby and a subduction plate zone directly beneath the dam site. Only madment would build a dam in such a place. Remember, we live below this thing.
2. There is no way this will not negatively affect fisheries. Temperature, flow, and turbidity changes will wreck havoc with all species.
3. The water table for the entire valley may be affected. There would be a lot less water running underground, possibly causing many wells to go dry.
4. This project would consume nearly all money meant for truly renewable projects.
5. 80 square miles of land will be drowned and changed forever.
6. There were at least ten issues "requiring more study" at the Talkeetna meeting. Study these issues before going any farther with funding or permitting.

Denis Ransy  
Talkeetna

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**From:** Barbara Mannix [<mailto:bmannix@mtaonline.net>]  
**Sent:** Monday, March 07, 2011 8:06 PM  
**To:** LIO Mat-Su  
**Subject:** Susitna Dam

To Whom it may concern,

I am writing to voice my concern over the proposed Susitna Dam project. Having recently attended the "informational meeting" here in Talkeetna, I was amazed at the profound lack of information that was available and yet the legislature seems ready to make decisions.

I find it deeply concerning that many other states are making plans to take out their dams due to a myriad of environmental problems and yet we are making plans to impact a pristine wilderness area and spend an astronomically huge amount of money with still massive amounts of unknowns.

I would far prefer to see money spent to grant incentive programs toward energy efficiency in all new buildings, monies allotted to make present homes and structures more energy efficient, smaller scale energy programs for specific areas and incentives for communities to be more conservative and practice efficiency.

Has anyone considered that expensive power may not be such a horrible thing? The earth is finite- at some point we need to realize that cheap power simply encourages mindless consumption which in turn, creates a need for more power and more devastating impacts to the land and all it's life forms.

As humans we erroneously believe ( quite pompously, I might add) that by carrying out our "studies" that we can somehow understand the incredible complexities of nature and the interconnectedness of all things and in this case the complexities of a major river and all the life it sustains down to the micro systems.

You are contemplating a staggering amount of money for this project. Why not invest in less impact-full measures? Wind and solar are certainly feasible options for specific areas

Please, let's learn from the mistakes of others and be a state that is forward thinking and creative in our approach. Let's use this money to develop the technologies for truly sustaining energy that doesn't destroy.