

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILE 8672

1329 SCOMM 50: HOUSE SPECIAL COMMITTEE ON STATE LOANS 1985-86

AMENDMENT

TO: "Discussion Draft" HB 219

Page 2, Line 23:

Replace Section 4 with:

* Sec. 4. AS 44.33 is amended by adding a new section to read:

⁶²⁵
~~Sec. 44.33.33. PRICE~~ ^{RATE} REOPENERS. A power sales agreement for the sale of power from a power project financed with a loan under AS 44.33.610 may include among its provisions an agreed schedule of wholesale power rates notwithstanding any other provisions of law and must include a provision for a ~~price~~ ^{rate} reopener after the first 15 years.

83
44.33.398

- (1) system increment
- (2) separate O&M can now be combined
- (3) 398E - distribution of all LPA cost over all the hours.

Levy
4/10/85✓

Original sponsor: House Special Committee
on State Loans

DISCUSSION DRAFT

IN THE HOUSE

CS FOR HOUSE BILL NO. 219 ()
IN THE LEGISLATURE OF THE STATE OF ALASKA
FOURTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act relating to the applicability of the Alaska Public Utilities Commission Act to certain electric utilities; power development loans; and the energy program for Alaska."

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

* Section 1. AS 42.05.711(b) is amended to read:

(b) Public utilities owned and operated by a political subdivision of the state and regional electric authorities established as an instrumentality of two or more public utilities owned and operated by a political subdivision of the state, none of whose utilities is in competition with any other utility, are exempt from the provisions of this chapter, other than the provisions of AS 42.05.221 - 42.05.281, unless the owner and operator elects to be subject to all provisions of this chapter.

* Sec. 2. AS 44.33.620(a) is amended to read:

(a) A loan from the fund shall [MUST] be repaid in accordance with the terms that the department determines to be appropriate. In establishing the terms, including provision for a return to the state of an amount in excess of the principal amount of the loan, the department shall consider the revenue that the authority could reasonably derive from the sale of power from the projects based upon

(1) [THE MARKET RATE OF INTEREST FOR A LOAN OF COMPARABLE SIZE AND DURATION AT THE TIME THE LOAN IS MADE; AND

(2)] the [ESTIMATED] costs, ^{power sales agreement} at the time the ~~loan~~ is ini-

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29

or
tially negotiated ~~[and at the time it]~~ is renegotiated, of alternative sources of energy generation for utilities purchasing power from a project financed with a loan from the fund;

(2) the effect of the loan terms on the wholesale power costs to all utilities purchasing power from the initial project;

(3) the long-term benefits to consumers and communities of stable wholesale power costs;

(4) the affordability of initial wholesale power costs that result from the loan terms with utilities purchasing power from the initial project;

(5) increasing repayment, not to exceed five years, of debt service payment per kilowatt hour gradually over the initial period of a loan repayment schedule to the extent necessary to avoid significant rate increases to the consumer;

(6) the existing excess capacity of power projects; and

(7) the effects of increased capacity utilization, inflation, and alternative energy production costs over the life of the initial project.

* Sec. 3. AS 44.33.620 is amended by adding a new subsection to read:

(d) In (a) of this section "initial project" means the project described in AS 44.83.398(a).

* Sec. 4. AS 44.33 is amended by adding a new section to read:

Sec. 44.33.625. PRICE REOPENERS. A power sales agreement for the sale of power from a power project financed with a loan under AS 44.33.610 must include a provision for periodic price reopeners.

* Sec. 5. AS 44.83.425(5) is amended to read:

(5) "qualified utility" means an electric utility or a regional electric authority established as an instrumentality of two or more electric utilities [THAT IS] certified by the Alaska Public

Utilities Commission to serve all or part of a market area that is served or will be served by the power project, [AND] that the authority determines is capable of operating and maintaining the power project.

The initial project offers a unique opportunity to share the infrastructure development in a sensible and equitable manner. the state or Federal Government has traditionally taken the responsibility for the infrastructure necessary to encourage statewide and/or regional economic development. The initial project has an excess capacity of approximately 59% at the present time. Of that 59% excess, approximately 49% is to be found in the Tyee project. The Tyee project, as an example, was built with excess capability because it is geographically well placed to aid regional and statewide energy and economic development. However, the interest on the excess capacity should be carried at state expense until such time as it is needed.

The current situation offers a unique opportunity for the communities and the state to share the burden of infrastructure development in a sensible and equitable manner. The provisions of HB 219 provide for the complete repayment of the principal and the maximum affordable interest rate which can be repaid under current conditions.

Repayment of the APA loan is computed at a fixed interest rate over a set term in order to yield a levelized debt service payment per kilowatt hour. Actual debt service is, in each year, the result of the payment of that portion of the levelized debt service amount corresponding to the fraction of the initial project's total capability which is actually sold in that year. The portion of the debt service amount not paid that year would have a principal component and an interest component. The principal component would be deferred to the end of the amortization period, to be repaid over the contract term remaining thereafter. The interest component is cancelled or treated as simply

unearned. The effect of this structure would be to establish a debt service rate which assumes the initial project is fully utilized and which remains level throughout the period of the loan.

ESSENTIAL LOAN CONDITIONS:

1. Interest rate of 4% on the fraction of the principal which corresponds to the fraction of initial project which is utilized in each contract year.
2. Principal amount of approximately \$196 million.
3. Term of the loan is 50 years with a 40 year amortization period.
4. Annual debt service during the amortization period to be computed payment amount multiplied by a fraction, the numerator of which is the actual amount of energy sold that year, and the denominator of which is the total 378,607,000 kwh capability of the initial project.
5. Principal amounts of the loan not paid during the amortization period because of unsold capability shall be deferred until the fortieth year, and then repaid in equal installments without interest over the remaining ten years.

AMENDMENT

OFFERED IN THE HOUSE:

By: SUND

To: _____ HOUSE BILL No. 219

SENATE BILL No. _____

PAGE: _____

LINE: _____

Page 1, line 13

Delete "regional electric authorities"

Replace with "electric operating entities"

Page 2, line 22, 23

Delete "a regional electric authority"

Replace with "an electric operating entity"

Purpose of amendment:

A term of art "regional electric authority" was inadvertently used; the effect of using this term would be to deregulate an existing electric authority. The amendment would clarify the legislative intent and leave unchanged existing APUC regulation.

DISCUSSION DRAFT CSHB 219 (Finance)

Pourchot

Section 1. AS 42.05.711(b) is amended to read: ...(same)

Sec. 2. AS 44.33.620(a) is amended to read:

(a) A loan from the fund must be repaid in accordance with the terms that the department determines to be appropriate. In establishing the terms, including provision for a return to the state of an amount in excess of the principal amount of the loan, the department shall consider the revenue that the authority could reasonably derive from the sale of power from the projects based upon

ok [(1) the market rate of interest for loan of comparable size and duration at the time the loan is made; and

clarify (1) the current [estimated] costs of alternative sources of energy generation for utilities purchasing power from a project financed with a loan from the fund . ;

(2) the effect of the loan terms on the wholesale power costs to all utilities purchasing power from the initial project;

(3) the affordability of initial wholesale power costs resulting from the loan terms on utilities purchasing power from the initial project;

(4) the benefits to consumers and communities of stable, certain wholesale power costs;

how do you calculate? (5) existing or anticipated wholesale power prices for other state hydroelectric projects;

gradually over the initial period of a loan repayment schedule to avoid significant rates increases to consumers above existing levels; (6) increasing repayment of debt service payment per kilowatt hour *grad to limit the term* *(to extent necessary)*

(7) the current existing excess capacity of projects;

* (8) the long-term benefits to [utilities and] consumers of stable hydroelectric power costs;

* (9) the effects of increased capacity utilization, inflation, and alternative energy production costs over the life of the initial project.

* (10) power sale contracts [no more than 35 years in duration] with periodic price reopeners; *100 pps*

Sec. 3. AS 44.83.425(5) is amended to read:(same)

= purchase of power

DISCUSSION DRAFT CSHB 219 (Finance)

Section 1. AS 42.05.711(b) is amended to read: ...(same)

Sec. 2. AS 44.33.620(a) is amended to read:

(a) A loan from the fund must be repaid in accordance with the terms that the department determines to be appropriate. In establishing the terms, including provision for a return to the state of an amount in excess of the principal amount of the loan, the department shall consider the revenue that the authority could reasonably derive from the sale of power from the projects based upon

[(1) the market rate of interest for loan of comparable size and duration at the time the loan is made; and

(1) the current [estimated] costs of alternative sources of energy generation for utilities purchasing power from a project financed with a loan from the fund . ;

(2) the effect of the loan terms on the wholesale power costs to all utilities purchasing power from the initial project;

(3) the affordability of initial wholesale power costs resulting from the loan terms on utilities purchasing power from the initial project;

(4) the benefits to consumers and communities of stable, certain wholesale power costs;

(5) existing or anticipated wholesale power prices for other state hydroelectric projects;

(6) increasing repayment of debt service payment per kilowatt hour gradually over the initial period of a loan repayment schedule to avoid significant rates increases to consumers above existing levels;

(7) the current existing excess capacity of projects;

* (8) the long-term benefits to utilities and consumers of stable hydroelectric power costs;

* (9) the effects of increased capacity utilization, inflation, and alternative energy production costs over the life of the initial project.

* (10) power sale contracts no more than 35 years in duration with periodic price reopeners;

Sec. 3. AS 44.83.425(5) is amended to read:(same)

H3219
Sumed

E. C. PHILLIPS & SON, INC.
Box 8235
KETCHIKAN, ALASKA 99901

March 28, 1985

Mayor Charles Freeman
City of Ketchikan, Alaska

Dear Chuck,

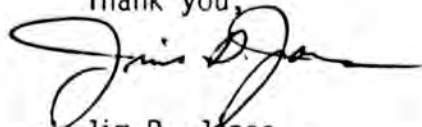
I am writing this letter to inform you that we are strongly considering buying diesel generators due to the high cost of K.P.U. power. We have done considerable research and found that we can generate for less than 6½¢ per kilowatt hour.

We feel that since Swan Lake is being utilized less than 50%, we should not have to pay a demand charge since there is a surplus of power. I am enclosing a copy of a proposal on diesel power which clearly shows that by using their option 3 plan at 6½¢ per kilowatt hour, we could save close to \$40,000 a year. This is based on \$1.25 per gallon for fuel and we are only paying \$.94 per gallon at the present time.

We also have another option which would be to ship all of our product South during the season and close the plant at the end of the season. We normally keep a crew employed in the Winter to pack the fish and fill our orders directly from Ketchikan.

We would like to keep the plant open all year round, utilizing K.P.U.'s power, but the continuing high cost may prohibit us from doing this.

Thank you,



Jim D. Jones
Chief Engineer

JDJ:cw

February 9, 1985

E.C. Phillips & Son
P.O. Box 8235
Ketchikan, Alaska 99901
Attn: Jim Jones

Re: Diesel electric power conversion for your Ketchikan plant

Jim,

For your electric power requirements, I am pleased to offer you the following quote.

Option #1

2 (two) each NTA 495 G1, 1800 R.P.M. 110 KW prime, (125 KW w/o fan)
diesel electric generators for the price of\$39,025.00

Which includes the following:

- * Skid mounted w/pad type vibration isolation
- * Radiator cooled
- * Unit mounted manual start control panel with complete instrumentation and manual paralleling capability
- * Unit mounted circuit breaker
- * Stainless steel exhaust flex and Nelson "critical level" exhaust silencers
- * Vernier throttles
- * Batteries, rack and cables
- * Custom Registry
- * F.O.B. your plant, Ketchikan, Alaska - delivered

Alternates:

- A. Wall mounted control panel for both units w/complete instrumentation for manual paralleling\$9,528.00
- B. Heat exchanger cooling (skid mounted) for both units.....\$1,267.00
- C. Motor operated circuit breakers for both units\$1,425.00

Option #2

2 (two) each Cummins N 855 G, 1800 R.P.M., 135 KW prime (140 KW w/o fan)
diesel electric generators for the price of \$47,335.00
Which includes the same equipment as in option #1.

Alternates:

- A. Same as option #1 alternate A.....\$9,528.00
- B. " " B.....\$2,156.00
- C. " " C.....\$1,425.00

Option #3

2 (two) each Cummins NT 855 G3 1200 R.P.M., 160 KW prime (170 KW w/o fan)
diesel electric generators for the price of\$57,200.00

Alternates:

A. Same as option #1 alternate A	\$9,528.00
B. " " B	\$1,625.00
C. " " C	\$1,425.00

Summarization:

Initial investment cost per KW (includes wall mounted panel, heat exchanger cooling, and motor operated breakers).

Option #1 \$232.93

Option #2 \$223.87

Option #3 \$218.06

KW cost per hour, based on both units (set up heat exchanger cooled, w/wall panel, & motor operated breakers), operating continuously at 3/4 rated load each for 5 years. Include the following:

- (1) The investment cost amortized over 5 years
- (2) Fuel @ rated consumption based on \$1.25 per gallon
- (3) \$3.00 per hour for lube oil, filters, maintenance and 1 major overhaul in the 5 year period

Option #1.....Less than 8¢ per KW/hr.

(1) per KW/hr.....	\$0.0070907
(2) " ".....	0.0533333
(3) " ".....	0.0160000
	<u>\$0.0764240</u>

Option #2.....Less than 7¢ per KW/hr.

(1) per KW/hr.....	\$0.0065714
(2) " ".....	0.0465686
(3) " ".....	0.0142857
	<u>\$0.0684761</u>

Option #3.....Less than 6½¢ per KW/hr.

(1) per KW/hr.....	\$0.0062474
(2) " ".....	0.0465686
(3) " ".....	0.0117647
	<u>\$0.0645807</u>

As you can see the larger the unit, the lower the cost, if you can utilize the power. Remember while one unit is not being used your KW/hr. cost would ~~increase~~ *decrease by the amortized factor, increase by fuel & maintenance factors.*

I hope that this has been some help to you. The prices quoted are firm for 60 days and subject to change thereafter. Availability on these units is 60 days. I look forward to doing business with you.

MEMORANDUM

TO: House Special Committee on State Loans

FROM: Richard D. Newland, Utilities Manager
Ketchikan Public Utilities *RNL*

RE: Wholesale Power Cost Comparison

DATE: March 5, 1985

Attached you will find a tabulation, accompanied by a graphic presentation, showing projected wholesale power costs for the City of Ketchikan under three alternative scenarios. The generation of power from the Swan Lake Hydroelectric Project is compared under HB 219 and the package proposed by the Alaska Power Authority (APA); we also project the costs of a like amount of power generated by diesel.

Several points should be emphasized regarding these numbers. First, these are wholesale rates. Rates to the customer would be considerably greater than what is presented here. Second, these are "marginal" rates, i.e., rates for power generated by the Swan Lake Project or by diesel generation used in lieu of Swan Lake. Their effect on Ketchikan's retail rates, up or down, is mitigated by Ketchikan's other sources of power, including other hydroelectric generation. Third, these rates do not account for needed generation in the future. Swan Lake is projected to meet Ketchikan's needs for approximately the next ten years, after which we will need to rely on new generation. Our future rates will therefore continue to be affected by changes in the energy program for Alaska.

In constructing these projections, we have relied on the following sources:

1. Load forecasts were developed by the APA.
2. Swan Lake operation and maintenance costs are from our current budget. They are inflated annually at the assumed inflation rate.
3. Diesel operation and maintenance costs are from the studies used to develop our most recent proposed rate ordinance. They are also inflated annually.
4. Diesel operation and maintenance costs are divided into fixed and variable costs. The fixed costs have been included under the Swan Lake projections because the diesels will be used as reserves.

5. APA debt service costs are from their projection of February 12, 1985.
6. Diesel fuel projections are from the Alaska Department of Revenue Mean Forecast of World Oil Price (Saudi Medium), calculated in 1983 dollars and then inflated at the assumed inflation rate.
7. Each of our cases uses different assumptions about 1985 diesel costs and about the rate of inflation. These assumptions are printed on the tables. The base case (Case 1), uses a 1985 diesel cost of 71¢ per gallon, computed from information provided by Chuck Logsdon, Petroleum Economist for the Department of Revenue. The base inflation rate is 5% per year.

I would like to thank the Committee for the opportunity to present this information.

WHOLESALE POWER COST COMPARISON
Swan Lake Hydroelectric Project
Ketchikan Public Utilities Diesel Generation
March 5, 1985
CASE 1

PAGE 1 OF 2

	1985	1986	1987	1988	1989	1990	1991	1992
Generation in MWH	28,880	37,764	41,423	44,140	46,872	49,663	52,516	55,430
HB 219 ALTERNATIVE:								
O & M Cost (Dollars)	1,100,000	1,155,000	1,212,750	1,273,388	1,337,057	1,403,910	1,474,105	1,547,810
Diesel Reserve Cost (Dollars)	386,992	406,342	426,659	447,992	470,391	493,911	518,606	544,537
HB 219 DEBT SERVICE:								
Debt Service (Cents/KWH)	2.00	2.12	2.25	2.39	2.53	2.68	2.68	2.68
Principal (Dollars)	0	19,250	76,048	145,561	229,132	329,246	363,052	399,759
Interest (Dollars)	577,600	781,347	855,969	909,385	956,730	1,001,723	1,044,376	1,085,765
TOTAL - HB 219 ALTERNATIVE	2,064,592	2,361,938	2,571,426	2,776,325	2,993,310	3,228,789	3,400,140	3,577,971
HB 219 ALTERNATIVE (Cents/KWH)	7.15	6.25	6.21	6.29	6.39	6.50	6.47	6.45
APA ALTERNATIVE:								
O & M Cost (Dollars)	1,100,000	1,155,000	1,212,750	1,273,388	1,337,057	1,403,910	1,474,105	1,547,810
Diesel Reserve Cost (Dollars)	386,992	406,342	426,659	447,992	470,391	493,911	518,606	544,537
APA DEBT SERVICE:								
Debt Service (Cents/KWH)	2.19	2.39	4.40	5.41	6.30	7.28	7.66	7.40
Debt Service (Dollars)	632,000	1,281,000	1,824,000	2,386,000	2,951,000	3,613,000	4,024,000	4,101,000
TOTAL - APA ALTERNATIVE	2,118,992	2,842,342	3,463,409	4,107,379	4,758,448	5,510,820	6,016,711	6,193,347
APA ALTERNATIVE (Cents/KWH)	7.34	7.53	8.36	9.31	10.15	11.10	11.46	11.17
DIESEL ALTERNATIVE:								
O & M:								
Variable	291,688	400,487	461,255	516,085	575,429	640,178	710,802	787,755
Fixed	386,992	406,342	426,659	447,992	470,391	493,911	518,606	544,537
Fuel	1,428,906	1,859,808	2,042,655	2,232,376	2,520,082	2,816,192	3,116,427	3,473,113
Lube Oil	43,320	59,478	68,503	76,646	85,460	95,076	105,565	116,993
TOTAL - DIESEL ALTERNATIVE	2,150,906	2,726,175	2,999,072	3,273,100	3,651,362	4,045,357	4,451,400	4,922,398
DIESEL ALTERNATIVE (Cents/KWH)	7.45	7.22	7.24	7.42	7.79	8.15	8.48	8.88

ASSUMPTIONS:

Inflation:	1.0500
Diesel (1985 Values):	
Variable O & M (Cents/KWH)	1.0100
Fuel (Cents/Gallon)	71.0000
KWH per Gallon of Diesel	14.3500

SOURCES:

Diesel Fuel Cost Projections: DREV
Generation Requirements: APA
O & M Cost Projections: Based on KPU Historical Data

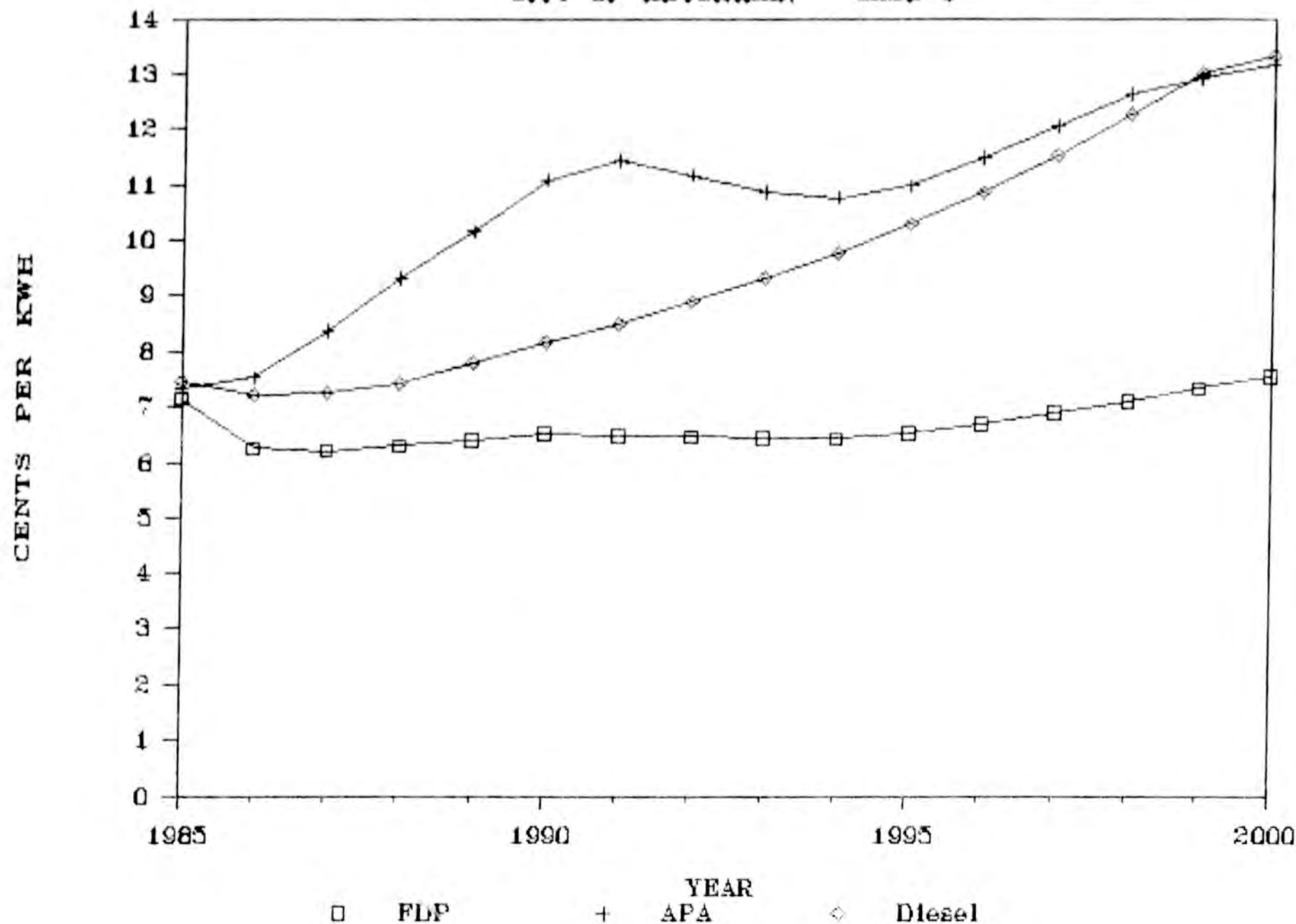
WHOLESALE POWER COST COMPARISON
Swan Lake Hydroelectric Project
Ketchikan Public Utilities Diesel Generation
March 5, 1985
CASE 1

PAGE 2 OF 2

	1993	1994	1995	1996	1997	1998	1999	2000
Generation in MWH	58,418	61,682	63,365	63,365	63,365	63,365	63,365	63,365
HB 219 ALTERNATIVE:								
O & M Cost (Dollars)	1,625,201	1,706,461	1,791,784	1,881,373	1,975,442	2,074,214	2,177,925	2,286,821
Diesel Reserve Cost (Dollars)	571,763	600,352	630,369	661,888	694,982	729,731	766,218	804,529
HB 219 DEBT SERVICE:								
Debt Service (Cents/KWH)	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68
Principal (Dollars)	439,582	484,152	518,594	540,010	562,273	585,423	609,493	634,518
Interest (Dollars)	1,126,020	1,168,925	1,179,588	1,158,172	1,135,909	1,112,759	1,098,689	1,063,664
TOTAL - HB 219 ALTERNATIVE	3,762,567	3,959,890	4,120,335	4,241,443	4,368,606	4,502,127	4,642,324	4,789,532
HB 219 ALTERNATIVE (Cents/KWH)	6.44	6.42	6.50	6.69	6.89	7.11	7.33	7.56
APA ALTERNATIVE:								
O & M Cost (Dollars)	1,625,201	1,706,461	1,791,784	1,881,373	1,975,442	2,074,214	2,177,925	2,286,821
Diesel Reserve Cost (Dollars)	571,763	600,352	630,369	661,888	694,982	729,731	766,218	804,529
APA DEBT SERVICE:								
Debt Service (Cents/KWH)	7.11	7.03	7.16	7.48	7.84	8.21	8.29	8.29
Debt Service (Dollars)	4,152,000	4,337,000	4,535,000	4,742,000	4,965,000	5,205,000	5,253,000	5,251,000
TOTAL - APA ALTERNATIVE	6,348,964	6,643,813	6,957,153	7,285,261	7,635,424	8,008,945	8,197,142	8,342,350
APA ALTERNATIVE (Cents/KWH)	10.87	10.77	10.98	11.50	12.05	12.64	12.94	13.17
DIESEL ALTERNATIVE:								
O & M:								
Variable	871,731	966,459	1,042,471	1,094,594	1,149,324	1,206,790	1,267,129	1,330,486
Fixed	571,763	600,352	630,369	661,888	694,982	729,731	766,218	804,529
Fuel	3,868,973	4,317,809	4,688,043	4,959,980	5,292,433	5,651,642	6,033,542	6,120,134
Lube Oil	129,465	143,534	154,822	162,563	170,692	179,226	188,188	197,597
TOTAL - DIESEL ALTERNATIVE	5,441,933	6,028,153	6,515,705	6,879,025	7,307,430	7,767,390	8,255,077	8,452,746
DIESEL ALTERNATIVE (Cents/KWH)	9.32	9.77	10.28	10.86	11.53	12.26	13.03	13.34

WHOLESALE POWER COST ALTERNATIVES

CITY OF KETCHIKAN - CASE 1



WHOLESALE POWER COST COMPARISON
Swan Lake Hydroelectric Project
Ketchikan Public Utilities Diesel Generation
March 5, 1985
CASE 2

PAGE 1 OF 2

	1985	1986	1987	1988	1989	1990	1991	1992
Generation in MWH	28,880	37,764	41,423	44,140	46,872	49,663	52,516	55,430
HB 219 ALTERNATIVE:								
O & M Cost (Dollars)	1,100,000	1,133,000	1,166,990	1,202,000	1,238,060	1,275,201	1,313,458	1,352,861
Diesel Reserve Cost (Dollars)	386,992	398,602	410,560	422,877	435,563	448,630	462,089	475,951
HB 219 DEBT SERVICE:								
Debt Service (Cents/KWH)	2.00	2.12	2.25	2.39	2.53	2.68	2.68	2.68
Principal (Dollars)	0	19,250	76,048	145,561	229,132	329,246	363,052	399,759
Interest (Dollars)	577,600	781,347	855,969	909,385	956,730	1,001,723	1,044,376	1,085,765
TOTAL - HB 219 ALTERNATIVE	2,064,592	2,332,199	2,509,567	2,679,822	2,859,484	3,054,800	3,182,975	3,314,337
HB 219 ALTERNATIVE (Cents/KWH)	7.15	6.18	6.06	6.07	6.10	6.15	6.06	5.98

APA ALTERNATIVE:

O & M Cost (Dollars)	1,100,000	1,133,000	1,166,990	1,202,000	1,238,060	1,275,201	1,313,458	1,352,861
Diesel Reserve Cost (Dollars)	386,992	398,602	410,560	422,877	435,563	448,630	462,089	475,951
APA DEBT SERVICE:								
Debt Service (Cents/KWH)	2.19	3.39	4.40	5.41	6.30	7.28	7.66	7.40
Debt Service (Dollars)	632,000	1,281,000	1,824,000	2,386,000	2,951,000	3,613,000	4,024,000	4,101,000
TOTAL - APA ALTERNATIVE	2,118,992	2,812,602	3,401,550	4,010,876	4,624,623	5,336,831	5,799,546	5,929,813
APA ALTERNATIVE (Cents/KWH)	7.34	7.45	8.21	9.09	9.87	10.75	11.04	10.70

DIESEL ALTERNATIVE:

O & M:								
Variable	291,688	392,859	443,851	487,153	532,824	581,488	633,339	688,536
Fixed	386,992	398,602	410,560	422,877	435,563	448,630	462,089	475,951
Fuel	1,428,906	1,824,442	1,965,581	2,107,226	2,333,492	2,558,008	2,776,799	3,035,669
Lube Oil	43,320	58,345	65,918	72,349	79,132	86,360	94,060	102,258
TOTAL - DIESEL ALTERNATIVE	2,150,906	2,674,248	2,885,910	3,089,605	3,381,011	3,674,485	3,966,287	4,302,414
DIESEL ALTERNATIVE (Cents/KWH)	7.45	7.08	6.97	7.00	7.21	7.40	7.55	7.76

ASSUMPTIONS:

Inflation:	1.0300
Diesel (1985 Values):	
Variable O & M (Cents/KWH)	1.0100
Fuel (Cents/Gallon)	71.0000
KWH per Gallon of Diesel	14.3500

SOURCES:

Diesel Fuel Cost Projections: DREV
Generation Requirements: APA
O & M Cost Projections: Based on KPU Historical Data

WHOLESALE POWER COST COMPARISON
Swan Lake Hydroelectric Project
Ketchikan Public Utilities Diesel Generation
March 5, 1985
CASE 2

PAGE 2 OF 2

	1993	1994	1995	1996	1997	1998	1999	2000
Generation in MWH	58,418	61,682	63,365	63,365	63,365	63,365	63,365	63,365

HB 219 ALTERNATIVE:

O & M Cost (Dollars)	1,393,447	1,435,251	1,478,308	1,522,657	1,568,337	1,615,387	1,663,849	1,713,764
Diesel Reserve Cost (Dollars)	490,230	504,937	520,085	535,687	551,758	568,311	585,360	602,921
HB 219 DEBT SERVICE:								
Debt Service (Cents/KWH)	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68
Principal (Dollars)	439,582	484,152	518,594	540,010	562,273	585,423	609,493	634,518
Interest (Dollars)	1,126,020	1,168,925	1,179,588	1,158,172	1,135,909	1,112,759	1,088,689	1,063,664
TOTAL - HB 219 ALTERNATIVE	3,449,279	3,593,265	3,696,575	3,756,527	3,818,277	3,881,880	3,947,391	4,014,867
HB 219 ALTERNATIVE (Cents/KWH)	5.90	5.83	5.83	5.93	6.03	6.13	6.23	6.34

APA ALTERNATIVE:

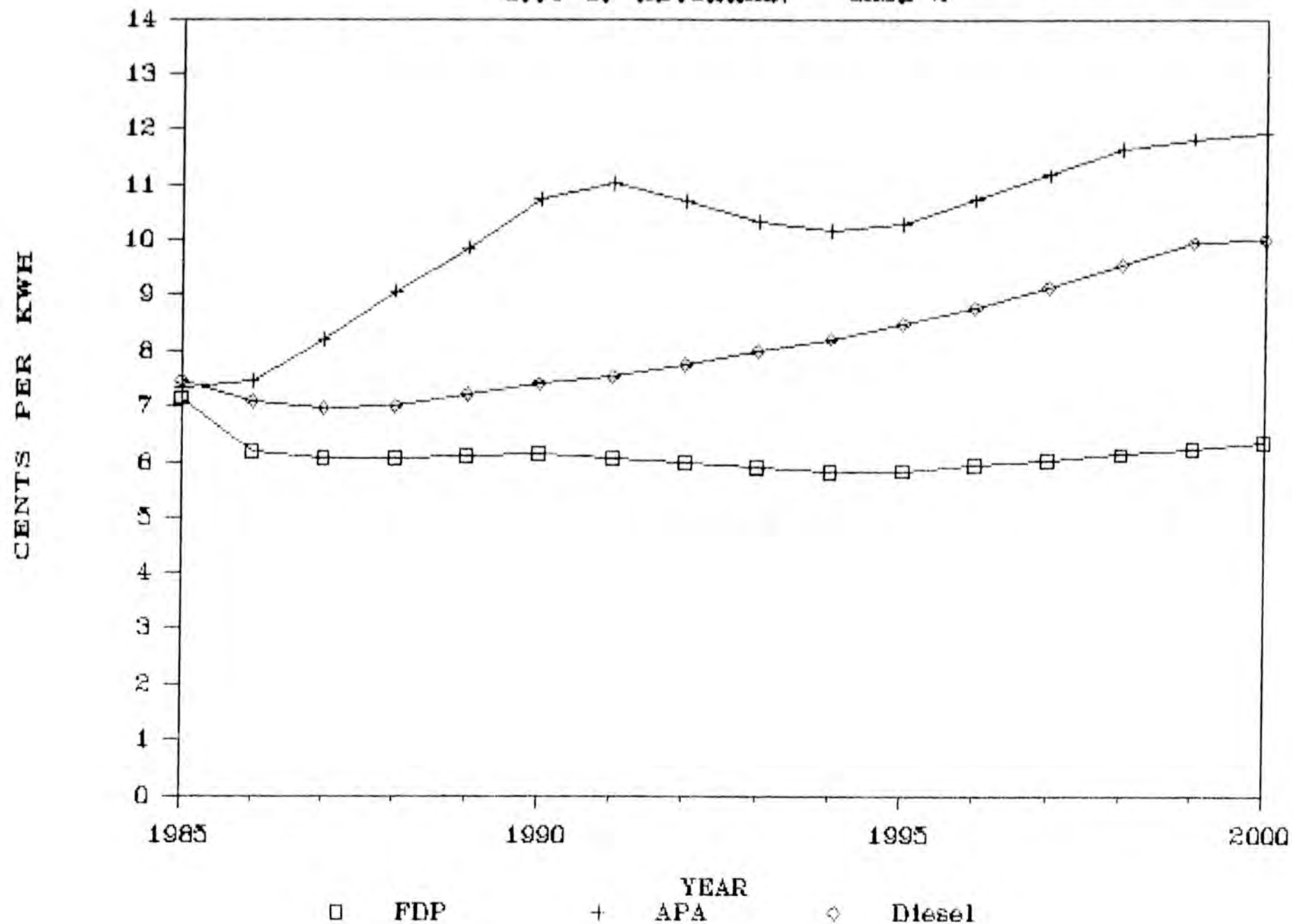
O & M Cost (Dollars)	1,393,447	1,435,251	1,478,308	1,522,657	1,568,337	1,615,387	1,663,849	1,713,764
Diesel Reserve Cost (Dollars)	490,230	504,937	520,085	535,687	551,758	568,311	585,360	602,921
APA DEBT SERVICE:								
Debt Service (Cents/KWH)	7.11	7.03	7.16	7.48	7.84	8.21	8.29	8.29
Debt Service (Dollars)	4,152,000	4,337,000	4,535,000	4,742,000	4,965,000	5,205,000	5,253,000	5,251,000
TOTAL - APA ALTERNATIVE	6,035,677	6,277,187	6,533,393	6,800,345	7,085,095	7,388,698	7,502,209	7,567,685
APA ALTERNATIVE (Cents/KWH)	10.33	10.18	10.31	10.73	11.18	11.66	11.84	11.94

DIESEL ALTERNATIVE:

O & M:								
Variable	747,422	812,858	860,088	885,891	912,468	939,842	968,037	997,078
Fixed	490,230	504,937	520,085	535,687	551,758	568,311	585,360	602,921
Fuel	3,317,257	3,631,573	3,867,861	4,014,275	4,201,752	4,401,470	4,609,388	4,586,484
Lube Oil	111,003	120,722	127,736	131,568	135,515	139,580	143,768	148,081
TOTAL - DIESEL ALTERNATIVE	4,665,912	5,070,089	5,375,770	5,567,421	5,801,493	6,049,203	6,306,553	6,334,564
DIESEL ALTERNATIVE (Cents/KWH)	7.99	8.22	8.48	8.79	9.16	9.55	9.95	10.00

WHOLESALE POWER COST ALTERNATIVES

CITY OF KETCHIKAN - CASE 2



WHOLESALE POWER COST COMPARISON
Swan Lake Hydroelectric Project
Ketchikan Public Utilities Diesel Generation
March 5, 1985
CASE 3

PAGE 1 OF 2

	1985	1986	1987	1988	1989	1990	1991	1992
Generation in MWH	28,880	37,764	41,423	44,140	46,872	49,663	52,516	55,430
HB 219 ALTERNATIVE:								
O & M Cost (Dollars)	1,100,000	1,155,000	1,212,750	1,273,388	1,337,057	1,403,910	1,474,105	1,547,810
Diesel Reserve Cost (Dollars)	386,992	406,342	426,659	447,992	470,391	493,911	518,606	544,537
HB 219 DEBT SERVICE:								
Debt Service (Cents/KWH)	2.00	2.12	2.25	2.39	2.53	2.68	2.68	2.68
Principal (Dollars)	0	19,250	76,048	145,561	229,132	329,246	363,052	399,759
Interest (Dollars)	577,600	781,347	855,969	909,385	956,730	1,001,723	1,044,376	1,085,765
TOTAL - HB 219 ALTERNATIVE	2,064,592	2,361,938	2,571,426	2,776,325	2,993,310	3,228,789	3,400,140	3,577,871
HB 219 ALTERNATIVE (Cents/KWH)	7.15	6.25	6.21	6.29	6.39	6.50	6.47	6.45

APA ALTERNATIVE:

O & M Cost (Dollars)	1,100,000	1,155,000	1,212,750	1,273,388	1,337,057	1,403,910	1,474,105	1,547,810
Diesel Reserve Cost (Dollars)	386,992	406,342	426,659	447,992	470,391	493,911	518,606	544,537
APA DEBT SERVICE:								
Debt Service (Cents/KWH)	2.19	3.39	4.40	5.41	6.30	7.28	7.66	7.40
Debt Service (Dollars)	632,000	1,281,000	1,824,000	2,386,000	2,951,000	3,613,000	4,024,000	4,101,000
TOTAL - APA ALTERNATIVE	2,118,992	2,842,342	3,463,409	4,107,379	4,758,448	5,510,820	6,016,711	6,193,347
APA ALTERNATIVE (Cents/KWH)	7.34	7.53	8.36	9.31	10.15	11.10	11.46	11.17

DIESEL ALTERNATIVE:

O & M:								
Variable	291,688	400,487	461,255	516,085	575,429	640,178	710,902	787,755
Fixed	386,992	406,342	426,659	447,992	470,391	493,911	518,606	544,537
Fuel	1,690,537	2,200,407	2,416,662	2,641,121	2,981,505	3,331,833	3,687,040	4,109,035
Lube Oil	43,320	59,478	68,503	76,646	85,460	95,076	105,565	116,993
TOTAL - DIESEL ALTERNATIVE	2,412,537	3,066,714	3,373,080	3,681,844	4,112,786	4,560,997	5,022,013	5,558,321
DIESEL ALTERNATIVE (Cents/KWH)	8.35	8.12	8.14	8.34	8.77	9.18	9.56	10.03

ASSUMPTIONS:

Inflation:	1.0500
Diesel (1985 Values):	
Variable O & M (Cents/KWH)	1.0100
Fuel (Cents/Gallon)	84.0000
KWH per Gallon of Diesel	14.3500

SOURCES:

Diesel Fuel Cost Projections: DREV
Generation Requirements: APA
O & M Cost Projections: Based on KPU Historical Data

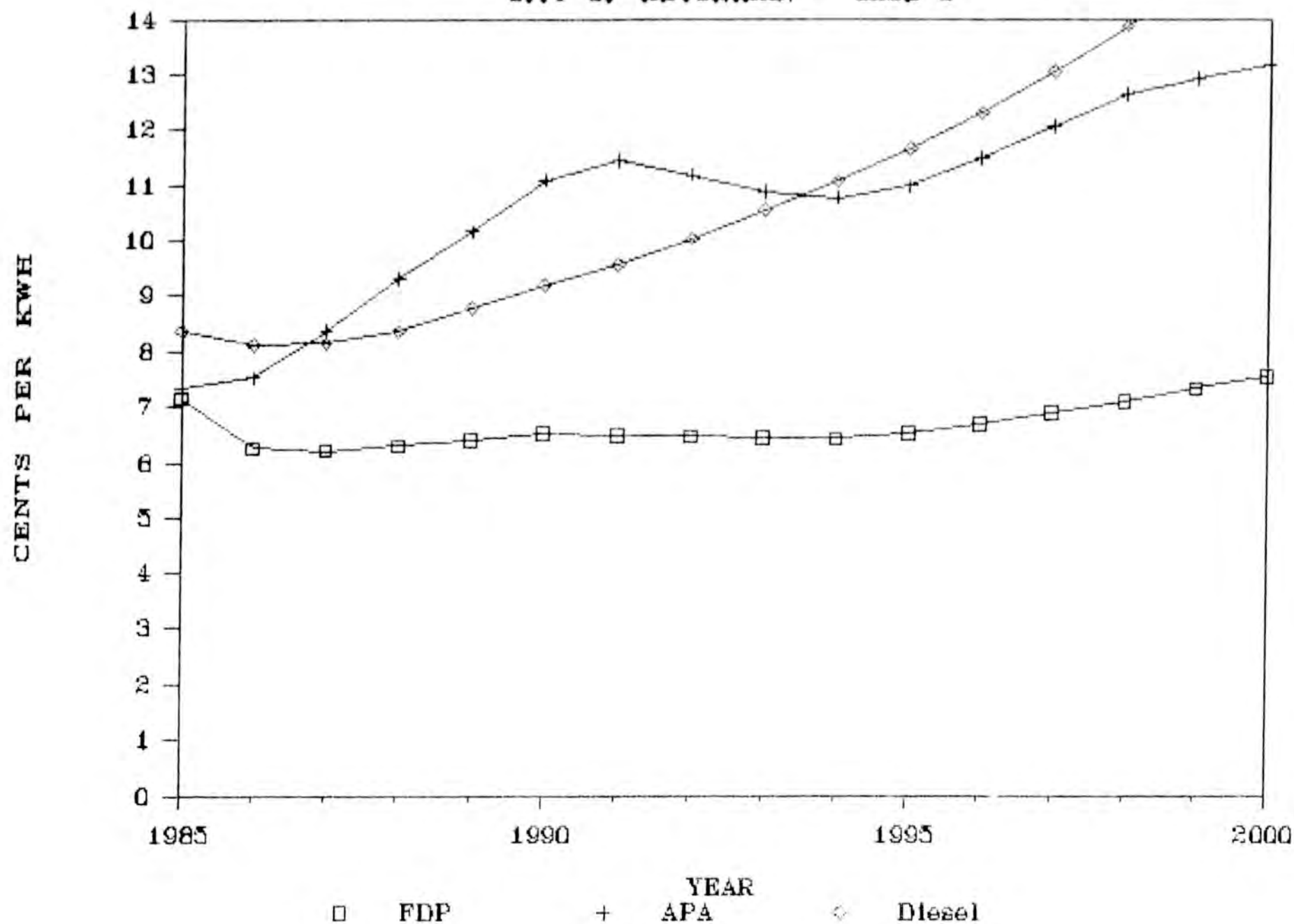
WHOLESALE POWER COST COMPARISON
Swan Lake Hydroelectric Project
Ketchikan Public Utilities Diesel Generation
March 5, 1985
CASE 3

PAGE 2 OF 2

	1993	1994	1995	1996	1997	1998	1999	2000
Generation in MWH	58,418	61,682	63,365	63,365	63,365	63,365	63,365	63,365
HB 219 ALTERNATIVE:								
O & M Cost (Dollars)	1,625,201	1,706,461	1,791,784	1,881,373	1,975,442	2,074,214	2,177,925	2,286,821
Diesel Reserve Cost (Dollars)	571,763	600,352	630,369	661,888	694,982	729,731	766,218	804,529
HB 219 DEBT SERVICE:								
Debt Service (Cents/KWH)	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68
Principal (Dollars)	439,582	484,152	518,594	540,010	562,273	585,423	609,493	634,518
Interest (Dollars)	1,126,020	1,168,925	1,179,588	1,158,172	1,135,909	1,112,759	1,088,689	1,063,664
TOTAL - HB 219 ALTERNATIVE	3,762,567	3,959,890	4,120,335	4,241,443	4,368,606	4,502,127	4,642,324	4,789,532
HB 219 ALTERNATIVE (Cents/KWH)	6.44	6.42	6.50	6.69	6.89	7.11	7.33	7.56
APA ALTERNATIVE:								
O & M Cost (Dollars)	1,625,201	1,706,461	1,791,784	1,881,373	1,975,442	2,074,214	2,177,925	2,286,821
Diesel Reserve Cost (Dollars)	571,763	600,352	630,369	661,888	694,982	729,731	766,218	804,529
APA DEBT SERVICE:								
Debt Service (Cents/KWH)	7.11	7.03	7.16	7.48	7.84	8.21	8.29	8.29
Debt Service (Dollars)	4,152,000	4,337,000	4,535,000	4,742,000	4,965,000	5,205,000	5,253,000	5,251,000
TOTAL - APA ALTERNATIVE	6,348,964	6,643,813	6,957,153	7,285,261	7,635,424	8,008,945	8,197,142	8,342,350
APA ALTERNATIVE (Cents/KWH)	10.87	10.77	10.98	11.50	12.05	12.64	12.94	13.17
DIESEL ALTERNATIVE:								
O & M:								
Variable	871,731	966,459	1,042,471	1,094,594	1,149,324	1,206,790	1,267,129	1,330,486
Fixed	571,763	600,352	630,369	661,888	694,982	729,731	766,218	804,529
Fuel	4,577,377	5,108,394	5,546,417	5,868,145	6,261,469	6,686,450	7,138,275	7,240,722
Lube Oil	129,465	143,534	154,822	162,563	170,692	179,226	188,188	197,597
TOTAL - DIESEL ALTERNATIVE	6,150,336	6,818,738	7,374,079	7,787,190	8,276,467	8,802,197	9,359,810	9,573,334
DIESEL ALTERNATIVE (Cents/KWH)	10.53	11.05	11.64	12.29	13.06	13.89	14.77	15.11

WHOLESALE POWER COST ALTERNATIVES

CITY OF KETCHIKAN - CASE 3



WHOLESALE POWER COST COMPARISON
Swan Lake Hydroelectric Project
Ketchikan Public Utilities Diesel Generation
March 5, 1985
CASE 4

PAGE 1 OF 2

	1985	1986	1987	1988	1989	1990	1991	1992
Generation in MWH	28,980	37,764	41,423	44,140	46,872	49,663	52,516	55,430
HB 219 ALTERNATIVE:								
O & M Cost (Dollars)	1,100,000	1,133,000	1,166,990	1,202,000	1,238,060	1,275,201	1,313,458	1,352,861
Diesel Reserve Cost (Dollars)	386,992	398,602	410,560	422,877	435,563	448,630	462,089	475,951
HB 219 DEBT SERVICE:								
Debt Service (Cents/KWH)	2.00	2.12	2.25	2.39	2.53	2.68	2.68	2.68
Principal (Dollars)	0	19,250	76,048	145,561	229,132	329,246	363,052	399,759
Interest (Dollars)	577,600	781,347	855,969	909,385	956,730	1,001,723	1,044,376	1,085,765
TOTAL - HB 219 ALTERNATIVE	2,064,592	2,332,199	2,509,567	2,679,822	2,859,484	3,054,800	3,182,975	3,314,337
HB 219 ALTERNATIVE (Cents/KWH)	7.15	6.18	6.06	6.07	6.10	6.15	6.06	5.98
APA ALTERNATIVE:								
O & M Cost (Dollars)	1,100,000	1,133,000	1,166,990	1,202,000	1,238,060	1,275,201	1,313,458	1,352,861
Diesel Reserve Cost (Dollars)	386,992	398,602	410,560	422,877	435,563	448,630	462,089	475,951
APA DEBT SERVICE:								
Debt Service (Cents/KWH)	2.19	3.39	4.40	5.41	6.30	7.28	7.66	7.40
Debt Service (Dollars)	632,000	1,281,000	1,824,000	2,386,000	2,951,000	3,613,000	4,024,000	4,101,000
TOTAL - APA ALTERNATIVE	2,118,992	2,812,602	3,401,550	4,010,876	4,624,623	5,336,831	5,799,546	5,929,813
APA ALTERNATIVE (Cents/KWH)	7.34	7.45	8.21	9.09	9.87	10.75	11.04	10.70
DIESEL ALTERNATIVE:								
O & M:								
Variable	291,688	392,859	443,851	487,153	532,824	581,488	633,339	688,536
Fixed	386,992	398,602	410,560	422,877	435,563	448,630	462,089	475,951
Fuel	1,690,537	2,158,494	2,325,476	2,493,056	2,760,751	3,026,375	3,285,227	3,591,496
Lube Oil	43,320	58,345	65,918	72,349	79,132	86,360	94,060	102,258
TOTAL - DIESEL ALTERNATIVE	2,412,537	3,008,300	3,245,805	3,475,435	3,808,270	4,142,852	4,474,715	4,858,241
DIESEL ALTERNATIVE (Cents/KWH)	8.35	7.97	7.84	7.87	8.12	8.34	8.52	8.76

ASSUMPTIONS:

Inflation:	1.0300
Diesel (1985 Values):	
Variable O & M (Cents/KWH)	1.0100
Fuel (Cents/Gallon)	84.0000
KWH per Gallon of Diesel	14.3500

SOURCES:

Diesel Fuel Cost Projections: DREV
Generation Requirements: APA
O & M Cost Projections: Based on KPU Historical Data

WHOLESALE POWER COST COMPARISON
Swan Lake Hydroelectric Project
Ketchikan Public Utilities Diesel Generation
March 5, 1985
CASE 4

PAGE 2 OF 2

	1993	1994	1995	1996	1997	1998	1999	2000
Generation in MWH	58,418	61,682	63,365	63,365	63,365	63,365	63,365	63,365

HB 219 ALTERNATIVE:

O & M Cost (Dollars)	1,393,447	1,435,251	1,478,308	1,522,657	1,568,337	1,615,387	1,663,849	1,713,764
Diesel Reserve Cost (Dollars)	490,230	504,937	520,085	535,687	551,758	568,311	585,360	602,921
HB 219 DEBT SERVICE:								
Debt Service (Cents/KWH)	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68
Principal (Dollars)	439,582	484,152	518,594	540,010	562,273	585,423	609,493	634,518
Interest (Dollars)	1,126,020	1,168,925	1,179,588	1,158,172	1,135,909	1,112,759	1,088,689	1,063,664
TOTAL - HB 219 ALTERNATIVE	3,449,279	3,593,265	3,696,575	3,756,527	3,818,277	3,881,880	3,947,391	4,014,867
HB 219 ALTERNATIVE (Cents/KWH)	5.90	5.83	5.83	5.93	6.03	6.13	6.23	6.34

APA ALTERNATIVE:

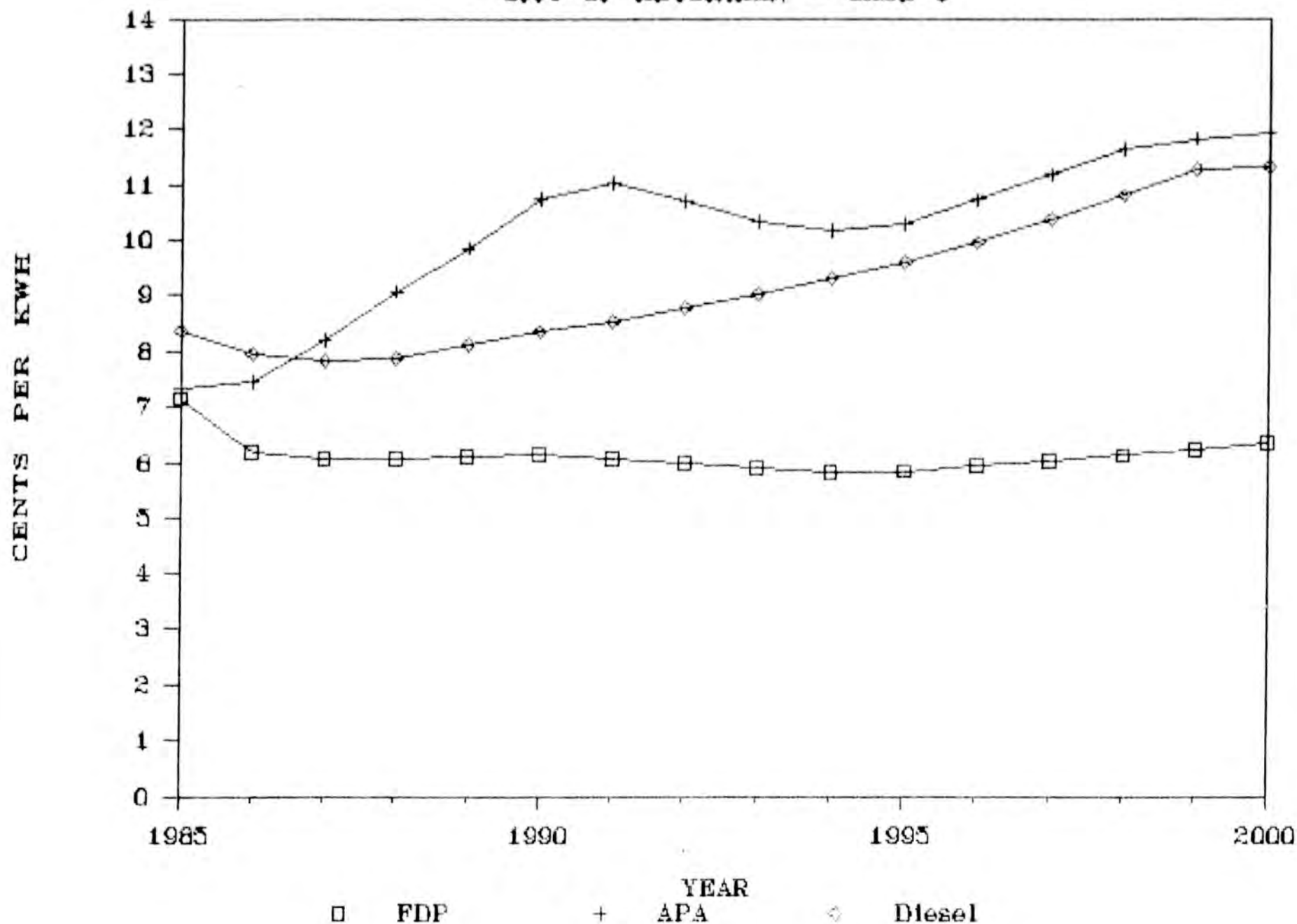
O & M Cost (Dollars)	1,393,447	1,435,251	1,478,308	1,522,657	1,568,337	1,615,387	1,663,849	1,713,764
Diesel Reserve Cost (Dollars)	490,230	504,937	520,085	535,687	551,758	568,311	585,360	602,921
APA DEBT SERVICE:								
Debt Service (Cents/KWH)	7.11	7.03	7.16	7.48	7.84	8.21	8.29	8.29
Debt Service (Dollars)	4,152,000	4,337,000	4,535,000	4,742,000	4,965,000	5,205,000	5,253,000	5,251,000
TOTAL - APA ALTERNATIVE	6,035,677	6,277,187	6,533,393	6,800,345	7,085,095	7,388,698	7,502,209	7,567,685
APA ALTERNATIVE (Cents/KWH)	10.33	10.18	10.31	10.73	11.18	11.66	11.84	11.94

DIESEL ALTERNATIVE:

O & M:								
Variable	747,422	812,858	860,088	885,891	912,468	939,842	968,037	997,078
Fixed	490,230	504,937	520,085	535,687	551,758	568,311	585,360	602,921
Fuel	3,924,642	4,296,509	4,576,060	4,749,283	4,971,087	5,207,372	5,453,361	5,426,262
Lube Oil	111,003	120,722	127,736	131,568	135,515	139,580	143,768	148,081
TOTAL - DIESEL ALTERNATIVE	5,273,297	5,735,025	6,083,970	6,302,429	6,570,828	6,855,105	7,150,526	7,174,342
DIESEL ALTERNATIVE (Cents/KWH)	9.03	9.30	9.60	9.95	10.37	10.82	11.28	11.32

WHOLESALE POWER COST ALTERNATIVES

CITY OF KETCHIKAN - CASE 4



ALASKA POWER AUTHORITY
FOUR DAM POOL
OBJECTIVES IN NEGOTIATIONS

- 1) Form the foundation for a statewide energy program for Alaska;
- 2) Establish debt service so that rate shock is not experienced by the communities;
- 3) Establish entry rates for the communities at no higher than their avoided cost; and
- 4) Establish long-term rates which benefit the communities as well as provide a return to the state.

LETTER OF UNDERSTANDING

The negotiating team representing APA, Ketchikan, Copper Valley Electric Association, Kodiak Electric Association, Petersburg and Wrangell have agreed on the terms and conditions of a power sales agreement incorporating the following:

1. The written and oral understandings of the parties heretofore reached shall be placed in writing in agreed final form, and remaining comments of the parties will be mutually and expeditiously resolved and also incorporated in the agreement.
2. A rate stabilization fund shall be established as proposed in the communities' 17 point proposal funded in part by a State appropriation of \$49,000,000.
3. The system increment proposal of the communities shall also be incorporated in such agreement.

We mutually recognize that certain statutory amendments are required to implement the agreements reached to date.

We expect to conclude draft O & M agreements and interconnection agreements following a mutual review of proposed contract revisions.

We will recommend to our respective boards and councils that the agreements be adopted and that we be authorized to execute them and to assist in the steps necessary to complete the financing.

DATED March 20, 1984

ALASKA POWER AUTHORITY

By: Larry R Crawford

CITY OF KETCHIKAN

By: John Newland

COPPER VALLEY ELECTRIC ASSOCIATION

By: J. A. Tillin

CITY OF WRANGELL

By: John Rusk

KODIAK ELECTRIC ASSOCIATION

By: David H. McNamee

CITY OF PETERSBURG

By: Don Koenigs

SENATE FINANCE COMMITTEE

MAY 26, 1984

9:20 A.M.

CALL TO ORDER

CO-CHAIRMAN DON BENNETT CONVENED THE MEETING AT APPROXIMATELY 9:20 A.M.

PRESENT

MEMBERS PRESENT: SENATORS BENNETT, FERGUSON, MULCAHY, SACKETT, AND V. FISCHER. SENATORS JOSEPHSON AND FAIKS CAME IN LATER.

OTHERS PRESENT: MIKE GREANY, DIRECTOR, LEGISLATIVE FINANCE; P.S. DHILLON, REVENUE ANALYST, LEGISLATIVE FINANCE; MILT BARKER, DEPUTY COMMISSIONER, DEPARTMENT OF REVENUE; COMMISSIONER HEATH, DEPARTMENT OF REVENUE; COMMISSIONER LYON, DEPARTMENT OF COMMERCE AND ECONOMIC DEVELOPMENT; REPRESENTATIVE HURLBERT; SENATOR KERTTULA; RICH UNDERKOFER, CITY MANAGER, CITY OF PETERSBURG; DON KOENIGS, MAYOR, CITY OF PETERSBURG; KURT DZINICH, SENIOR ADVISOR, SENATOR ADVISORY COUNCIL; SUSAN WHITE, EXECUTIVE ASSISTANT, ALASKA POWER AUTHORITY; MARTHA FOX, ASSISTANT ATTORNEY GENERAL, DEPARTMENT OF LAW; TERRY ELDER, DEPUTY COMMISSIONER, DEPARTMENT OF COMMERCE AND ECONOMIC DEVELOPMENT; AND STAFF FROM STATE OFFICES AND LEGISLATIVE OFFICES.

SUMMARY INFO

CSHB 684(FIN) AM AN ACT MAKING SPECIAL APPROPRIATIONS TO THE ALASKA POWER AUTHORITY; AND PROVIDING FOR AN EFFECTIVE DATE. DISCUSSION AND HELD IN COMMITTEE.

SENATOR FERGUSON WALKED THE COMMITTEE THROUGH THE PROPOSED SCS FOR CS FOR HB 684(FINANCE). HE THEN ASKED MR. LARRY CRAWFORD AND BILL BATT TO COME FORWARD AND DISCUSS THE PROPOSAL WITH THE COMMITTEE.

LARRY CRAWFORD

MR. LARRY CRAWFORD, EXECUTIVE DIRECTOR OF THE ALASKA POWER AUTHORITY CAME FORWARD TO TESTIFY AND INTRODUCED MR. BILL BATT, DIRECTOR OF FINANCE. SENATOR MULCAHY ASKED WHAT THE INTENT WAS OF THE ALASKA POWER AUTHORITY WITH REGARD TO SECTION 1, THE \$210,000,000 AND THE POWER CONTRACTS. MR. CRAWFORD SAID THE INTENT OF THE POWER AUTHORITY WAS TO USE THE RENEGOTIATED AGREEMENTS AS THE BASIS FOR THE LOAN AND THE COMMUNITIES WOULD HAVE RATES BASED ON THOSE RENEGOTIATED AGREEMENTS. HE SAID THE ONLY TIME THEY WOULD ENFORCE THE EXISTING AGREEMENT WOULD BE WHERE THEY DID NOT HAVE A NEW RENEGOTIATED AGREEMENT.

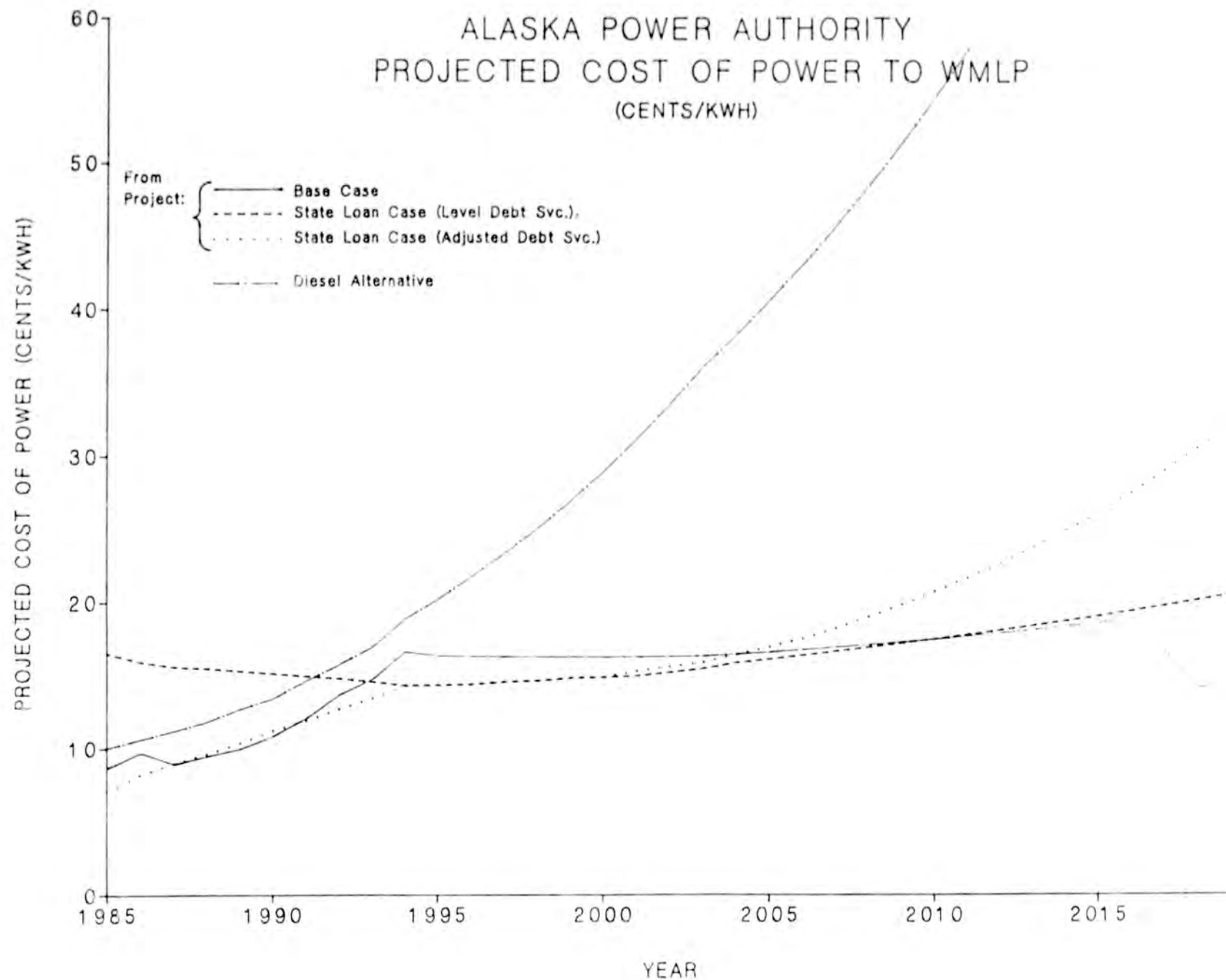
SENATOR MULCAHY ASKED ABOUT CLARIFICATION ON SECTION 1. HE FELT THE APPROACH BEING TAKEN WOULD DO AWAY WITH THE RATE STABILIZATION APPROPRIATION THAT HAD BEEN LOOKED AT BEFORE WHEN GOING OUT TO THE BOND MARKET. HE SAID IT WAS HIS UNDERSTANDING THAT THE RATE STABILIZATION APPROPRIATION WOULD NOT BE NEEDED BECAUSE OF THE USE OF GENERAL FUNDS AND BECAUSE THE LANGUAGE IN THE AUTHORIZING BILL IS SUCH THAT THE INTEREST RATE CAN BE "BACKED IN."

MR. CRAWFORD SAID THIS WAS CORRECT, THAT THEY ARE LOOKING AT WHAT THE DEBT SERVICE PAYMENTS WOULD HAVE BEEN UNDER THE RENEGOTIATED AGREEMENT AND THEN THEY WILL BE RETURNING THE MONEY TO THE STATE IN ACCORDANCE WITH THOSE DEBT SERVICE PAYMENTS. THE INTEREST RATE IS THE DERIVED NUMBER AND LOOKS TO BE ABOUT AN 8% YIELD TO THE STATE ON THE \$210,000,000 OVER THE LIFE OF THE LOAN. HE SAID THE PAYMENTS IN THE EARLY YEARS WILL BE LESS THAN IN THE LATER YEARS AND THEY CAN DO AWAY WITH THE RATE STABILIZATION FUND.

SCS FOR CSHB 589(FINANCE)

SENATOR FERGUSON WALKED THE COMMITTEE THROUGH THIS LEGISLATION. SECTIONS 1 THROUGH 3, CREATE THE POWER DEVELOPMENT REVOLVING FUND FOR THE PURPOSE OF IMPLEMENTING THE \$210,000,000 LOAN FOR THE FOUR-DAM POOL PAY OUT. SECTION 4 ALLOWS THE CREATION FOR THE FOUR-DAM POOL.

ALASKA POWER AUTHORITY
PROJECTED COST OF POWER TO WMLP
(CENTS/KWH)

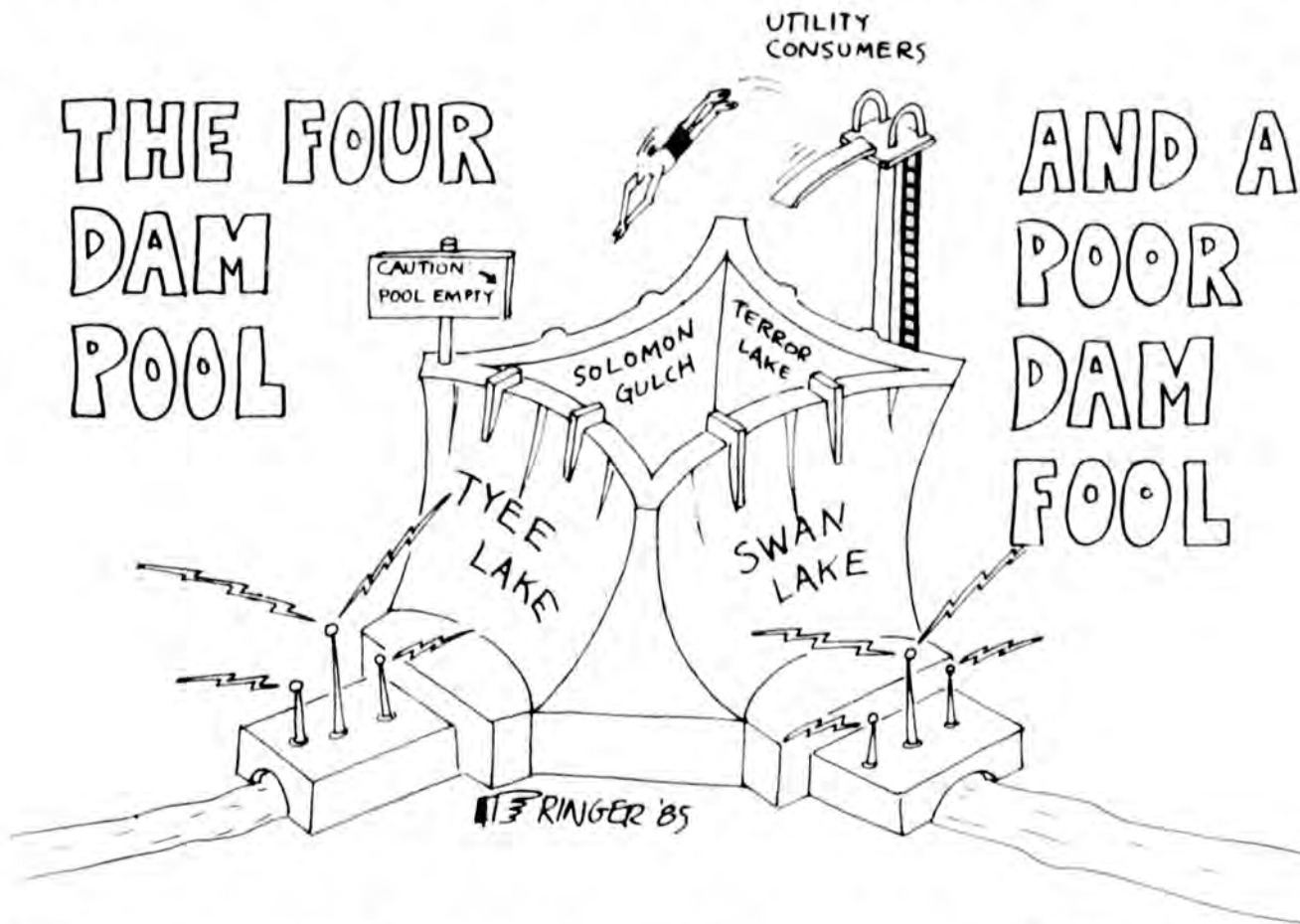


The Capital REPORTER

A Journal of Alaskan Political News and Opinion

Volume 1, No. 13

Four Dam Pool: Round & Round We Go



Three meetings were held this week between legislators, the administration officials and representatives of the four-dam pool communities to discuss Rep. John Sund's House Bill 219. The bill represents the four-dam pool communities' latest attempt to come to an agreement with the Alaska Power Authority and the administration for

long-term power rates that the communities can afford, and that offer the state a reasonable rate of return on its investment.

Negotiations began on an amicable, hopeful note, but by week's end, when House Bill 219 failed to move from a House Finance subcommittee, the pre-Easter talks

ended on a hostile, confrontational note. The turn in events was termed "frustrating, but not surprising," by some of the players who have worked for two and a half years to reach the ever-elusive, long-term power cost agreement with the state.

In spite of the negative end to

(Continued on page 8)

Wunnicke Defends DNR Action on Royalty Gas Increase

Controversy erupted last week over a decision by the Department of Natural Resources (DNR) to increase state royalties on Cook Inlet natural gas. The action could result in significant increases for Anchorage utility consumers, and some lawmakers are concerned over the effect that would have on the rural power cost equalization program which provides power subsidies for rural consumers.

DNR announced on March 19 that it had notified five Cook Inlet gas producers (ARCO, Chevron, Marathon, Shell and Union Oil of California) that, effective April 1, it would no longer accept royalty valuation based on long-term contract prices that are significantly below current market value. A higher royalty valuation on the state's portion of Cook Inlet gas translates into about \$8 million per year in additional revenues to the state.

It also means that the producers, under the terms of their contracts with purchasers, will pass the costs on, in this case to Chugach Electric Association and Enstar Natural Gas in Anchorage. Those utilities would probably seek APUC approval to pass the costs on to their customers.

Estimates vary as to the magnitude of the increases, but according to DNR Commissioner Esther Wunnicke, press accounts of a 20 percent jump are overstated. She feels prices would rise by no more than about ten percent for Chugach Electric Association, the utility that will be the most severely affected, and by about one percent for Enstar who relies less heavily on Cook Inlet gas. Chugach estimates utility rates will rise about four percent as a result of the action.

Wunnicke said recent negotiations by Enstar and Marathon set the market rate for natural gas at around \$2.05 per thousand cubic feet (mcf), significantly higher than the rates established under long-term contracts the some producers are operating under. Chugach, under its present contract with Chevron, ARCO and Shell for Beluga gas, pays only \$.21 per mcft. Wunnicke pointed out that

although Chugach's gas purchase costs will increase by almost 50 percent, the gas represents only 30 percent of the utility's fuel requirement.

According to Wunnicke, who gave an overview on the subject to the Senate Resources Committee on April 1, DNR is merely exercising the state's right to obtain royalties on the higher "market value" of its natural gas. Wunnicke labeled the action a "lease enforcement action" and not an optional or arbitrary decision.

Wunnicke also stressed the importance of strict, yet even-handed enforcement of the state's leases. "If we hope to prevail in the North Slope royalty litigation, it is our view that we must act across the board to collect full value for the state's resources. It would be improper to have one standard of enforcement where oil companies bear the burden and a different more lenient standard where some of that burden is passed on to Alaska consumers," she said.

The effect on bush power subsidies is not clear. Some fear that an increase in Anchorage power rates will adversely affect the Power Cost Equalization program established last year which provides power cost subsidies to rural consumers. Some of the impetus to establish the program came from recognition of the fact that Anchorage enjoyed what amounted to a state subsidy in the form of low gas prices to the utilities, and that rural consumers should be afforded the same benefits. On March 25 Rep. Virginia Collins (R-Anchorage) circulated a letter to Sheffield claiming that rates established under the Power Cost Equalization program "are premised, in large part, on per kilowatt hour costs in the Anchorage area."

Wunnicke disagreed. "The marker for rural subsidies is set by statute at 8.5 cents per kilowatt hour, and this rate is unaffected by changes that might occur in urban power rates," she told the Senate Resources Committee. She also said that the lower gas prices have never been openly labeled a subsidy, and that if the Legislature decides to subsidize Anchorage then it

The Hyder Connection

The House Finance Committee gave a favorable recommendation to Rep. Robin Taylor's bill to link Hyder, Alaska with the rest of the state via marine highway service. Taylor (R-Wrangell) introduced the bill in mid-February to appropriate \$22,000 to initiate trial summer service into the long-neglected Southeastern Alaska community. Taylor said he hopes to see the bill on the floor of the House for a vote early next week, and he hopes that the bill's minimal fiscal impact will help it in its journey through the Senate.

Hyder is a community of approximately 100 residents located at the head of Portland Canal, a long, scenic fjord that runs 90 miles along the U.S. - Canadian border just north of Prince Rupert, British Columbia. Hyder is directly across the canal from Stewart, a British Columbia mining town. Children from Hyder are bused to Stewart to attend school, and the currency used in town is Canadian. The State of Alaska provides very little in the way of services to Hyder, the town that calls itself "The Friendliest Ghost Town in Alaska."

The Stewart-Cassiar Highway opened last year, connecting the two towns to the Alaska/Yukon Highway 37, and Hyder asked the Legislature that it be designated as "Mile 0" of the Alaska/Yukon Highway. Proponents point out that Hyder is 141 miles closer to the Seattle than Prince Rupert, and that the road is superior to the Prince Rupert-Terrace portion of the Yellowhead Highway. Rep. Taylor testified that over 25,000 cars made the trip into Stewart and Hyder last year. Taylor would like to see the State help out one of its own, and he sees Hyder as a possibility for a future southern terminus of the Alaska Marine Highway. A companion measure, House Bill 202, that is also in House Finance, appropriates \$2.1 million for construction of a ferry dock and terminal facilities at Hyder.

Chances of HB 202 passing this session are slim, however Rep. Taylor intends to keep pushing for a ferry terminal at Hyder. Joe Camp from the Marine Highway System claims that the northeast end of Portland Canal can be extremely windy, and that the twice-weekly summertime runs would give them some experience in navigating the canal.

(Continued on page 6)

Subsistence and Tlingit Culture

by Robert Willard

Let me allay any fear that the culture of the Tlingit nation is dying. There are those among you who preach the notion that the culture of the Tlingit is either dead or dying on the vine.

There are even some among the Tlingit people who express that fear. It may well be that these people, on their own or through their upbringing, write off the customary ways and the heritage of the Tlingit. But I can assure you, the culture of the Tlingit nation is alive and well.

To our younger people: do not believe that the culture is dying. It is there because you are there.

We thank and acknowledge our elders - our mothers and fathers who brought us here, and our aunts, uncles, grandmothers and grandfathers for teaching us to respect the culture and to respect our fathers, mothers, brothers, sisters, and our children. Respect is the cultural trait of the Tlingit people.

We acknowledge, too, those among us who have a culture to identify with. We applaud the Irish, the Filipinos, the Vietnamese, the African nations, the Russians - and others from around the world who are among us. We are pleased when we observe their folklore dances in our presence. They too have not lost the cultural identity and the inherited traits of their cultural beginnings. Likewise, they must respect the Tlingit when we act in our customary and traditional ways.

In order to understand this business of culture, you need first to identify what you claim is lost. These things may not be understood even by our own people.

You must understand the king's language on the terms "culture" or "cultural," "custom" or "customary," "tradition" or "traditional," and "heritage," "hereditary," or "inherited."

You should know the difference between these terms before you charge me, or my Tlingit people with having lost our cultural ties.

Permit me to explain certain aspects of culture, custom, tradition and heritage.

Tlingit is the culture of the land and waters around us. Likewise, the land and water are the culture of the Tlingit.

My five Tlingit names are part of the Tlingit culture, in fact my very existence is living proof of that culture. The honor we give to the Tlingit name is customary practice. The method that I use, perform and

"Subsistence is the very culture of the Tlingit Nation. . . . To take away subsistence . . . would constitute cultural genocide."

speak at ceremonial activities is the tradition of our people. All of the above is the heritage, because I inherited all from my mother and father.

I belong to the Decitan, or clan of the beaver. That too is the culture. My Tlingit name is that of the beaver, and the headgear, the blanket, leg wear and make-up I wear at official Tlingit activity are all aspects of culture.

Occasionally you will hear of a "40-Day Party" being held for a deceased member of the Tlingit. This has become a tradition, although it is not of the true culture because this practice came with the advent of Christianity. The churches take credit for having "brought Christianity to the Tlingit people." Not true. Long before the Christians came to our shores, the Tlingit had a word for "God." The Tlingit accommodated the Christians' religion though, and instituted the 40-Day Party. In that event the favorite food of the decedent was served in the traditional way, usually our subsistence foods - the fish, the deer, the berries, the water plants, and other wildlife.

Subsistence is the very culture of the Tlingit Nation. It is of the land and the water around us. The methods we use to prepare and preserve our foods are the customary ways that we have used since life began. The manner in which we serve our foods is in the traditional way of the Tlingit nation, and the implements derived from the resources represent the Tlingit culture. All of these uses and methods are the heritage of the Tlingit nation. Thus, the subsistence use of the resources is more than traditional and customary.

Any effort to take subsistence away will be met with the full resistance of the Tlingit nation. The same is true of the Haida nation. To take away subsistence would constitute cultural genocide, by any interpretation.

Because we respect other cultures, we would never deny the Chinese his rice or the Norwegian his lutefisk.

We have never imposed our culture, customary or traditional ways upon others. They are reserved and revered by the Tlingit nation. All we ask is that you understand our ways, we do not ask that you respect them or observe our rites when they are occurring. Only to understand.

Our present generation, and the generations to come, will observe the cultural traits and customary way of life of the Tlingit nation. They will enjoy the fruits of our labors in the traditional way. That is our heritage and it will never be surrendered or lost. For that is the culture of the Tlingit nation. I have spoken.

Ed. Note: Robert Willard is the Chairman of the Alaska Native Brotherhood Legislative Affairs Committee.

The Capital Reporter is published weekly during the legislature and monthly in the interim. Yearly subscription rate is \$100. Comments, suggestions or opposing viewpoints should be addressed to:

The Capital Reporter
P.O. Box 1376
Juneau, Alaska 99802
Or call us at (907) 586-6672

Graphics by Tony Armlin
1985
Ann Gardiner Metcalfe and
Kimberly Metcalfe-Helmar

Vern's Version

Presiding Officers I Have Known

By Vern Metcalfe



For those who are into Alaska Trivial Pursuit, it should be known that the first speaker of the House in 1913, was Earnest B. Collins. He was named aptly and from then on referred to as "Fox." His counterpart, from Seward, was L. V. Ray and no, he was not related to another present day senator, who has yet to be prexy of the Senate and is not included in the coalition ruling the Senate body this session.

E. B. Collins later moved to Fairbanks and last served as a senator in the 1949 Territorial Legislature. He was a delegate to the Constitutional Convention of 1955. No one else, to my knowledge, had a greater time span in legislative office than the Fairbanks attorney, who was born in 1873 and had resided in Alaska since 1904.

Collins was the only speaker to serve two consecutive terms until another Fairbanksan, Warren A. Taylor did so for the first two sessions of the State House. Taylor was a good friend of the writer (we served together in 1951 and again in 1955) and he was also the only member to be elected from three different towns — Cordova, Kodiak, and Fairbanks. Taylor read law under Anthony J. Dimond, who had served eight years in the Territorial Senate before becoming a delegate to Congress, from 1933 to 1945, after which he became a federal judge for the Third Division.

One of the most colorful of all presiding officers, Taylor was once accused during a debate in the 1955 session of "defending more criminals than any other Alaskan attorney." Speaker Wendell P. Kay could have taken exception but agreed with Taylor when he replied, "you have that wrong, sir, I have defended more people accused of crime than any other attorney."

My acquaintance with speakers began with Stanley J. McCutcheon of Anchorage who served in 1949 and was perhaps the ablest I've seen in the chair. He could move more legislation off the calendar faster than anyone I've seen. He was often placed in the chair during the 1951 session, when William A. Egan was speaker, to do just that, move things. The Democrats had only a four vote margin (14 to 10) with two of these being prone to vote with the GOP unless sufficiently prodded to do otherwise.

Egan was a no-nonsense man in the chair although reduced to laughter on occasion -- once when Mike Stepovich, later a Territorial governor, got carried away with his fiery oratory. Seems that Mike was seated directly behind Alden Wilbur, a Fairbanks plumber and businessman, who got tired of dogging that Stepovich windmill approach to debate. Each time Mike stepped forward, Alden put out his arm and pushed him back, without Stepovich missing a word or Wilbur changing expressions.

"... Taylor was once accused ... of 'defending more criminals than any other Alaskan attorney.' Then Speaker Wendell P. Kay could have taken exception, but agreed when Taylor replied, 'you have that wrong, sir, I have defended more people accused of crime than any other attorney.'"

George Miscovich followed Egan and presided over the Republican-controlled 1953 House. Miscovich was non-plussed at being in the majority but handled the chores well. In 1951 there was a saying that went, "23 and Miscovich" since he

never liked having a unanimous vote on anything. He also figured in a last night epic that is still spoken of when such matters are discussed. Seems he was presented with a painting he much admired (all presiding officers get gifts for surviving) and overcome with emotion, reared back in his chair which rolled off the podium with a horrendous crash. Miscovich recovered enough to crawl back up on his dais, slam down the gavel and call a recess.

Wendell Kay was given a solid majority in 1955, 21 to 3, where Miscovich had like numbers, 20 to 4, which was the fastest party turn around in legislative history. Kay had quite a crew to herd, consisting of 12 attorneys, plus 12 laymen. His session saw the passage of the "Unified Bar" which gave the Alaska Bar Association the ruling of the legal roost but only after a trick brought about by Rep. Dora Sweeney (D-Juneau).

The House was expected to pass the bill without any nays but each lawyer had to rise to explain the benefits of the passage. Rep. Sweeney determined that the laymen should upset various applegarts and when the vote was called Wendell Kay very nearly emulated Miscovich's upsy-daisy. He was busy scanning a newspaper, feet on his desk as the roll call was made, and suddenly dropped his feet, paper, and almost himself and yelled, "What in the hell is going on here?"

Seaborn J. Buckalew, Jr. also was on his feet in a panic but all was well when the lay people allowed that another vote be taken. There have also been instances wherein a speaker had a pet bill which he left the chair to champion and then heard the House roundly vote it down. All in fun, of course.

There have been some Senate presidents I've known, although when covering the legislature as a reporter I've always preferred the House. Where else could you have seen such a maverick as Bruce Kendall presiding? Bruce was the winner in a 20-20 contest. Kendall was later to become a Democrat after not gaining the Republican nomination, he lost to Walter J. Hickel in the 1966 primary for governor. Kendall was one of the shrewdest operators I've seen.

He once told the reporter following a stirring speech he made, before he became speaker, that his

(Continued on page 6)

Legislature . . .

(Continued from page 5)

proponents to be "freedom of choice" legislation, was sponsored by Sen. Bettye Fahrenkamp, and would exempt midwives from State Medical Board regulation, and instead grant the Department of Health and Social Services power to adopt regulations for educating and training persons engaged in the practice of midwifery.

Kay Connelly, a midwife who is licensed through the state of New Mexico and practices in Juneau, told members of the HESS committee that because midwives are not regulated they cannot get insurance. Connelly was one of five Juneau residents testifying in favor of the bill. Most midwives in Alaska are licensed through New Mexico, which is one of more than 10 states that has sanctioned the practice of midwifery.

One Anchorage doctor, who spoke on behalf of the Anchorage medical society, and said that they are "adamantly opposed" to this bill. Another doctor in Anchorage also voiced his objection to the bill, by stating that he doesn't "want to see the state legitimize a second class of care."

The bill defines the practice of midwifery as "giving education and advice concerning pregnancy; supervising, caring for, and advising women during pregnancy, labor, and the postpartum period; conducting deliveries without supervision; and caring for newborns and infants."

A student midwife in Fairbanks, Diane Fuller, said women have a "right to be attended by the person of our choice, and a right to alternative health care. And it is our constitutional right to choose where and when we give birth."

—The Senate postponed action on a bill that would allow a terminally ill patient to decide whether life-sustaining devices are used. Under the "living will" bill, CSSB 140(HESS) by Sen. Ellason, a patient would have the right to make treatment decisions "as long as the patient is able to do so." When a patient is no longer able to make decisions, his sworn statement regarding withdrawal of life-support systems becomes effective. Sen.

Josephson (D-Anchorage) felt the circumstances constituting "not being able to make a decision" should be clearly defined in the legislation, and Sen. Ray (D-Juneau) expressed concern over a provision requiring doctors who will not honor the wishes of a patient to transfer the patient to another doctor. The Senate will take the bill up again on Tuesday, April 9.

—A bill creating the Alaska State Fire Commission to promote fire safety was passed out of Senate State Affairs on Tuesday, but with only one favorable recommendation. Sen. Bob Ziegler's Sb 209, and the companion funding measure, SB 210, prompted criticism from Anchorage Republican Tim Kelly who questioned a section in the bill granting the Commission power to adopt regulations. "What we're talking about here is a statewide, super-regulatory agency," Kelly said. "Frankly, I don't think that's necessary." Sen. Bill Ray of Juneau was the lone "do pass."

—Sen. Bettye Fahrenkamp (D-Fairbanks) testified before Senate State Affairs on Tuesday in support of her bill to continue the Administrative Journal, the bi-weekly compilation of state solicitations to bid and notices of changes in regulations. The journal was started on an experimental basis last year.

Four Dam Pool . . .

(Continued from page 8)

Pourchot until the Alaska Power Authority and the four-dam communities reach a compromise somewhere between 8 and 4 percent, and until a formula for figuring out avoided cost is settled on.

No one is saying what the final figures will be, but they are talking, and most of the parties agree that Bob Heath, the most recent in a chain of Alaska Power Authority executive directors, is the most reasonable person they have had to deal with so far. Heath is confident of reaching an agreement and said, "we're getting close and are working toward a conceptual framework," and he hopes that in another two or three meetings the factions can agree on a methodology. Heath said all of the ideas are on the table, and stated "nothing is sacred here - until we reach some agreement I'm refusing to recognize any boundaries..."

Vern's Version . . .

(Continued from page 4)

remarks might have been on the wrong bill — they were — but the mistake was a natural one for him. "I've never read a bill en toto yet, why start now?" he told me. He was extremely partisan prior to becoming the speaker but acquitted himself well once he gained the throne. It should also be noted that as House minority leader in 1959, the 1st State Legislature, he persuaded Jay Hammond, who was elected as an Independent, to join the five-man Republican force.

He explained to Hammond that he would be able to choose what committees he wished since the majority had to allow at least one GOP member on each. Hammond confessed that when he ran he didn't know which party appealed to him the most, thus his classification as an Independent.

More than one Republican later indicated that he was still a bit foggy as far as party affiliation went but that would be another column all in itself. Hammond was to preside from 1971 to 1973 as Senate President, then retired from the fray to his home in Bristol Bay only to be persuaded by Sen. Lowell Thomas, Jr. to run for governor with Thomas as his Lt. Gov. candidate.

Others that I came to know and admire included Frank Peratrovich of Klawock who holds distinction in leadership roles and service in both houses, which has never been attained and never will be attained by any other legislator. There was Bill Boardman, a Ketchikan Republican, who like Kendall surprised a lot of people, including me, by being an extremely effective speaker.

Gas . . .

(Continued from page 2)

should do so directly, not through slack enforcement of its leasing program.

Collins' letter to Sheffield urges the governor to suspend DNR's decision until the Legislature has a chance to study its impact on both rural and urban consumers. Wunnicke said that in response to these concerns the effective date of the decision has been postponed until April 15 to give lawmakers a chance to study the problem.

Sheffield's Budget "Revelation" Anti-Climactic At Best



Commentary

by Joe LaRocca

Several weeks ago, when I discussed here the ease with which Alaska's government and political establishment are able to manipulate Alaska's gullible press corps, I didn't anticipate the prompt confirmation they would obligingly proffer.

The case in point was the Sheffield administration's recent "revelation" that first quarter state revenue projections foretold a half billion dollar shortfall from earlier budget expectations.

The local rag, for example, carried this Page One banner headline: "New forecast: State revenue falls \$463 million."

In fact, there was nothing at all new about the projections. They were, at best, an anti-climactic, after-the-fact reaffirmation of months' old projections which could be altered only by dramatic events which would have been obvious if and when they occurred.

If ever there was a non-news story, it was the one to which Alaska's naive news media over-reacted on April 1 when they announced, with drum rolls and fanfare, the "new" state revenue projections. April fools, indeed.

My news media colleagues compounded their folly when they

erroneously attributed the \$463 million shortfall announced by the administration exclusively to eroding oil prices.

In fact, only half that total is directly attributable to the softening world oil market. The other half is due to shortfalls from three general revenue sources: state investment yields (\$75 million); property taxes (\$60 million); and corporate income taxes (\$95 million).

The distinction is subtle, but significant. There is little, if anything, the state can do to make up shortfalls directly attributable to declining world oil prices.

But there's much it can do to compensate for shortfalls from two of the other three revenue sources: to wit, raise taxation levels.

While I'm not necessarily advocating that option, it's clearly one over which state decision makers exercise significant control.

By hyper-dramatizing a non-news event, the news media played right

"By hyper-dramatizing a non-news event, the news media played right into the hands of sly politicians, underscoring the myth that Alaska is going broke."

into the hands of sly politicians, underscoring the myth that Alaska is going broke.

That's precisely the perception which certain politicians are anxious to foster among rank and file Alaskans. The reality, which the politicians prefer to mask, is that Alaska is, relatively speaking, awash in money.

But by poor-mouthing their constituents, the politicians are more easily able to deflect constituent demands in favor of their own pet projects, which they continue to promote and fund behind the scenes

(Continued on page 7)

Legislature

--A proposal to guarantee the state Ombudsman access to confidential records of state agencies drew fire from Department of Health & Social Services representatives at a Senate State Affairs meeting on Tuesday. SB 9 by Senator Ray would grant the Ombudsman access "at all times to records of every state agency, including confidential records." Deputy Commissioner of the Department of Health & Social Services Connie Sipe objected to the language as being too broad. "Some federal statutes and regulations flatly prohibit public disclosure of client records, except for internal audits. Other federal laws condition receipt of federal funds by the state upon the state's agreement to honor client confidentiality requirements," she said. DH&SS recommended a substitute version with more restrictive language relating to confidential information. The bill will be brought before the committee again when the Ombudsman's Office and bill drafters have reached agreement on a proposed substitute.

--Senate Resources unanimously approved a bill which would remove a possible legal obstacle to development of Barrick Petroleum, Ltd.'s treadwell mine development in Juneau. The bill, SCS CSHB 273 (Res), grants extralateral mining rights to owners of mining claims located before statehood under federal mining laws. Extralateral rights enable the claim holder to follow a slanting vein of ore even if it slants out of the boundaries of the claim.

--A bill requiring the Department of Revenue to make public the list of candidates and groups to which campaign contributions were made and political campaign contribution credits granted was piloted through House State Affairs by its sponsor, Rep. Terry Martin (R-Anchorage). Martin requested this information earlier this year, but was not successful in obtaining the list until DOR was ordered by the Supreme Court to release it.

--Proponents and opponents of a bill that would legalize the practice of midwifery testified in force Tuesday during a Senate HESS Committee teleconference with Anchorage and Fairbanks. SB 239, termed by many

(Continued on page 6)

LaRocca . . .

(Continued from page 5)

with cash surpluses obscured by political pettifoggery.

For example, legislators can use the state's misperceived impecuniosity as a pretext to roll-back state employees' salaries (while greedily pocketing their own extravagant paychecks).

The half billion dollar shortfall, which anyone could have computed with a dime store calculator, has prompted a re-examination by some legislators of the state's corporate income tax law. That's the likeliest target for a tax rate increase, because of lingering resentment among some legislators over 1981 changes in the 1978 law which they say have cost the state literally hundreds of millions of dollars in revenues foregone.

The 1981 amendments were sold to the legislature, based upon assurances from the Hammond administration and

other industry supporters that they would not result in a significant decrease in state revenues over time.

But subsequent events revealed that an egregious error by the Department of Revenue had led to a gross miscalculation of future revenues which, according to figures developed in 1983, will reduce the state's corporate income tax revenues by more than two billion dollars over the next five years.

During a House Finance Committee meeting last week at which the director of the Revenue Department's research section testified, one member, Rep. Sam Cotten, drew from him an admission that the 1981 miscalculation has already cost the state incalculable millions of dollars in revenues foregone. Cotten estimates the losses "in hundreds of millions of dollars."

After the enactment of the new corporate income tax law in 1978, the major oil companies operating in

Alaska took the state into court, contending that the statute was unconstitutional.

Later, they said they would settle the lawsuit out of court if the state would amend the law to satisfy their objections to it. It was an unwritten agreement to that effect which led to the 1981 amendments.

But the oil companies subsequently decided that the amendments did not go far enough in their favor, and they continued the lawsuit. A decision in State Superior Court upheld the state's position, and an appeal to the State Supreme Court is still pending.

A news report last week that the House Finance Committee was quietly drafting legislation to re-institute the 1978 law brought oil industry lobbyists scurrying to Juneau in their corporate jets to try to forestall that threat. The proposed legislation was introduced in the House on Wednesday, April 3, precipitating one of this legislature's potentially most explosive issues.

Helmar's Politicians Past



Sen. W.E. "Brad" Bradley (R-Anchorage) and the late Sen. John Huber (D-Fairbanks), 1978 Session.

Four Dam Pool . . .

(Continued from page 1)

the meetings, negotiations will continue, and representatives of the four-dam communities hope to iron out the loan repayment terms so they can finally sign power sales agreements that will assure their communities of stable electrical rates into the next century.

Rep. Pat Pourchot (D-Anchorage) headed the House Finance subcommittee where the bill is mired. When Pourchot refused to move the bill out of his subcommittee Rep. Robin Taylor (R-Wrangell) and Rep. David Thompson (R-Kodiak) badgered Pourchot about a time schedule for moving the bill. Taylor and Thompson represent a constituency who harbor a growing resentment over failure to reach an agreement between their city governments and the state on long-term electric rates.

Cities in Taylor's district have refused to accept agreements until they are put before the voters, and Taylor stated that he is afraid of a "consumer revolt" if something is not resolved soon. Rep. Thompson accused Pourchot of not appreciating the amount of time spent negotiating, and Taylor said four-dam communities desperately need to see the bill move.

Pourchot told Taylor and Thompson that they could have their pick of a final resting place for the bill, the subcommittee, the full Finance Committee, the Rules Committee, the House floor, or the Senate, and he indicated that persistence on their part would not change his mind.

Pourchot was more hopeful about continued negotiations between the state and the communities the day after the heated meeting. As chairman of the subcommittee he feels he must try to fashion a rate structure that will benefit the state as a whole. He thinks it would be presumptuous of the committee to move the bill before the Power Authority comes in with its offer, and Pourchot said "one or two points means literally millions of dollars." He wants to take the time to study the proposals, and he thinks it is important that all factions talk.

The four-dam pool communities are Ketchikan (Swan Lake), Wrangell and Petersburg (Tyee Lake), Valdez and

Glenallen (Solomon Gulch), and Kodiak (Terror Lake). What they have in common are hydroelectric projects that have been financed by the state. The projects are very different, the communities are very different, but in order to finance the state's first petro-dollar dams, a pool was formed, now known as "the four-dam pool," or "the poor, damned fool," depending on who you talk to.

What is at stake is repayment of \$196 million in loans from the state. The dams were built at a total cost of \$490 million, and except for the \$196 million owed, the projects were funded by state grants. The repayment terms are seen by some, including Pourchot, as precedent-setting, in terms of the "Energy Program for Alaska." The energy program is the statutory vehicle by which the Alaska Power Authority has authority to acquire or construct power projects in the state with approval of the legislature. One faction fears the long-term loss to the state if this legislature were to give up too much on the four-dam contracts, with so many unmet energy needs in the state.

According to House Bill 219, the communities would commit to an annual interest rate not to exceed four percent, a loan term not to exceed 50 years, and a 40-year amortization period. The communities would loan payments adjusted so the payment per kilowatt hour increases gradually over the first five years of the loan and remains fixed over the next 35 years. The deferred principal would be repaid with interest in equal annual installments during the last 10 years of the loan.

Last summer the Power Authority's offer was an eight percent average yield over 35 years. The four-dam communities made a counter proposal in September, that is basically what HB 219 calls for, four percent over 40 years. The four percent sounds good, but in reality does not equate to a four percent average total yield, said Kurt Dzinich, the senior advisor to the Senate Advisory Council. Dzinich has been following the four-dam issue for over three years during his tenure with the Senate. He figures the interest rate equates to 2.2 percent because the communities will only agree to pay a lower interest rate on the unused capacity of the dams. They also want to defer payment of the principal, interest free, until the last 10 years of

loan. Community representatives claim some of the dams were grossly overbuilt, and they refuse to pay the high costs now for future power capacity.

Dzinich blames the longevity of negotiations on passage of a \$210 million loan made by the Legislature to the communities last year. The loan is administered by the Department of Commerce and Economic Development, and paid off short-term bonds that financed the original projects. Payment of the short-term bonds changed the whole negotiating scenario that had gone on between the communities and the Alaska Power Authority.

Dzinich said that the APA, by law, must charge debt service on a loan, and the Dept. of Commerce must set the terms. The state agencies have to take into consideration the current market rate and the cost of alternative avoided cost. Avoided cost, Dzinich explained, is determined by figuring what a community like Ketchikan, for example, would pay for power should the Swan Lake hydro project not come on line - what they would pay if they had to buy a diesel generator, install it and operate it.

Figuring a formula for avoided cost gets confusing, too. The price of diesel fuel has dropped, and the communities are arguing against paying premium prices for hydro power when over the next five years they could be getting bargain electrical rates burning diesel fuel. Charles Freeman, mayor of Ketchikan, said that HB 219 puts his city over the amount they would pay for diesel, but would give them predictable rates in the long term.

Ketchikan has commercial customers who need predictability, and Freeman is afraid they will opt for buying their own diesel generators which they can operate cheaper in the short run. In addition to short-term lower rates, private businesses can take advantage of investment tax credits, Freeman stated.

In spite of the brief confrontation between Taylor and Thompson, who represent communities with real problems, and Pourchot, who sees his job as fashioning a rate structure that is in the state's best interest, it seems as though negotiations will proceed. House Bill 219 will not move out of the Finance subcommittee headed by

(Continued on page 6)

COMMITTEE REPORT
HOUSE

(11)

FURTHER:

3/15/85

Date: 4-13-85

The Committee on FINANCE has had HB 219

"An Act relating to the applicability of the Alaska Public Utilities Commission Act to certain electric utilities; power development loans; and the energy program for Alaska."

under consideration and recommends:

☐ do pass

☐ do not pass

☐ do pass with attached amendments(s)

☒ replace with CS for HB 219 (Fin) ☒ same title
☐ new title
and recommends do pass

☐ AND attaches a "Letter of Intent" ☐ New Fiscal Note

☐ reports it back without recommendation ☒ Zero Fiscal Note Attached

☐ referred to the _____ Committee

MEMBERS SIGNING
DO PASS

Albert R. Adams
John P. Goggin
Don W. King
Ronald J. Jarmy
Earl Parnichot
Sam Carter
John P. Goggin
John P. Goggin

MEMBERS HAVING
OTHER RECOMMENDATIONS:

John P. Goggin
John P. Goggin
John P. Goggin
John P. Goggin
John P. Goggin
John P. Goggin

Albert R. Adams
CHAIRMAN

Alaska State Legislature



House of Representatives

REPRESENTATIVE
JOHN L. SUND

Box 6440
KETCHIKAN, ALASKA 99901
(907) 225-5552

WHILE IN JUNEAU
POUCH V
JUNEAU, ALASKA 99811
(907) 465-4919

CHAIR, HOUSE SPECIAL COMMITTEE ON LOANS
VICE-CHAIR, JUDICIARY COMMITTEE
MEMBER, SPECIAL COMMITTEE ON OIL AND GAS
MEMBER, RESOURCES COMMITTEE

4/22/85

MEMORANDUM

TO: Sen. Arliss Sturgulewski, Chair,
Senate Resources Committee

FROM: Rep. John Sund *JS*

RE: HB 219 "An act relating to the applicability of the Alaska Public Utilities Commission Act to certain electric utilities; power development loans; and the energy program for Alaska."

The purpose of this bill is to resolve the problems holding up four-dam-pool power sales agreements and to provide for payback of the \$196 million appropriation made last year to complete the hydroelectric projects. The Alaska Power Authority and the six communities served by the four dams have been negotiating power sales agreements for 2½ years without success. The goal is a long-term power sales agreement that provides affordable electricity for the communities and a maximum return on the state's investment.

\$210 million was appropriated last year; \$196 million has been spent to complete the dams and pay off short-term construction financing issued by the APA. This appropriation was structured as a loan from the Department of Commerce and Economic Development to the APA to be paid off through power sales from the project. AS 44.33.620 sets terms for the loan.

As in existing law, the Finance Committee Substitute does not set in law exact terms for the loan, nor does it set power rates. These are left open for further negotiation. The bill provides specific guidelines for resolving the issue under a plan developed by Gordon Harrison of the APA board.

The APA and the six communities report recent significant progress in power sales agreement negotiations; the plan they are now working with requires the passage of CSHB 219 (Fin). Action is required this session to permit sales agreements which will capture additional loads for the under-utilized hydroelectric capacity.

The bill is supported by both the APA and the four-dam-pool communities. Bob Heath, Executive Director of the APA and representatives of the communities are expected to testify before the Resources Committee.

Sectional analysis:

Section 1:

Sections 1 and 5, propose a change in law to allow two communities to get together for joint operation of a dam. The main purpose is to allow the Thomas Bay Power Authority to operate the Tyee Dam. Tyee serves two communities (Wrangell and Petersburg); Current law requires one or the other to operate the dam. This section corrects that by adding "electric operating entities established as an instrumentality of two or more public utilities owned and operated by a political subdivision of the state" to the APUC statutes. Like the communities, the 'joint operating entity' would not be subject to APUC regulation.

Section 2:

This section amends the loan terms for the Power Development Revolving Loan Fund (AS 44.33.620). This fund was created last session and the statutory loan terms give little direction to the APA. The added language sets clear guidelines for the agencies to work with. Deleted is the requirement that the loan terms be set considering market rates of interest.

Section 3 adds a definition: "initial project" means the four dams.

Section 4 adds a provision for power sales contract rate reopeners. This protects the state in times of inflation when the power sales rate could not provide sufficient loan repayment in real terms and protects the communities should the price of alternate power generation drop significantly. An important provision is added allowing an agreed schedule of wholesale power rates to be included in the contracts. This allows a contract to be reached through negotiation which will provide for certainty in power rates as needed by utility planners. This also will provide for a greater return to the state in debt service from the project.

Section 5 adds joint operating entities to the definition of "qualified utilities" which may purchase power from the APA. (See explanation of Section 1)

RETAIL RATES
(cents per kwh)

<u>Community</u>	<u>@ 200 kwh/month</u>	<u>@ 500 kwh/month</u>	<u>@ 700 kwh/month</u>
Copper Valley			
-Glenallen	23.5	20.1	18.8
-Valdez	21.3	16.0	14.7
Kodiak	19.0	18.1	17.5
Wrangell	19.1	16.3	15.7
Petersburg	13.9	11.7	11.2
Ketchikan	14.3	10.8	10.2

COMPONENTS OF THE RATES
(cents per kwh)

<u>Community</u>	<u>APA O&M</u>	<u>APA Debt Service</u>	<u>Other^{*/}</u>	<u>Total (@ 700 kwh/month)</u>
Copper Valley				
-Glenallen	2.76	2.64	13.4	18.8
-Valdez	2.76	2.64	9.3	14.7
Kodiak	2.00	2.64	12.86	17.5
Wrangell	4.59	2.64	8.47	15.7
Petersburg	4.59	2.64	3.97	11.2
Ketchikan	2.26	2.64	5.3	10.2

^{*/} "Other" includes distribution, administrative and general, reserve generation, and other generation (other hydro as well as diesel in the case of Ketchikan and Petersburg.)

Draft: April 23, 1985

SHORTCOMINGS OF PRICING APA POWER AS A PERCENTAGE OF AVOIDED COST

A. Problems for the purchasing utility (in the Alaskan context)^{*/}

1. Loss of potential loads: Some or all potential large new loads that could increase project utilization will be lost, because such loads demand a higher degree of certainty over longer periods. Many such loads will either be met with private generation or cogeneration (e.g., Wrangell Forest Products) or will be lost entirely (e.g., Phillips). In the cogeneration case, the utility may be required by law to purchase excess cogenerated power from the private party, thus reducing the utility's own purchases from the APA project. In the case of loads lost because the economic activity is relocated (e.g., to the Lower 48), the community loses not only employment and taxes, but also the "induced" loads, i.e., increases in other community loads resulting from the economic activity represented by the primary load.

2. Ratemaking and billing problems: The utility must make its retail rates prospectively, yet its power costs will become known only retrospectively. Matching costs to rates during each rate period (and keeping rates fairly predictable for consumers), always a chore, becomes significantly more difficult.

3. Added administrative costs: A fairly sophisticated formula is needed to calculate true avoided cost, and the values for each variable in the formula must be recalculated at frequent (e.g., monthly) intervals. This would create some administrative burden even if (a) diesel were the only alternative, and (b) disputes with APA over the proper value for each variable never arose. (It is also difficult to continue getting realistic quotes for a large volume of diesel once the utility begins buying reduced volumes.) In practice, the difficulties are even greater because (a) the formula must accommodate other alternatives (e.g., cogeneration) as such alternatives become available, and (b) disputes with the APA over the value of individual variables are likely.

^{*/} Such pricing works well in power "pools" in which a sophisticated computer controls the generators of many producers on an instantaneous central-dispatch basis. The computer is programed to minimize total generation costs at all times, based on each generator's fuel cost, efficiency, and maximum/minimum operating guides. Cost savings made possible by using Utility A's generator rather than Utility B's to serve a portion of Utility B's load are "split" (usually on a 50/50 basis) through use of a share-the-savings rate the computer charges to Utility B and credits to Utility A. The actual rate for each transaction, and each utility's costs and savings for any given period, are known at once, facilitating utility ratemaking and billing. Nothing similar exists in Alaska, nor could it exist in the Four Dam Pool context where (a) the communities are not electrically interconnected, and (b) APA power is intended to displace thermal generation completely for most days of the year.

4. Regulatory costs: For the cooperatives (Kodiak and Copper Valley), whose retail rates are regulated by the Alaska PUC, rate filings and rate cases will become more frequent, more complex, and more costly. If the past is a guide, the APUC may also require the co-ops to raise/lower retail rates to "track" the fluctuating wholesale cost of power to the co-op, thus producing fluctuating retail rates.

5. Planning problems: The search for alternative sources of power supply with more predictable long-term costs would be intensified and simultaneously complicated. Presumably the planning process would be biased (rationally) toward predictability, even if the price of predictability were that somewhat higher retail rates might result from the more predictable alternatives.

6. Uncertain impact on utility financing: It is not clear that a utility would be able to finance additions to its distribution system and/or its generating plant as easily or inexpensively as would otherwise be the case, since the utility's revenue stream and its ability to maintain required coverage ratios and reserves would be somewhat unpredictable.

B. Problems for the State of Alaska as the seller of power

1. Reduced revenue: Compared with long-term contracts under the terms of HB 219 pricing method, power sold on a percentage-of-avoided-cost basis is likely to produce less total revenue for the State, even if one assumes that loads are equal in both cases. But loads will actually be less (see ¶ A.1. above). The loss of potential large new loads that would have produced more revenue for the State would make the comparative revenue disadvantage to the State worse.

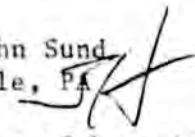
2. Increased revenue risk: This would take two forms. First, the State would take the entire risk of further downward movement in the price of diesel and the cost of alternative resources, whereas under HB 219 the communities would bear that risk entirely. Second, because the utilities would be free, over time, to switch wholly or partially to other sources of supply, and because the utilities would have an incentive to investigate and pursue such other sources, the State would face some risk of losing even the existing loads of the utilities, as well as utility load growth.

3. Risk of negative rate of return (failure to cover current costs): This simply indicates the extreme to which the State's additional risk could take it. Under HB 219, the State is assured that (a) O&M costs will be completely paid by the utilities, and (b) some positive return, in addition to return of the principal, will be earned on the State's loan. If wholesale rates are tied to actual avoided costs of the utilities, however, a sufficiently great drop in actual avoided costs would result in the APA failing to cover even its O&M costs. In less extreme cases, APA might cover its O&M costs but fail to earn sufficient revenue to repay the principal and/or interest on the loan.

4. Added administrative costs: Administering such a pricing system would be just as complex and labor-intensive for the APA as it would be for the utilities.

4/12/85

MEMORANDUM

TO: Rep. John Sund
FROM: J. Hartle, PA 

RE: Amendment to Subcommittee draft of HB 219

Here are some reasons for adding the section:

*Sec. 4. AS 44.33 is amended by adding a new section to read:

Sec. 44.33.625. RATE REOPENERS. A power sales agreement for the sale of power from the initial project financed under AS 44.33.610 may include among its provisions an agreed schedule of wholesale power rates notwithstanding the provisions of AS 44.83.398 but must include a provision for a rate reopener.

1. Will allow the present negotiations to continue.

Negotiations are presently moving forward under a plan from Gordon Harrison. His plan is to offer a wholesale power rate which combines debt service and O & M. The plan would offer the purchasers of power a certain rate per kwh, O&M would be taken out of that rate and whatever is left above O&M would go to debt service. This is not allowed under AS 44.83.398 which specifies that O&M and Debt service must be separated and debt service must be the same for all projects.

2. Will return more debt service to the state.

Per KWH, Tyee has the highest O&M rate; this rate is by itself almost equal to the cost of alternative sources of power. Therefore, if the "Harrison plan" is implemented, very little would be left over for debt service thus limiting the debt service rate that can be paid by the other projects as well (under 398). Other projects with lower O&M are, with this amendment, allowed to provide a greater return to the state for debt service.

3. It still leaves the rate open to negotiations.

The amendment only provides for an agreed schedule, it is silent as to what that rate will be. Under AS 44.83.398 there is no way to agree on a schedule - the rates must fluctuate with loads - if loads go down, rates go up, if loads go up, rates go down. This is the exact problem the communities are trying to get away from - certainty is more important than the actual rate itself; the amendment allows for agreement.

Bill may facilitate power sales dealings

The Associated Press

JUNEAU — House lawmakers passed a bill Tuesday that supporters say offers new hope to officials trying to negotiate power sales agreements between the Alaska Power Authority and the so-called "Four-Dam Pool" communities.

The measure, first sponsored by Rep. John Sund, D-Ketchikan, was sent to the Senate after a 33-to-4 vote in the House.

The communities — Ketchikan, Wrangell and Petersburg, Kodiak, and Valdez and Glennallen — are all served

by hydroelectric projects recently built in their back yards.

But municipal officials in those areas have been unable to reach long-term power agreements with the APA, fearing it will cost more to pay for hydroelectric power than to generate diesel-fueled power.

Officials from the communities currently are negotiating with the APA, trying to work out repayment schedules on a \$210 million loan set aside last year by lawmakers to offset part of the cost of the four projects.

Sund said his bill outlines "general policy direction" for both sides involved in the power-sales negotiations.

A key provision in the measure would release the APA from offering repayment agreements at current market rates. By setting lower interest rates on the loan, APA officials hope to offer the communities power at more affordable rates.

State lawmakers in the late 1970s put together a \$462.5 million, four-part hydroelectric project designed to make the state energy self-sufficient.

ANC - Daily News 4/17/85

Draft: April 23, 1985

SHORTCOMINGS OF PRICING APA POWER AS A PERCENTAGE OF AVOIDED COST

A. Problems for the purchasing utility (in the Alaskan context)*/

1. Loss of potential loads: Some or all potential large new loads that could increase project utilization will be lost, because such loads demand a higher degree of certainty over longer periods. Many such loads will either be met with private generation or cogeneration (e.g., Wrangell Forest Products) or will be lost entirely (e.g., Phillips). In the cogeneration case, the utility may be required by law to purchase ~~excess~~ cogenerated power from the private party, thus reducing the utility's own purchases from the APA project. In the case of loads lost because the economic activity is relocated (e.g., to the Lower 48), the community loses not only employment and taxes, but also the "induced" loads, i.e., increases in other community loads resulting from the economic activity represented by the primary load.

2. Ratemaking and billing problems: The utility must make its retail rates prospectively, yet its power costs will become known only retrospectively. Matching costs to rates during each rate period (and keeping rates fairly predictable for consumers), always a chore, becomes significantly more difficult.

3. Added administrative costs: A fairly sophisticated formula is needed to calculate true avoided cost, and the values for each variable in the formula must be recalculated at frequent (e.g., monthly) intervals. This would create some administrative burden even if (a) diesel were the only alternative, and (b) disputes with APA over the proper value for each variable never arose. (It is also difficult to continue getting realistic quotes for a large volume of diesel once the utility begins buying reduced volumes.) In practice, the difficulties are even greater because (a) the formula must accommodate other alternatives (e.g., cogeneration) as such alternatives become available, and (b) disputes with the APA over the value of individual variables are likely.

*/ Such pricing works well in power "pools" in which a sophisticated computer controls the generators of many producers on an instantaneous central-dispatch basis. The computer is programed to minimize total generation costs at all times, based on each generator's fuel cost, efficiency, and maximum/minimum operating guides. Cost savings made possible by using Utility A's generator rather than Utility B's to serve a portion of Utility B's load are "split" (usually on a 50/50 basis) through use of a share-the-savings rate the computer charges to Utility B and credits to Utility A. The actual rate for each transaction, and each utility's costs and savings for any given period, are known at once, facilitating utility ratemaking and billing. Nothing similar exists in Alaska, nor could it exist in the Four Dam Pool context where (a) the communities are not electrically interconnected, and (b) APA power is intended to displace thermal generation completely for most days of the year.

4. Added administrative costs: Administering such a pricing system would be just as complex and labor-intensive for the APA as it would be for the utilities.

4/12/85

MEMORANUDM

TO: Rep. John Sund
FROM: J. Hartle, PA 

RE: Amendment to Subcommittee draft of HB 219

Here are some reasons for adding the section:

*Sec. 4. AS 44.33 is amended by adding a new section to read:

Sec. 44.33.625. RATE REOPENERS. A power sales agreement for the sale of power from the initial project financed under AS 44.33.610 may include among its provisions an agreed schedule of wholesale power rates notwithstanding the provisions of AS 44.83.398 but must include a provision for a rate reopener.

1. Will allow the present negotiations to continue.

Negotiations are presently moving forward under a plan from Gordon Harrison. His plan is to offer a wholesale power rate which combines debt service and O & M. The plan would offer the purchasers of power a certain rate per kwh, O&M would be taken out of that rate and whatever is left above O&M would go to debt service. This is not allowed under AS 44.83.398 which specifies that O&M and Debt service must be separated and debt service must be the same for all projects.

2. Will return more debt service to the state.

Per KWH, Tyee has the highest O&M rate; this rate is by itself almost equal to the cost of alternative sources of power. Therefore, if the "Harrison plan" is implemented, very little would be left over for debt service thus limiting the debt service rate that can be paid by the other projects as well (under 398). Other projects with lower O&M are, with this amendment, allowed to provide a greater return to the state for debt service.

3. It still leaves the rate open to negotiations.

The amendment only provides for an agreed schedule, it is silent as to what that rate will be. Under AS 44.83.398 there is no way to agree on a schedule - the rates must fluctuate with loads - if loads go down, rates go up, if loads go up, rates go down. This is the exact problem the communities are trying to get away from - certainty is more important than the actual rate itself; the amendment allows for agreement.

4. Regulatory costs: For the cooperatives (Kodiak and Copper Valley), whose retail rates are regulated by the Alaska PUC, rate filings and rate cases will become more frequent, more complex, and more costly. If the past is a guide, the APUC may also require the co-ops to raise/lower retail rates to "track" the fluctuating wholesale cost of power to the co-op, thus producing fluctuating retail rates.

5. Planning problems: The search for alternative sources of power supply with more predictable long-term costs would be intensified and simultaneously complicated. Presumably the planning process would be biased (rationally) toward predictability, even if the price of predictability were that somewhat higher retail rates might result from the more predictable alternatives.

6. Uncertain impact on utility financing: It is not clear that a utility would be able to finance additions to its distribution system and/or its generating plant as easily or inexpensively as would otherwise be the case, since the utility's revenue stream and its ability to maintain required coverage ratios and reserves would be somewhat unpredictable.

B. Problems for the State of Alaska as the seller of power

1. Reduced revenue: Compared with long-term contracts under the terms of HB 219 pricing method, power sold on a percentage-of-avoided-cost basis is likely to produce less total revenue for the State, even if one assumes that loads are equal in both cases. But loads will actually be less (see ¶ A.1. above). The loss of potential large new loads that would have produced more revenue for the State would make the comparative revenue disadvantage to the State worse.

2. Increased revenue risk: This would take two forms. First, the State would take the entire risk of further downward movement in the price of diesel and the cost of alternative resources, whereas under HB 219 the communities would bear that risk entirely. Second, because the utilities would be free, over time, to switch wholly or partially to other sources of supply, and because the utilities would have an incentive to investigate and pursue such other sources, the State would face some risk of losing even the existing loads of the utilities, as well as utility load growth.

3. Risk of negative rate of return (failure to cover current costs): This simply indicates the extreme to which the State's additional risk could take it. Under HB 219, the State is assured that (a) O&M costs will be completely paid by the utilities, and (b) some positive return, in addition to return of the principal, will be earned on the State's loan. If wholesale rates are tied to actual avoided costs of the utilities, however, a sufficiently great drop in actual avoided costs would result in the APA failing to cover even its O&M costs. In less extreme cases, APA might cover its O&M costs but fail to earn sufficient revenue to repay the principal and/or interest on the loan.

Alaska State Legislature

Blue Copy

CO-CHAIRMAN
FINANCE COMMITTEE

907-465-3740

IAN FAIRIS
POUCH V
CAPITOL BUILDING
JUNEAU, ALASKA 99811

Senate

April 11, 1985

MEMORANDUM

TO: Senator Bettye Fahrenkamp, Chairman

FROM: Senator Jan Faiks *Jan Faiks*

SUBJECT: Background on Senate Bill 263, an Act relating to disqualification for certain state loan programs for failure to pay child support.

This bill will disqualify persons who have an overdue child support obligation from participating in certain state loan programs. Persons who are delinquent in their payments to the Child Support Enforcement Division of the Department of Revenue (CSED) will be prevented from receiving loans from any of the following programs:

<u>Section of Bill</u>	<u>Loan Program</u>
Section 1	Agricultural Loan Program
Sections 2 & 3	Alaska Student Loan Program
Section 4	Commercial Fishing Loan Program
Section 5	Alaska Housing Finance Corporation
Section 6	Veteran's Loan Assumption

Section 7	Mining Loan Program
Section 8	Housing Assistance Loan Program
Section 9	Alternative Technology and Energy Loan Program
Section 10	Residential Energy Conservation Loan Program

Delinquent child support is a monumental problem in Alaska. As of April 2 of this year, CSED has 7198 cases having a total arrearage balance of over \$30,000,000. The Division is now determining what portion of this debt is owed by loan recipients. Once this information is available, I will forward it to the committee.

The Division's files are computerized, and it can share information with loan agencies in three ways. Upon receiving a call from an agency, CSED can respond within minutes with a status report on a particular loan applicant. The Division can match computer tapes with any agency which has a system which is compatible with its IBM equipment. Finally, CSED sends a monthly statement to all absent parents which verifies their current obligation status. The parents can provide a copy of this statement to the lending agency when they file their loan applications, or upon request, CSED can verify their obligations in writing.

Support payments are a debt that is owed to the children of Alaska. When payments are not made, our public assistance programs must often pick up the cost of maintaining our children's health, safety, and comfort. To alleviate hardship and reduce our public welfare costs, I ask you to act favorably on this bill.

Initial Loan Principal \$196,000,000
 Loan Interest Rate 4.00%
 Loan Term (Years) 40
 Total Energy Capability (GW.h/yr) 378,607

Ramp Period (Years) 5
 D. S. Entry Rate (c/kW.h) 2.00
 Entry Rate Annual Escalation 6.05%
 D. S. Rate Ceiling (c/kW.h) 2.682940

4-DAM POOL
 LOAN REPAYMENT SCHEDULE
 CASE 4-A

Year	DEBT SERV COMPONENT (c/kW.h)	PAYMENT FROM ELEC REVENUE	ENERGY SALES (GW.h)	UTILIZ- ATION	CURRENT PRINCIPAL BALANCE	INTEREST DUE FROM 4-DAM POOL	ACTUAL PAY- MENT LESS INT. DUE	PRINCIPAL REPAYMENT DEFERRED	DEFERRED PRINCIPAL BALANCE
1985	2.00	3,104,120	155,286	40.99%	196,000,000	3,213,926	(109,806)	1,217,061	1,217,061
1986	2.12	3,849,550	181,496	47.94%	194,892,746	3,755,990	92,561	1,116,790	2,333,851
1987	2.25	4,306,077	191,437	50.56%	193,683,395	3,954,721	351,356	1,102,885	3,436,735
1988	2.39	4,751,347	199,181	52.61%	192,229,154	4,095,758	655,589	1,099,544	4,535,279
1989	2.53	5,212,398	206,042	54.42%	190,474,021	4,205,259	1,007,139	1,099,799	5,636,078
1990	2.68	5,714,288	212,994	56.25%	188,367,283	4,300,727	1,413,561	1,097,712	6,733,790
1991	2.68	5,877,217	219,067	57.86%	185,855,810	4,361,163	1,516,054	1,099,757	7,833,547
1992	2.68	6,087,552	226,907	59.93%	183,239,999	4,449,374	1,638,178	1,087,542	8,921,089
1993	2.68	6,336,412	236,183	62.38%	180,514,278	4,557,384	1,779,108	1,061,884	9,982,973
1994	2.68	6,596,916	245,893	64.35%	177,673,286	4,664,816	1,932,100	1,029,868	11,012,841
1995	2.68	6,853,020	255,439	67.47%	174,712,118	4,760,231	2,092,789	993,250	12,005,291
1996	2.68	6,990,569	260,566	68.82%	171,625,080	4,767,619	2,222,950	989,981	12,995,272
1997	2.68	7,133,591	265,897	70.23%	168,413,149	4,771,637	2,361,954	983,082	13,978,354
1998	2.68	7,283,428	271,482	71.71%	165,068,112	4,772,574	2,510,854	971,743	14,950,097
1999	2.68	7,440,669	277,343	73.25%	161,585,516	4,770,144	2,670,525	955,320	15,905,417
2000	2.68	7,605,529	283,488	74.88%	157,959,671	4,763,757	2,841,772	933,243	16,838,660
2001	2.68	7,732,481	288,220	76.13%	154,184,656	4,725,569	3,006,912	922,268	17,760,948
2002	2.68	7,781,390	290,043	76.61%	150,255,456	4,633,629	3,147,761	939,834	18,700,782
2003	2.68	7,831,907	291,926	77.11%	146,167,861	4,536,187	3,295,720	956,646	19,657,428
2004	2.68	7,884,572	293,889	77.62%	141,915,495	4,433,170	3,451,401	972,381	20,629,809
2005	2.68	7,939,463	295,935	78.16%	137,491,713	4,324,205	3,615,257	986,853	21,616,662
2006	2.68	7,996,661	298,067	78.73%	132,889,602	4,208,891	3,787,770	999,859	22,616,521
2007	2.68	8,056,300	300,290	79.31%	128,101,973	4,086,822	3,969,478	1,011,153	23,627,674
2008	2.68	8,118,488	302,608	79.93%	123,121,342	3,957,546	4,160,942	1,020,474	24,648,147
2009	2.68	8,183,279	305,023	80.56%	117,939,925	3,820,549	4,362,730	1,027,568	25,675,716
2010	2.68	8,250,833	307,541	81.23%	112,549,627	3,675,330	4,575,503	1,032,102	26,707,818
2011	2.68	8,321,231	310,165	81.92%	106,942,022	3,521,308	4,799,922	1,033,753	27,741,570
2012	2.68	8,394,633	312,901	82.55%	101,108,347	3,357,895	5,036,738	1,032,125	28,773,696
2013	2.68	8,471,148	315,753	83.40%	95,039,483	3,184,428	5,286,719	1,026,818	29,800,514
2014	2.68	8,550,882	318,725	84.18%	88,725,946	3,000,199	5,550,683	1,017,397	30,817,911
2015	2.68	8,634,023	321,824	85.00%	82,157,866	2,804,469	5,829,554	1,003,334	31,821,245
2016	2.68	8,720,652	325,053	85.85%	75,324,978	2,596,405	6,124,247	984,130	32,805,376
2017	2.68	8,810,983	328,420	86.74%	68,216,601	2,375,152	6,435,831	959,147	33,764,523
2018	2.68	8,905,124	331,929	87.67%	60,821,622	2,139,753	6,765,371	927,769	34,692,291
2019	2.68	9,003,262	335,587	88.64%	53,128,483	1,889,200	7,114,062	889,265	35,581,556
2020	2.68	9,105,559	339,400	89.64%	45,125,156	1,622,397	7,483,162	842,864	36,424,421
2021	2.68	9,212,202	343,375	90.69%	36,799,130	1,338,166	7,874,035	787,707	37,212,128
2022	2.68	9,323,352	347,518	91.79%	28,137,388	1,035,234	8,288,118	722,882	37,935,010
2023	2.68	9,439,197	351,836	92.93%	19,126,387	712,229	8,726,968	647,379	38,582,389
2024	2.68	9,559,978	356,338	94.12%	9,752,841	367,680	9,192,299	560,052	39,142,441
2025	1.34	4,825,870	361,030	95.36%	(310)	1,565,685	3,260,185		35,881,945
2026	1.32	4,825,870	365,921	96.65%		1,435,278	3,390,592		32,491,353
2027	1.30	4,825,870	371,019	98.00%		1,299,654	3,526,216		28,965,137
2028	1.28	4,825,870	376,334	99.40%		1,158,605	3,667,265		25,297,872
2029	1.27	4,825,870	378,607	100.00%		1,011,915	3,813,955		21,483,917
2030	1.27	4,825,870	378,607	100.00%		859,357	3,966,514		17,517,403
2031	1.27	4,825,870	378,607	100.00%		700,696	4,125,174		13,391,229
2032	1.27	4,825,870	378,607	100.00%		535,689	4,290,181		9,102,048
2033	1.27	4,825,870	378,607	100.00%		364,082	4,461,788		4,640,260
2034	1.27	4,825,870	378,607	100.00%		185,610	4,640,260		(0)
TOTALS		347,620,986	15,046,933			151,628,986	196,000,000	39,142,441	

1984 SHCA NSD Forecast^{*}
World Oil Price -- "Marker Crude"
 (\$1983/bbl)

<u>Year</u>	<u>Forecast</u>
1985	\$ 26.30
1986	26.30
1987	26.30
1988	26.30
1989	27.09
1990	27.90
1995	32.50
2000	40.00
2005	50.00
2010	60.00
2020	80.00
2030	90.00
2040	100.00
2050	110.00

* Sherman H. Clark Associates "no supply disruption" forecast. Extracted from "Alaska Power Authority Comments on the Federal Energy Regulatory Commission Draft Environmental Impact Statement of May 1984, Volume 3, Appendix I"; August 1984; p. 2-6.

Alaska Department of Revenue Mean Forecast
World Oil Price -- Saudi Medium
(1983/bbl)

<u>Fiscal Year</u>	<u>December 1984 Forecast</u>
1985	\$25.70
1986	24.36
1987	23.24
1988	22.81
1989	22.71
1990	23.08
1991	22.99
1992	23.13
1993	23.28
1994	23.43
1995	23.60
1996	23.76
1997	24.16
1998	24.56
1999	24.99
2000	25.42
2001	25.86

COMPARISON OF HB 219 AND "DIESEL ALTERNATIVE"

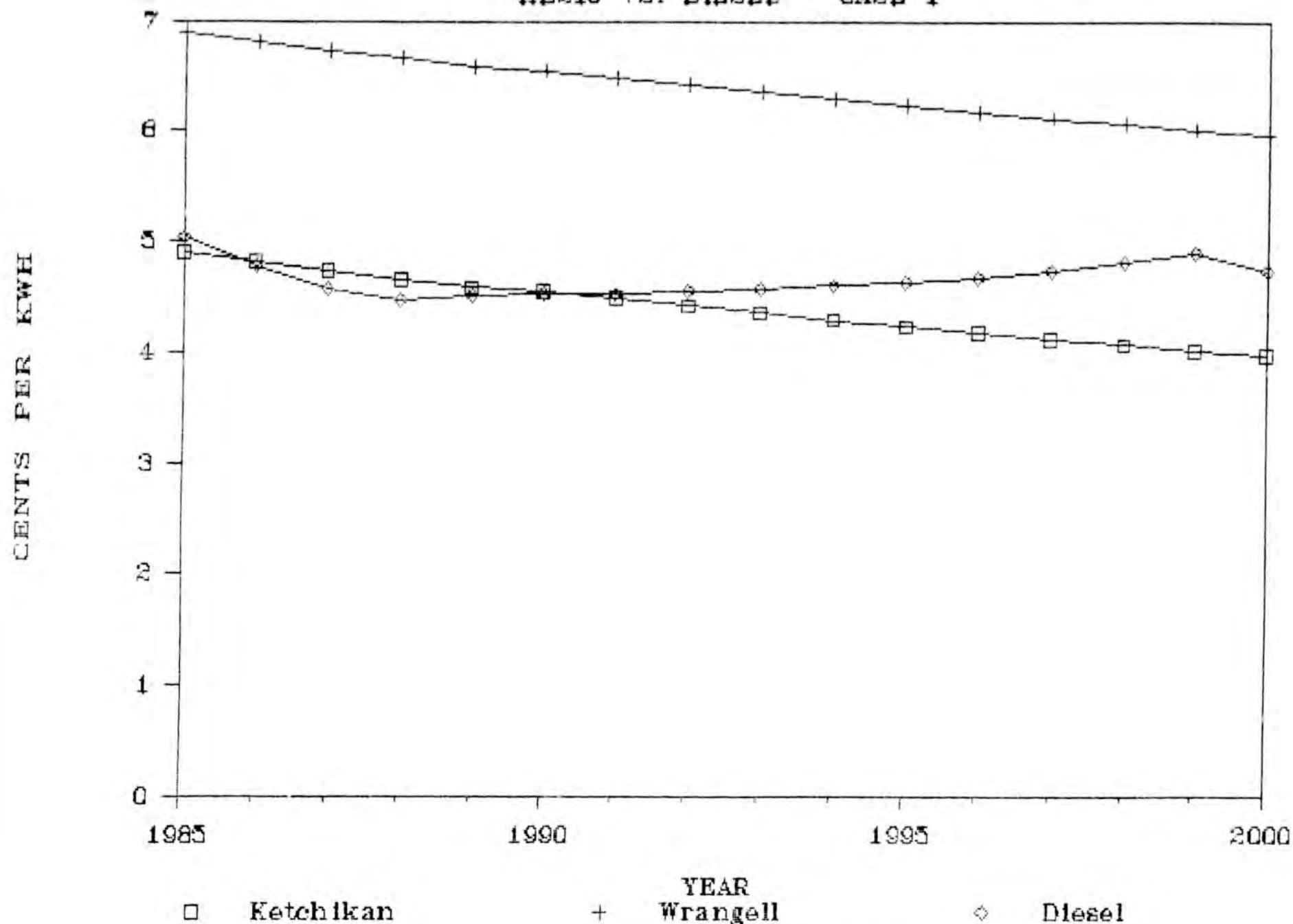
The attached tables and graphs present a rough calculation of projected wholesale power rates and amounts returned to the state by the City of Ketchikan under two alternative arrangements for purchasing power out of the Swan Lake Hydroelectric Project. The first is the result obtained under HB 219, now pending in the House. The second assumes that power from the Project is priced according to what the City would save by not burning diesel fuel.

Several assumptions need to be clarified. First, these are wholesale power costs from the Project. The City has other costs and other resources which bring its current retail rates up over 10¢ per kWh. Future resources will need to be acquired under circumstances far different from those of the past. Second, it is not certain that diesel generation will be the only alternative open to the City in the future. Cogeneration, alternative fuels and technologies, and imported power could all play a role. Thus the diesel alternative analyzed here may not be the lowest cost alternative. Third, we have computed the avoided cost of diesel generation -- i.e., only the savings that would actually be realized by taking power from the Project. Because the City's diesel generators would need to be maintained in reserve, only fuel and lubrication costs would be saved. Finally, we have simplified the "ramp" that is authorized but not required by HB 219. This reflects a recognition that the wholesale power rate under the Interim Power Sales Agreement is currently close to the fixed rate under HB 219.

The numbers presented here are highly sensitive to inflation, changes in the cost of fuel, and changes in load. Case 1 assumes no inflation and modest load growth. It shows that HB 219 would produce insignificant savings over diesel in 1985, and would result in slightly higher costs in the years 1986-1990. Savings from HB 219 would largely be realized in the years from 1990 and later. Case 2 shows what happens if load growth does not materialize. In this case, the diesel alternative remains less expensive throughout the entire 15 year period. This reflects the fact that under HB 219, the City bears the risk of operations and maintenance. If loads, fuel prices, and other prices fall steeply over this period, HB 219 would become relatively more burdensome to the City, whereas if these components rise, the bill becomes more attractive.

WHOLESALE POWER COST ALTERNATIVES

HB219 VS. DIESEL - CASE 1



71% Diesel

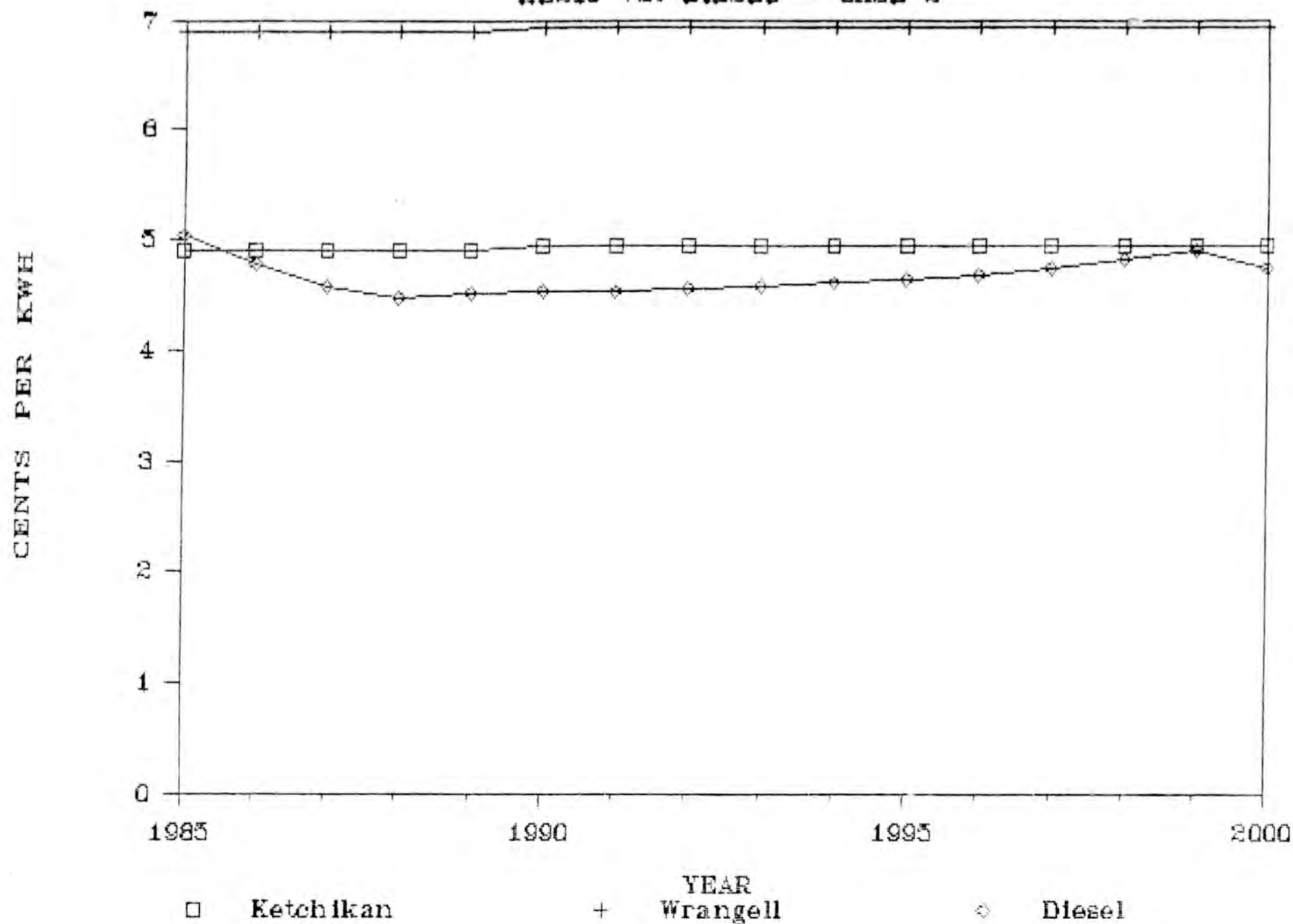
14.53 kWh/gallon diesel

NO Inflation

Load growth "Normal" (APA)

WHOLESALE POWER COST ALTERNATIVES

HB219 VS. DIESEL - CASE 2



no load growth

WHOLESALE POWER COST COMPARISON
Swan Lake Hydroelectric Project
Ketchikan Public Utilities Diesel Generation
March 5, 1985

PAGE 1 OF 5

C A S E 2

	1985	1986	1987	1988	1989	1990	1991	1992
Swan Lake Generation MWH	49,000	49,000	49,000	49,000	49,000	49,000	49,000	49,000
HB 219 ALTERNATIVE:								
O & M Cost (Dollars)	1,107,400	1,107,400	1,107,400	1,107,400	1,107,400	1,107,400	1,107,400	1,107,400
Debt Service (Cents/KWH)	2.64	2.64	2.64	2.64	2.64	2.68	2.68	2.68
Debt Service (Dollars)	1,293,600	1,293,600	1,293,600	1,293,600	1,293,600	1,313,200	1,313,200	1,313,200
TOTAL - HB 219 ALTERNATIVE	2,401,000	2,401,000	2,401,000	2,401,000	2,401,000	2,420,600	2,420,600	2,420,600
HB 219 ALTERNATIVE (Cents/KWH)	4.90	4.90	4.90	4.90	4.90	4.94	4.94	4.94
DIESEL ALTERNATIVE:								
Fuel	2,394,357	2,269,850	2,164,498	2,114,217	2,140,555	2,150,132	2,142,949	2,154,921
Lube Oil	73,500	73,500	73,500	73,500	73,500	73,500	73,500	73,500
TOTAL - DIESEL ALTERNATIVE	2,467,857	2,343,350	2,237,998	2,187,717	2,214,055	2,223,632	2,216,449	2,228,421
DIESEL ALTERNATIVE (Cents/KWH)	5.04	4.78	4.57	4.46	4.52	4.54	4.52	4.55
TOTAL DOLLARS RETURNED TO STATE	1,360,457	1,235,950	1,130,598	1,080,317	1,106,655	1,116,232	1,109,049	1,121,021

=====

ASSUMPTIONS: (CASE 2)

Inflation:	1.0000
Diesel (1985 Values):	
Fuel (Cents/Gallon)	71.0000
KWH per Gallon of Diesel	14.5300

WHOLESALE POWER COST COMPARISON
Swan Lake Hydroelectric Project
Ketchikan Public Utilities Diesel Generation
March 5, 1985

PAGE 2 OF 5

C A S E 2

	1993	1994	1995	1996	1997	1998	1999	2000
Swan Lake Generation MWH	49,000	49,000	49,000	49,000	49,000	49,000	49,000	49,000
HB 219 ALTERNATIVE:								
O & M Cost (Dollars)	1,107,400	1,107,400	1,107,400	1,107,400	1,107,400	1,107,400	1,107,400	1,107,400
Debt Service (Cents/KWH)	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68
Debt Service (Dollars)	1,313,200	1,313,200	1,313,200	1,313,200	1,313,200	1,313,200	1,313,200	1,313,200
TOTAL - HB 219 ALTERNATIVE	2,420,600	2,420,600	2,420,600	2,420,600	2,420,600	2,420,600	2,420,600	2,420,600
HB 219 ALTERNATIVE (Cents/KWH)	4.94	4.94	4.94	4.94	4.94	4.94	4.94	4.94
DIESEL ALTERNATIVE:								
Fuel	2,169,287	2,183,653	2,198,019	2,214,780	2,250,695	2,289,005	2,327,315	2,248,301
Lube Oil	73,500	73,500	73,500	73,500	73,500	73,500	73,500	73,500
TOTAL - DIESEL ALTERNATIVE	2,242,787	2,257,153	2,271,519	2,288,280	2,324,195	2,362,505	2,400,815	2,321,801
DIESEL ALTERNATIVE (Cents/KWH)	4.58	4.61	4.64	4.67	4.74	4.82	4.90	4.74
TOTAL DOLLARS RETURNED TO STATE	1,135,387	1,149,753	1,164,119	1,180,880	1,216,795	1,255,105	1,293,415	1,214,401

WHOLESALE POWER COST COMPARISON
Swan Lake Hydroelectric Project
Ketchikan Public Utilities Diesel Generation
March 5, 1985
C A S E 1

PAGE 1 OF 5

	1985	1986	1987	1988	1989	1990	1991	1992
Swan Lake Generation MWH	49,000	50,862	52,795	54,801	56,883	59,045	61,289	63,618
HB 219 ALTERNATIVE:								
O & M Cost (Dollars)	1,107,400	1,107,400	1,107,400	1,107,400	1,107,400	1,107,400	1,107,400	1,107,400
Debt Service (Cents/KWH)	2.64	2.64	2.64	2.64	2.64	2.68	2.68	2.68
Debt Service (Dollars)	1,293,600	1,342,757	1,393,782	1,446,745	1,501,722	1,582,405	1,642,536	1,704,953
TOTAL - HB 219 ALTERNATIVE	2,401,000	2,450,157	2,501,182	2,554,145	2,609,122	2,689,805	2,749,936	2,812,353
HB 219 ALTERNATIVE (Cents/KWh)	4.90	4.82	4.74	4.66	4.59	4.56	4.49	4.42
DIESEL ALTERNATIVE:								
Fuel	2,394,357	2,356,104	2,332,126	2,364,512	2,484,939	2,590,908	2,680,378	2,797,775
Lube Oil	73,500	76,293	79,192	82,201	85,325	88,567	91,933	95,426
TOTAL - DIESEL ALTERNATIVE	2,467,857	2,432,397	2,411,318	2,446,714	2,570,264	2,679,475	2,772,311	2,893,202
DIESEL ALTERNATIVE (Cents/KWH)	5.04	4.78	4.57	4.46	4.52	4.54	4.52	4.55
TOTAL DOLLARS RETURNED TO STATE	1,360,457	1,324,997	1,303,918	1,339,314	1,462,864	1,572,075	1,664,911	1,785,802

=====

ASSUMPTIONS:

(CASE 1)

Inflation: 1.0000

Diesel (1985 Values):

Fuel (Cents/Gallon) 71.0000

KWH per Gallon of Diesel 14.5300

WHOLESALE POWER COST COMPARISON
Swan Lake Hydroelectric Project
Ketchikan Public Utilities Diesel Generation
March 5, 1985
C A S E 1

PAGE 2 OF 5

	1993	1994	1995	1996	1997	1998	1999	2000
Swan Lake Generation MWH	66,035	68,544	71,149	73,853	76,659	79,572	82,596	85,735
HB 219 ALTERNATIVE:								
O & M Cost (Dollars)	1,107,400	1,107,400	1,107,400	1,107,400	1,107,400	1,107,400	1,107,400	1,107,400
Debt Service (Cents/KWH)	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68
Debt Service (Dollars)	1,769,741	1,836,991	1,906,797	1,979,255	2,054,467	2,132,536	2,213,573	2,297,689
TOTAL - HB 219 ALTERNATIVE	2,877,141	2,944,391	3,014,197	3,086,655	3,161,867	3,239,936	3,320,973	3,405,089
HB 219 ALTERNATIVE (Cents/KWh)	4.36	4.30	4.24	4.18	4.12	4.07	4.02	3.97
DIESEL ALTERNATIVE:								
Fuel	2,923,451	3,054,639	3,191,575	3,338,116	3,521,153	3,717,169	3,922,997	3,933,822
Lube Oil	99,053	102,817	106,724	110,779	114,989	119,358	123,894	128,602
TOTAL - DIESEL ALTERNATIVE	3,022,504	3,157,455	3,298,299	3,448,895	3,636,142	3,836,527	4,046,891	4,062,424
DIESEL ALTERNATIVE (Cents/KWH)	4.58	4.61	4.64	4.67	4.74	4.82	4.90	4.74
TOTAL DOLLARS RETURNED TO STATE	1,915,104	2,050,055	2,190,899	2,341,495	2,528,742	2,729,127	2,939,491	2,955,024

RETAIL RATES
(cents per kwh)

<u>Community</u>	<u>@ 200 kwh/month</u>	<u>@ 500 kwh/month</u>	<u>@ 700 kwh/month</u>
Copper Valley			
-Glenallen	23.5	20.1	18.8
-Valdez	21.3	16.0	14.7
Kodiak	19.0	18.1	17.5
Wrangell	19.1	16.3	15.7
Petersburg	13.9	11.7	11.2
Ketchikan	14.3	10.8	10.2

COMPONENTS OF THE RATES
(cents per kwh)

<u>Community</u>	<u>APA O&M</u>	<u>APA Debt Service</u>	<u>Other^{*/}</u>	<u>Total (@ 700 kwh/month)</u>
Copper Valley				
-Glenallen	2.76	2.64	13.4	18.8
-Valdez	2.76	2.64	9.3	14.7
Kodiak	2.00	2.64	12.86	17.5
Wrangell	4.59	2.64	8.47	15.7
Petersburg	4.59	2.64	3.97	11.2
Ketchikan	2.26	2.64	5.3	10.2

^{*/} "Other" includes distribution, administrative and general, reserve generation, and other generation (other hydro as well as diesel in the case of Ketchikan and Petersburg.)

SHORTCOMINGS OF PRICING APA POWER AS A PERCENTAGE OF AVOIDED COSTA. Problems for the purchasing utility (in the Alaskan context)^{*/}

1. Loss of potential loads: Some or all potential large new loads that could increase project utilization will be lost, because such loads demand a higher degree of certainty over longer periods. Many such loads will either be met with private generation or cogeneration (e.g., Wrangell Forest Products) or will be lost entirely (e.g., Phillips). In the cogeneration case, the utility may be required by law to purchase excess cogenerated power from the private party, thus reducing the utility's own purchases from the APA project. In the case of loads lost because the economic activity is relocated (e.g., to the Lower 48), the community loses not only employment and taxes, but also the "induced" loads, i.e., increases in other community loads resulting from the economic activity represented by the primary load.

2. Ratemaking and billing problems: The utility must make its retail rates prospectively, yet its power costs will become known only retrospectively. Matching costs to rates during each rate period (and keeping rates fairly predictable for consumers), always a chore, becomes significantly more difficult.

3. Added administrative costs: A fairly sophisticated formula is needed to calculate true avoided cost, and the values for each variable in the formula must be recalculated at frequent (e.g., monthly) intervals. This would create some administrative burden even if (a) diesel were the only alternative, and (b) disputes with APA over the proper value for each variable never arose. (It is also difficult to continue getting realistic quotes for a large volume of diesel once the utility begins buying reduced volumes.) In practice, the difficulties are even greater because (a) the formula must accommodate other alternatives (e.g., cogeneration) as such alternatives become available, and (b) disputes with the APA over the value of individual variables are likely.

^{*/} Such pricing works well in power "pools" in which a sophisticated computer controls the generators of many producers on an instantaneous central-dispatch basis. The computer is programed to minimize total generation costs at all times, based on each generator's fuel cost, efficiency, and maximum/minimum operating guides. Cost savings made possible by using Utility A's generator rather than Utility B's to serve a portion of Utility B's load are "split" (usually on a 50/50 basis) through use of a share-the-savings rate the computer charges to Utility B and credits to Utility A. The actual rate for each transaction, and each utility's costs and savings for any given period, are known at once, facilitating utility ratemaking and billing. Nothing similar exists in Alaska, nor could it exist in the Four Dam Pool context where (a) the communities are not electrically interconnected, and (b) APA power is intended to displace thermal generation completely for most days of the year.

4. Regulatory costs: For the cooperatives (Kodiak and Copper Valley), whose retail rates are regulated by the Alaska PUC, rate filings and rate cases will become more frequent, more complex, and more costly. If the past is a guide, the APUC may also require the co-ops to raise/lower retail rates to "track" the fluctuating wholesale cost of power to the co-op, thus producing fluctuating retail rates.

5. Planning problems: The search for alternative sources of power supply with more predictable long-term costs would be intensified and simultaneously complicated. Presumably the planning process would be biased (rationally) toward predictability, even if the price of predictability were that somewhat higher retail rates might result from the more predictable alternatives.

6. Uncertain impact on utility financing: It is not clear that a utility would be able to finance additions to its distribution system and/or its generating plant as easily or inexpensively as would otherwise be the case, since the utility's revenue stream and its ability to maintain required coverage ratios and reserves would be somewhat unpredictable.

B. Problems for the State of Alaska as the seller of power

1. Reduced revenue: Compared with long-term contracts under the terms of HB 219 pricing method, power sold on a percentage-of-avoided-cost basis is likely to produce less total revenue for the State, even if one assumes that loads are equal in both cases. But loads will actually be less (see "A.1. above"). The loss of potential large new loads that would have produced more revenue for the State would make the comparative revenue disadvantage to the State worse.

2. Increased revenue risk: This would take two forms. First, the State would take the entire risk of further downward movement in the price of diesel and the cost of alternative resources, whereas under HB 219 the communities would bear that risk entirely. Second, because the utilities would be free, over time, to switch wholly or partially to other sources of supply, and because the utilities would have an incentive to investigate and pursue such other sources, the State would face some risk of losing even the existing loads of the utilities, as well as utility load growth.

3. Risk of negative rate of return (failure to cover current costs): This simply indicates the extreme to which the State's additional risk could take it. Under HB 219, the State is assured that (a) O&M costs will be completely paid by the utilities, and (b) some positive return, in addition to return of the principal, will be earned on the State's loan. If wholesale rates are tied to actual avoided costs of the utilities, however, a sufficiently great drop in actual avoided costs would result in the APA failing to cover even its O&M costs. In less extreme cases, APA might cover its O&M costs but fail to earn sufficient revenue to repay the principal and/or interest on the loan.

4. Added administrative costs: Administering such a pricing system would be just as complex and labor-intensive for the APA as it would be for the utilities.

May 11, 1985

The Honorable Jan Faiks, Chair
Senate Finance Committee
Pouch V
Juneau, Alaska 99811

Dear Madam Chair:

My name is Jim Franzel. I am a member of the Petersburg City Council and it is my signature that appears on the Four Dam Pool/APA memorandum of understanding, dated May 8, 1985. I would like to briefly comment on several items, mostly related to the M.O.U., for the record.

(1) I believe that Petersburg would have preferred not to have a rate reopener, but if we must have one, we will be negotiating for some tight limitations.

(2) The mention of Bradley Lake in the M.O.U. has been difficult to assess in the limited time we have had to work with it. Comparing the APA forecast loads and projected project construction costs for Bradley Lake versus the Four Dam Pool projects, it looks like the Four Dam Pool will have higher electric rates. I want to emphasize that, since Bradley Lake has not been constructed, it is my understanding that if there are construction cost overruns (as there were with Tyee,) the Petersburg rate payers will not eventually be penalized for something that isn't their fault.

(3) If HB 219 becomes law, the Four Dam Pool communities will have among the most expensive residential electrical rates in Alaska at present. I think this will be a concern to the voters of Petersburg.

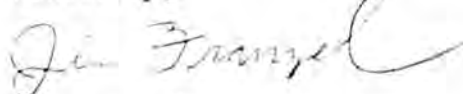
(4) The Petersburg City Council intends to put the negotiated contract to a vote of the people.

I would like to express that I feel we have made significant progress with the M.O.U. agreement. However, we still have a long way to go.

I pledge that I will support the M.O.U. to my governing body.

Finally, I think that it is to everyone's advantage to settle this issue. Thank You.

Sincerely,



Jim Franzel
Petersburg City Council

Alaska State Legislature



House of Representatives

REPRESENTATIVE
JOHN L. SUND

Box 8440
KETCHIKAN, ALASKA 99901
(907) 225-5552

WHILE IN JUNEAU
POUCH V
JUNEAU, ALASKA 99811
(907) 465-4919

CHAIR, HOUSE SPECIAL COMMITTEE ON LOANS
VICE-CHAIR, JUDICIARY COMMITTEE
MEMBER, SPECIAL COMMITTEE ON OIL AND GAS
MEMBER, RESOURCES COMMITTEE

5/10/85

MEMORANDUM

TO: Sen. Jan Faiks, Co-Chair
Sen. John Sackett, Co-Chair
Senate Finance Committee
Sen Dick Eliason
Sen. Frank Ferguson
Sen. Paul Fischer
Sen. Rick Halford
Sen. Jay Kerttula

FROM: Rep. John Sund

RE: HB 219 "An act relating to the applicability of the Alaska
Public Utilities Commission Act to certain electric utilities;
power development loans; and the energy program for Alaska."

Attached please find a package of backup information on HB 219, the
four-dam-pool bill. Please let me know if there is any further
information I can provide you.

The package contains:

- The Finance Committee Substitute for the bill
- A Memorandum of Understanding dated May 8, 1985
- Schedule of debt service charges for the project
- Schedule of retail electric rates
- Memo to Senate Resources with sectional analysis HB 219
- Spreadsheet of debt repayment

Offered: 4/14/85
Referred: Rules

Original sponsor: House Special Committee
on State Loans

1 IN THE HOUSE

BY THE FINANCE COMMITTEE

2

CS FOR HOUSE BILL NO. 219 (Finance)

3

IN THE LEGISLATURE OF THE STATE OF ALASKA

4

FOURTEENTH LEGISLATURE - FIRST SESSION

5

A BILL

6

For an Act entitled: "An Act relating to the applicability of the Alaska
Public Utilities Commission Act to certain electric
utilities; power development loans; and the energy
program for Alaska."

9

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

11 * Section 1. AS 42.05.711(b) is amended to read:

12

(b) Public utilities owned and operated by a political subdivi-
sion of the state and electric operating entities established as an
instrumentality of two or more public utilities owned and operated by
a political subdivision of the state, none of whose utilities is in
competition with any other utility, are exempt from the provisions of
this chapter, other than the provisions of AS 42.05.221 - 42.05.281,
unless the owner and operator elects to be subject to all provisions
of this chapter.

19

20 * Sec. 2. AS 44.33.620(a) is amended to read:

21

(a) A loan from the fund shall [MUST] be repaid in accordance
with the terms that the department determines to be appropriate. In
establishing the terms, including provision for a return to the state
of an amount in excess of the principal amount of the loan, the de-
partment shall consider the revenue that the authority could reason-
ably derive from the sale of power from the projects based upon

26

27

28

29

(1) [THE MARKET RATE OF INTEREST FOR A LOAN OF COMPARABLE
SIZE AND DURATION AT THE TIME THE LOAN IS MADE; AND

(2)] the [ESTIMATED] costs, at the time the power sales

1 agreement is initially negotiated or renegotiated, of alternative
2 sources of energy generation for utilities purchasing power from a
3 project financed with a loan from the fund;

4 (2) the effect of the loan terms on the wholesale power
5 costs to all utilities purchasing power from the initial project;

6 (3) the long-term benefits to consumers and communities of
7 stable wholesale power costs;

8 (4) the affordability of initial wholesale power costs that
9 result from the loan terms with utilities purchasing power from the
10 initial project;

11 (5) increasing repayment, not to exceed five years, of debt
12 service payment per kilowatt hour gradually over the initial period of
13 a loan repayment schedule to the extent necessary to avoid significant
14 rate increases to the consumer;

15 (6) the existing excess capacity of power projects; and

16 (7) the effects of increased capacity utilization, infla-
17 tion, and alternative energy production costs over the life of the
18 initial project.

19 * Sec. 3. AS 44.33.620 is amended by adding a new subsection to read:

20 (d) In (a) of this section "initial project" means the project
21 described in AS 44.83.398(a).

22 * Sec. 4. AS 44.33 is amended by adding a new section to read:

23 Sec. 44.33.625. RATE REOPENERS. A power sales agreement for the
24 sale of power from the initial project, as described in AS 44.83.-
25 398(a), financed with a loan under AS 44.33.610 may include among its
26 provisions an agreed schedule of wholesale power rates notwithstanding
27 the provisions of AS 44.83.398, but must include a provision for a
28 rate reopener.

29 * Sec. 5. AS 44.83.425(5) is amended to read:

1 (5) "qualified utility" means an electric utility or an
2 electric operating entity established as an instrumentality of two or
3 more electric utilities [THAT IS] certified by the Alaska Public
4 Utilities Commission to serve all or part of a market area that is
5 served or will be served by the power project, [AND] that the author-
6 ity determines is capable of operating and maintaining the power
7 project.

MEMORANDUM OF UNDERSTANDING

Between the Alaska Power Authority
and
Representatives of the Four Dam Pool Communities
governing
Power Sales Contracts for the Four Dam Pool

Representatives of the APA and the Four Dam Pool utilities (Ketchikan, Kodiak, Copper Valley, Wrangell, and Petersburg) have reached agreement in principle on the terms and conditions of a power sales contract for the sale of power from the Solomon Gulch, Swan Lake, Lake Tyee, and Terror Lake hydroelectric projects (the "Initial Project"). Although the specific details of such a contract must still be resolved and drafted, the undersigned representatives hereby agree to recommend to their governing bodies the approval of power sales contracts embodying, among other things, the principles set forth in this Memorandum.

1. The Alaska Power Authority ("APA") and the purchasing utilities of the Four-Dam Pool communities ("Purchasing Utilities") agree to enter into a power sales agreement that will run for 50 years, subject to periodic renegotiations and other conditions set forth below.
2. At the end of the contract period, there will be no debt service component of the wholesale rate charged by the APA for power from the four projects. Debt service payments that may be required to pay for additions and expansions of the four projects that are made subsequent to the execution of these agreements will be governed by future agreements.
3. The Purchasing Utilities agree to pay a wholesale rate for energy purchased from the APA that is generated by the four projects that has a debt service component, and a component relevant to all other annual costs.
4. The annual costs exclusive of the debt service component shall include costs of on-site operations and maintenance, safety inspections and investigations, insurance, project-specific administrative and general expenses, and renewals and replacements.
5. Annual costs referred to in Section 4 will be based on prudent utility practice, and will be subject to mutual agreement arrived at through an annual process that establishes an operating budget for the coming year. An O&M

oversight committee composed of all parties to the agreement will be established. In the event disputes over these annual costs cannot be resolved by the parties, the matter will be referred to arbitration by a certified engineer mutually agreeable to the parties.

6. All annual costs referred to in Section 4 will be pooled and divided by the total annual sales from the four projects, so that all Purchasing Utilities pay the same annual cost component of the wholesale rate.
7. The debt service component of the wholesale rate has two elements: an element paid for energy shown in Schedule A as "forecast sales," and an element paid for energy in addition to the "forecast sales," which is referred to as "additional sales."
8. The "additional sales" debt service element in Schedule A will be charged only after the total annual sales from all four projects exceed the "forecast sales" for that year; that is, the distinction between "forecast sales" and "additional sales" applies to the entire four dam system (as configured at the time this agreement is executed).
9. The purchasing utilities will schedule the energy produced by the projects into their load ahead of energy from other sources, except from existing hydroelectric projects.
10. Upon the initiation of either party, the debt service rates shown in Schedule A may be renegotiated after 15 years. The contract shall require reasonable notice of intent to renegotiate rates, and the contract may direct the parties to consider certain factors and conditions in establishing a new rate schedule.
11. The parties to this agreement do not expect that the composite wholesale rate that results from this agreement will be less than the composite wholesale rate charged by the APA for energy produced from the Bradley Lake hydroelectric project.
12. The APA shall bear the risk of uninsured project failures, substandard project performance, and failure of any Purchasing Utility to make payments required by the contract.

DATED May 8, 1985

ALASKA POWER AUTHORITY

By: R. L. Vest

CITY OF KETCHIKAN

By: Charles E. Fennell

COPPER VALLEY ELECTRIC ASSOCIATION

By: Andrew E. Hoge

KODIAK ELECTRIC ASSOCIATION

By: William E. Hoge

CITY OF WRANGELL

By: James F. Hoge

CITY OF PETERSBURG

By: Jim F. Hoge

SCHEDULE A

<u>YEAR</u>	<u>FORECAST SALES (MWH)</u>	<u>DEBT SERVICE RATE FOR FORECAST SALES (CENTS/KWH)</u>	<u>DEBT SERVICE RATE FOR ADDITIONAL SALES (CENTS/KWH)</u>
1986	181,496	2.6	1.6
1987	191,437	2.8	1.8
1988	199,181	3.2	2.2
1989	206,042	3.5	2.5
1990	212,994	4.0	3.0
1991	219,067	4.0	3.0
1992	226,907	4.0	3.0
1993	236,183	4.0	3.0
1994	245,893	4.0	3.0
1995	255,439	4.0	3.0
1996	260,573	4.0	3.0
1997	265,897	4.0	3.0
1998	271,482	4.0	3.0
1999	277,343	4.0	3.0
2000	283,488	4.0	3.0
2001	288,220	4.0	3.0
2002	290,043	4.0	3.0
2003	291,926	4.0	3.0
2004	293,889	4.0	3.0
2005	295,935	4.0	3.0
2006	298,067	4.0	3.0
2007	300,290	4.0	3.0
2008	302,508	4.0	3.0
2009	305,723	4.0	3.0
2010	307,541	4.0	3.0
2011	310,165	4.0	3.0
2012	312,901	4.0	3.0
2013	315,753	4.0	3.0
2014	318,725	4.0	3.0
2015	321,824	4.0	3.0
2016	325,055	4.0	3.0
2017	328,420	4.0	3.0
2018	331,929	4.0	3.0
2019	335,587	4.0	3.0
2020	339,400	4.0	3.0
2021	343,375	4.0	3.0
2022	347,518	4.0	3.0
2023	351,836	4.0	3.0
2024	356,338	4.0	3.0
2025	361,030	4.0	3.0
2026	365,921	4.0	3.0
2027	371,019	4.0	3.0

<u>YEAR</u>	<u>FORECAST SALES (MWH)</u>	<u>DEBT SERVICE RATE FOR FORECAST SALES (¢1 KWH)</u>	<u>DEBT SERVICE RATE FOR ADDITIONAL SALES (¢1 KWH)</u>
2028	376,334	4.0	3.0
2029	378,607	4.0	3.0
2030	378,607	4.0	3.0
2031	378,607	4.0	3.0
2032	378,607	4.0	3.0
2033	378,607	4.0	3.0
2034	378,607	4.0	3.0
2035	378,607	4.0	3.0
2036	378,607	4.0	3.0
2037	378,607	4.0	3.0

RETAIL RATES
(cents per kwh)

<u>Community</u>	<u>@ 200 kwh/month</u>	<u>@ 500 kwh/month</u>	<u>@ 700 kwh/month</u>
Copper Valley			
-Glenallen	23.5	20.1	18.8
-Valdez	21.3	16.0	14.7
Kodiak	19.0	18.1	17.5
~~Wrangell~~	~~19.1~~	~~16.3~~	~~15.7~~
Petersburg	13.9	11.7	11.2
Ketchikan	14.3	10.8	10.2

COMPONENTS OF THE RATES
(cents per kwh)

<u>Community</u>	<u>APA O&M</u>	<u>APA Debt Service</u>	<u>Other^{*/}</u>	<u>Total (@ 700 kwh/month)</u>
Copper Valley				
-Glenallen	2.76	2.64	13.4	18.8
-Valdez	2.76	2.64	9.3	14.7
Kodiak	2.00	2.64	12.86	17.5
Wrangell	4.59	2.64	8.47	15.7
Petersburg	4.59	2.64	3.97	11.2
Ketchikan	2.26	2.64	5.3	10.2

^{*/} "Other" includes distribution, administrative and general, reserve generation, and other generation (other hydro as well as diesel in the case of Ketchikan and Petersburg.)

Alaska State Legislature



House of Representatives

REPRESENTATIVE
JOHN L. SUND

Box 5440
KETCHIKAN, ALASKA 99901
(907) 225-5552

WHILE IN JUNEAU
PO BOX 11
JUNEAU, ALASKA 99811
(907) 485-4819

CHAIR, HOUSE SPECIAL COMMITTEE ON LOANS
VICE-CHAIR, JUDICIARY COMMITTEE
MEMBER, SPECIAL COMMITTEE ON OIL AND GAS
MEMBER, RESOURCES COMMITTEE

4/22/85

MEMORANDUM

TO: Sen. Arliss Sturgulewski, Chair,
Senate Resources Committee

FROM: Rep. John Sund

RE: HB 219 "An act relating to the applicability of the Alaska Public Utilities Commission Act to certain electric utilities; power development loans; and the energy program for Alaska."

The purpose of this bill is to resolve the problems holding up four-dam-pool power sales agreements and to provide for payback of the \$196 million appropriation made last year to complete the hydroelectric projects. The Alaska Power Authority and the six communities served by the four dams have been negotiating power sales agreements for 2½ years without success. The goal is a long-term power sales agreement that provides affordable electricity for the communities and a maximum return on the state's investment.

\$210 million was appropriated last year; \$196 million has been spent to complete the dams and pay off short-term construction financing issued by the APA. This appropriation was structured as a loan from the Department of Commerce and Economic Development to the APA to be paid off through power sales from the project. AS 44.33.620 sets terms for the loan.

As in existing law, the Finance Committee Substitute does not set in law exact terms for the loan, nor does it set power rates. These are left open for further negotiation. The bill provides specific guidelines for resolving the issue under a plan developed by Gordon Harrison of the APA board.

The APA and the six communities report recent significant progress in power sales agreement negotiations; the plan they are now working with requires the passage of CSHB 219 (Fin). Action is required this session to permit sales agreements which will capture additional loads for the under-utilized hydroelectric capacity.

The bill is supported by both the APA and the four-dam-pool communities. Bob Heath, Executive Director of the APA and representatives of the communities are expected to testify before the Resources Committee.

Sectional analysis:

Section 1:

Sections 1 and 5, propose a change in law to allow two communities to get together for joint operation of a dam. The main purpose is to allow the Thomas Bay Power Authority to operate the Tyee Dam. Tyee serves two communities (Wrangell and Petersburg); Current law requires one or the other to operate the dam. This section corrects that by adding "electric operating entities established as an instrumentality of two or more public utilities owned and operated by a political subdivision of the state" to the APUC statutes. Like the communities, the 'joint operating entity' would not be subject to APUC regulation.

Section 2:

This section amends the loan terms for the Power Development Revolving Loan Fund (AS 44.33.620). This fund was created last session and the statutory loan terms give little direction to the APA. The added language sets clear guidelines for the agencies to work with. Deleted is the requirement that the loan terms be set considering market rates of interest.

Section 3 adds a definition: "initial project" means the four dams.

Section 4 adds a provision for power sales contract rate reopeners. This protects the state in times of inflation when the power sales rate could not provide sufficient loan repayment in real terms and protects the communities should the price of alternate power generation drop significantly. An important provision is added allowing an agreed schedule of wholesale power rates to be included in the contracts. This allows a contract to be reached through negotiation which will provide for certainty in power rates as needed by utility planners. This also will provide for a greater return to the state in debt service from the project.

Section 5 adds joint operating entities to the definition of "qualified utilities" which may purchase power from the APA. (See explanation of Section 1)

EXHIBIT A: WHOLESALE POWER RATE SCHEDULE
Alaska Power Authority--Four Dam Pool
Memorandum of Understanding

YEAR	SCHEDULED DEBT SERVICE (CENTS/KWH)	ESTIMATED O & M COST (CENTS/KWH)	PROJECTED WHOLESALE POWER RATE (CENTS/KWH)
--A--	---B---	---C---	---D---
1986	2.60	2.72	5.32
1987	2.80	2.72	5.52
1988	3.20	2.76	5.96
1989	3.50	2.81	6.31
1990	4.00	2.87	6.87
1991	4.00	2.94	6.94
1992	4.00	3.00	7.00
1993	4.00	3.04	7.04
1994	4.00	3.08	7.08
1995	4.00	3.13	7.13
1996	4.00	3.24	7.24
1997	4.00	3.36	7.36
1998	4.00	3.47	7.47
1999	4.00	3.59	7.59
2000	4.00	3.72	7.72
2001	4.00	3.86	7.86
2002	4.00	4.06	8.06
2003	4.00	4.27	8.27
2004	4.00	4.48	8.48
2005	4.00	4.71	8.71
2006	4.00	4.94	8.94
2007	4.00	5.19	9.19
2008	4.00	5.45	9.45
2009	4.00	5.72	9.72
2010	4.00	6.01	10.01
2011	4.00	6.30	10.30
2012	4.00	6.61	10.61
2013	4.00	6.94	10.94
2014	4.00	7.28	11.28
2015	4.00	7.63	11.63
2016	4.00	8.00	12.00
2017	4.00	8.38	12.38
2018	4.00	8.78	12.78
2019	4.00	9.20	13.20
2020	4.00	9.63	13.63
2021	4.00	10.08	14.08
2022	4.00	10.55	14.55
2023	4.00	11.04	15.04
2024	4.00	11.54	15.54
2025	4.00	12.07	16.07
2026	4.00	12.61	16.61
2027	4.00	13.18	17.18
2028	4.00	13.76	17.76
2029	4.00	14.50	18.50
2030	4.00	15.36	19.36
2031	4.00	16.27	20.27
2032	4.00	17.24	21.24
2033	4.00	18.27	22.27
2034	4.00	19.35	23.35
2035	4.00	20.51	24.51

Notes:

1. O & M based on forecast loads without Additional Sales.
2. O & M includes \$500,000 per year capital cost for Renewals and Replacements.
3. O & M inflation assumed to be 6% per year.
4. Additional Sales to be charged for Debt Service at 1 Cent/kWh less than Scheduled Debt Service.

Case Number 2
 Loan Principal (\$=000's) \$196,000
 O&M Cost Inflation Rate 6.00%

EXHIBIT B: PROJECTED OPERATING RESULTS AND RATES OF RETURN
 Alaska Power Authority--Four Dam Pool
 Memorandum of Understanding

Average Rate of Return:
 Without Additional Sales 5.47%
 With Additional Sales 6.10%

YEAR	PROJECTED			OPERATIONS & MAINTENANCE						
	SCHEDULED DEBT SVC. (CENTS/KWH)	O & M COST (CENTS/KWH)	WHL. POWER RATE (CENTS/KWH)	SALES (MMH)	GROSS REVENUES (\$=000's)	NET REVENUES (\$=000's)	ADMIN (\$=000's)	ON-SITE (\$=000's)	R & R (\$=000's)	TOTAL O & M (\$=000's)
A	B	C	D	E	F	G	H	I	J	K
1986	2.60	2.72	5.32	181,496	9,658	5,219	863	3,576	500	4,939
1987	2.80	2.72	5.52	191,437	10,566	5,860	915	3,791	500	5,205
1988	3.20	2.76	5.96	199,181	11,861	6,874	970	4,018	500	5,488
1989	3.50	2.81	6.31	206,042	12,998	7,711	1,028	4,259	500	5,787
1990	4.00	2.87	6.87	212,994	14,624	9,020	1,090	4,515	500	6,104
1991	4.00	2.94	6.94	219,067	15,203	9,263	1,155	4,785	500	6,440
1992	4.00	3.00	7.00	226,907	15,873	9,576	1,224	5,073	500	6,797
1993	4.00	3.04	7.04	236,183	16,622	9,947	1,298	5,377	500	7,175
1994	4.00	3.08	7.08	245,893	17,411	10,336	1,375	5,700	500	7,575
1995	4.00	3.13	7.13	255,439	18,217	10,718	1,458	6,042	500	8,000
1996	4.00	3.24	7.24	260,533	18,871	10,921	1,546	6,404	500	8,450
1997	4.00	3.36	7.36	265,897	19,562	11,136	1,638	6,788	500	8,927
1998	4.00	3.47	7.47	271,482	20,291	11,359	1,737	7,196	500	9,432
1999	4.00	3.59	7.59	277,343	21,062	11,594	1,841	7,627	500	9,968
2000	4.00	3.72	7.72	283,488	21,876	11,840	1,951	8,085	500	10,536
2001	4.00	3.86	7.86	288,220	22,667	12,029	2,068	8,570	500	11,138
2002	4.00	4.06	8.06	290,043	23,378	12,102	2,192	9,084	500	11,777
2003	4.00	4.27	8.27	291,926	24,130	12,177	2,324	9,629	500	12,453
2004	4.00	4.48	8.48	293,889	24,926	12,256	2,463	10,207	500	13,170
2005	4.00	4.71	8.71	295,935	25,768	12,337	2,611	10,820	500	13,931
2006	4.00	4.94	8.94	298,067	26,659	12,423	2,768	11,469	500	14,736
2007	4.00	5.19	9.19	300,290	27,602	12,512	2,934	12,157	500	15,591
2008	4.00	5.45	9.45	302,608	28,600	12,604	3,110	12,886	500	16,496
2009	4.00	5.72	9.72	305,023	29,657	12,701	3,296	13,659	500	17,456
2010	4.00	6.01	10.01	307,541	30,775	12,802	3,494	14,479	500	18,473
2011	4.00	6.30	10.30	310,165	31,958	12,907	3,704	15,348	500	19,552
2012	4.00	6.61	10.61	312,901	33,211	13,016	3,926	16,269	500	20,695
2013	4.00	6.94	10.94	315,753	34,537	13,130	4,162	17,245	500	21,906
2014	4.00	7.28	11.28	318,725	35,940	13,249	4,411	18,279	500	23,191
2015	4.00	7.63	11.63	321,824	37,425	13,373	4,676	19,376	500	24,552
2016	4.00	8.00	12.00	325,053	38,997	13,502	4,957	20,539	500	25,995
2017	4.00	8.38	12.38	328,420	40,662	13,637	5,254	21,771	500	27,525
2018	4.00	8.78	12.78	331,929	42,424	13,777	5,569	23,077	500	29,147
2019	4.00	9.20	13.20	335,587	44,289	13,923	5,903	24,462	500	30,865
2020	4.00	9.63	13.63	339,400	46,263	14,076	6,258	25,930	500	32,687
2021	4.00	10.08	14.08	343,375	48,354	14,235	6,633	27,485	500	34,619
2022	4.00	10.55	14.55	347,518	50,566	14,401	7,031	29,135	500	36,666
2023	4.00	11.04	15.04	351,836	52,909	14,573	7,453	30,883	500	38,836
2024	4.00	11.54	15.54	356,338	55,389	14,754	7,900	32,736	500	41,136
2025	4.00	12.07	16.07	361,030	58,015	14,941	8,374	34,700	500	43,574
2026	4.00	12.61	16.61	365,921	60,795	15,137	8,877	36,782	500	46,158
2027	4.00	13.18	17.18	371,019	63,739	15,341	9,409	38,989	500	48,898
2028	4.00	13.76	17.76	376,334	66,855	15,553	9,974	41,328	500	51,802
2029	4.00	14.30	18.50	378,607	70,024	15,644	10,572	43,808	500	54,880
2030	4.00	15.36	19.36	378,607	73,287	15,644	11,206	46,436	500	58,143
2031	4.00	16.27	20.27	378,607	76,745	15,644	11,879	49,222	500	61,601
2032	4.00	17.24	21.24	378,607	80,411	15,644	12,592	52,176	500	65,267
2033	4.00	18.27	22.27	378,607	84,297	15,644	13,347	55,306	500	69,153
2034	4.00	19.35	23.35	378,607	88,417	15,644	14,148	58,624	500	73,272
2035	4.00	20.51	24.51	378,607	92,783	15,644	14,997	62,142	500	77,639