HB

1221

PROPOSED LEGISLATION: SUSITNA
HB 120, 121, 122
A REVIEW OF KEY ISSUES

HB 120/ AUTHORIZATION AND APPROVAL OF THE SUSITNA FEASIBILITY STUDY AND APPROVAL OF THE PROPOSED "PLAN" OF FINANCE

Issue — Acceptability of the APA/Acres Feasibility Study

The Susitna Feasibility Study prepared for the APA by Acres American (March 1982), concluded that Susitna could offer the most attractive long term electrical energy source for the Railbelt but only on the basis of several very critical assumptions. Most importantly, these assumptions included: 1) high electrical demand growth (forecasts), 2) rapidly increasing oil prices, 3) outdated revenue projections/multi-billion dollar cash construction subsidies, and 4) tax exempt bond financing.

The Acres report included a "sensitivity analysis" which tested how critical certain assumptions were to the conclusion that Susitna was economically viable (Attachment A).

Since the time that the Acres study was prepared, fundamental changes in world economic circumstances has invalidated the conclusion that Susitna is the most attractive Railbelt alternative, at least until well into the next century.

Electrical Demand: The "need" for Susitna was predicated on a host of assumptions about future economic activity-population growth-employment-household formation, etc. which results in electrical demand. Assumptions included the ANGTS line, an ALPETCO-like refinery in Valdez, PacAlaska, and State spending trends as before the world oil market collapsed. In light of the changed circumstances, the most recent revised projections of Railbelt electrical demand for the year 2010 (Battelle, 1982) are close to half those used by Acres a couple of years back in its design development selection work which led to the choice of the Watana/Devil Canyon proposal currently under consideration (Attachments B and C).

The ISER (1980) projections used by Acres called for a Moderate (or "most likely") demand case of 8,940 Gwh per year in 2010 which compares to the more recent Battelle (1982) Moderate demand estimate of 4,986 Gwh/year in 2010. That is, the most recent demand projections for 2010 are only about 56% of those used by Acres to arrive at the conclusion that we "need" Susitna.

Another way of considering this question is in terms of capacity requirements: how many megawatts of additional capacity are needed to replace retired capacity over time and meet expected peak (highest) demand? Acres, in its design development and selection analysis, used the ISER (1980) projections calling for a Moderate case peak demand of 1,635 megawatts (MW); this contrasts with the more recent Battelle (1982) projection of peak demand projection of 1,003 MW. Approximately 577 MW of capacity would still be in place in the year 2010. The essential issue is how large a "capacity deficit" can

be expected and how much additional capacity is needed to meet the shortfall. Using the capacity retirement schedule developed by Acres and the most recent capacity requirement projections by Battelle (including a 30% reserve capacity margin) it is evident that the Railbelt will experience a capacity shortfall of about 200 MW in the year 2000 and about 727 MW by the year 2010. This contrasts with the Susitna project at a total of 1,620 MW (Watana at 1,020 and Devil Canyon at 600). A premature commitment to Susitna would result in massive amounts of excess, idle capacity as is the case with the Lake Tyee project (Attachment D).

Note that the Acres' "sensitivity analysis" (Attachment A) tested a "Low" demand case for 2010 as 6,300 Gwh. This supposed "Low" scenario — which renders the project marginal at best — is 26% higher than the more recent "Moderate" case and 64% higher than the revised Battelle "Low" for 2010 (3,844 Gwh).

Using Acres own analysis, the new demand projections would indicate that the project had negative net benefits (ie, was more costly than the alternatives).

Fuel Price Escalation Rate: Acres assumed that there would be constantly rising fuel prices through 2010 reflecting the constantly increasing cost of the world price of oil. The Acres projection called for real (adjusted for inflation) price increases of 2.6%/year to 2000 and 1.2%/year to 2010 (Attachment A). The "sensitivity analysis" shows that a 0% real rate of fuel price increase yields a negative net benefit in excess of $1 billion. The Alaska Department of Revenue projects a negative (declining) real price of oil throughout most of this decade and does not anticipate positive real price increases anywhere near as great as the Acres base case assumed.

Again, using Acres own analysis, it is apparent that the project would cost more than the alternatives.

Outdated Revenue Projections/ Multi-Billion Dollar Subsidies: The Energy Program for Alaska was conceived of in a time of upwardly spiraling revenues; before the collapse of the world oil market. Superabundent revenues are clearly no longer available (Attachment E) yet the financing scheme proposed by HB 121 presumes the availability of $2.3 billion in grants for the project in order to make the project's cost of power artificially competitive with the less expensive alternatives. Acres/APA acknowledges that Susitna power (at 30¢/kwh) will cost more than twice the alternatives (at 14.5¢/kwh) when/if it is brought on line as scheduled in 1993 (Attachment E). The alternatives will continue to be lower in cost until well into the next century.

Tax Exempt Financing: Acres assumed that the project could be built with tax exempt bonds. This assumption has been questioned by, among others, the APA's own bond counsel (Acres: Task 11/January 1983, pp. 11-13).

General Comment: It is especially noteworthy that the Alaska Power Authority Board of Directors never endorsed the conclusion that the Susitna project was the most attractive electrical alternative for

thr Railbelt. At least until the APA Board formally adopts that position, it would be premature for the Legislature (with vastly less information and understanding) to do so.

The Feasibility Study should not be endorsed in the absence of such action on the part of the APA Board or without a formal reconsideration and economic reevaluation of the project in light of present economic realities.

Issue — Approval of the "Plan" of Finance

There is, in fact, no "plan" per se, but rather a vague set of options that have been proposed (Acres: Task 11/January 1983). These proposals call for multi-billion dollar grant subsidies with some sort of complimentary bonding — revenue bonds? G.O. bonds? "double barrel" bonds? There is no plan, just several nebulous scenarios.

What is being sought (in the form of approval of the so-called plan) is an open-ended commitment to multi-billion dollar subsidies. That's the plan.

The most basic issue raised by this aspect of the proposed legislation is: how does this finance "plan" approval relate to the other companion proposals: $2.3 billion subsidy grants (HB 121) and $5.4 billion "double barrel" bonding (HB 122)? What specifically is being contemplated?

General Comment: A proposed plan of finance should be very specific as to the marketing of power and power sales agreements. The object is, of course, to avoid a situation like Lake Tyee where we have a $120 million project and no takers ($82 million in State appropriations, $50 million in short term debt). The APA charged ahead with the 20 MW Tyee project without power sales agreements with Wrangell and Petersburg. Now nearly completed (with $10 million cost overrun), the two communities don't want the power because it would cost significantly more than oil-fired electricity (even with about 70% grant financing).

The "Plan" of Finance (Task 11) is very vague on the relationship of power sales agreements and State expenditures and bond financing. It is absolutely critical that this relationship be clear and explicit. Power sales contracts (take-or-pay) should be an absolute prerequisite to any State expenditures on the project.

HB 121/ CONSTITUTIONAL AMENDMENT AND $2.3 BILLION SUBSIDY FUND: ADVISORY VOTE

Issue — Constitutional Amendment

One can wonder whether the framers of the Constitution would approve of an amendment to the Constitution to secure a single capital project.

Issue — Advisory Vote/Costs and Public Education

It is estimated that a special statewide election would cost about $1 million.

It has been well documented that people generally don't have even a remote idea of what the project would actually cost. The recently released Dittman poll showed that while people were mostly supportive of the project, 53% didn't have any idea as to what the project would cost while 71% either didn't know or thought that it would cost less than $500 million. The acknowledged nominal (as spent) cost of the project is $10-15 billion excluding finance charges or the possibility of cost overruns. (A cost overrun the same size as experienced on the Tyee project — 9% — would amount to about $460 million).

Certainly any popular vote or advisory vote should be preceeded by an objective and impartial educational effort designed to inform people about the true costs of the project (Attachment E). If billions are to be allocated to Susitna, as proposed by HB 121, the decision should be carefully considered in light of the opportunity costs. Susitna subsidies threaten the loan programs, municipal revenue sharing, Permanent Fund dividends, education funding, property tax relief, and would likely force the return of the personal income tax. These are the true costs of Susitna that nobody is talking about.

HB 122/DOUBLE BARREL BONDING

Issue — Change in APA Statutes/Public Vote on Susitna Bonds

Current APA statutes (AS 44.83.130(b)) expressly disallows the APA from engaging the State's credit in its bonding efforts. HB 122 would empower the APA to put the "full faith, credit and resources" of the State behind $5.4 billion of revenue bonds making them virtually indistinguishable from general obligation (G.O.) bonds. (Revenue bonds backed up by the State's general obligation are "double barrel" bonds). The basic issue to be addressed is whether the Susitna project justifies exemption from the explicit blanket prohibition to engage the State's credit.

The fiscal implications of this matter are profound. If the APA were to be empowered, by a public vote, to issue "double barrel" bonds in the amount of $5.4 billion the entire credit of the State would be at risk. It is a near certainty that that the public has little understanding of the issue and could well, in complete innocence, give over this power to the APA on the basis of a shallow understanding based on the pro-Suitna propaganda campaign.

Giving the APA autonomy to put the State into significantly greater debt is inadvisable in light of the State's presently precarious

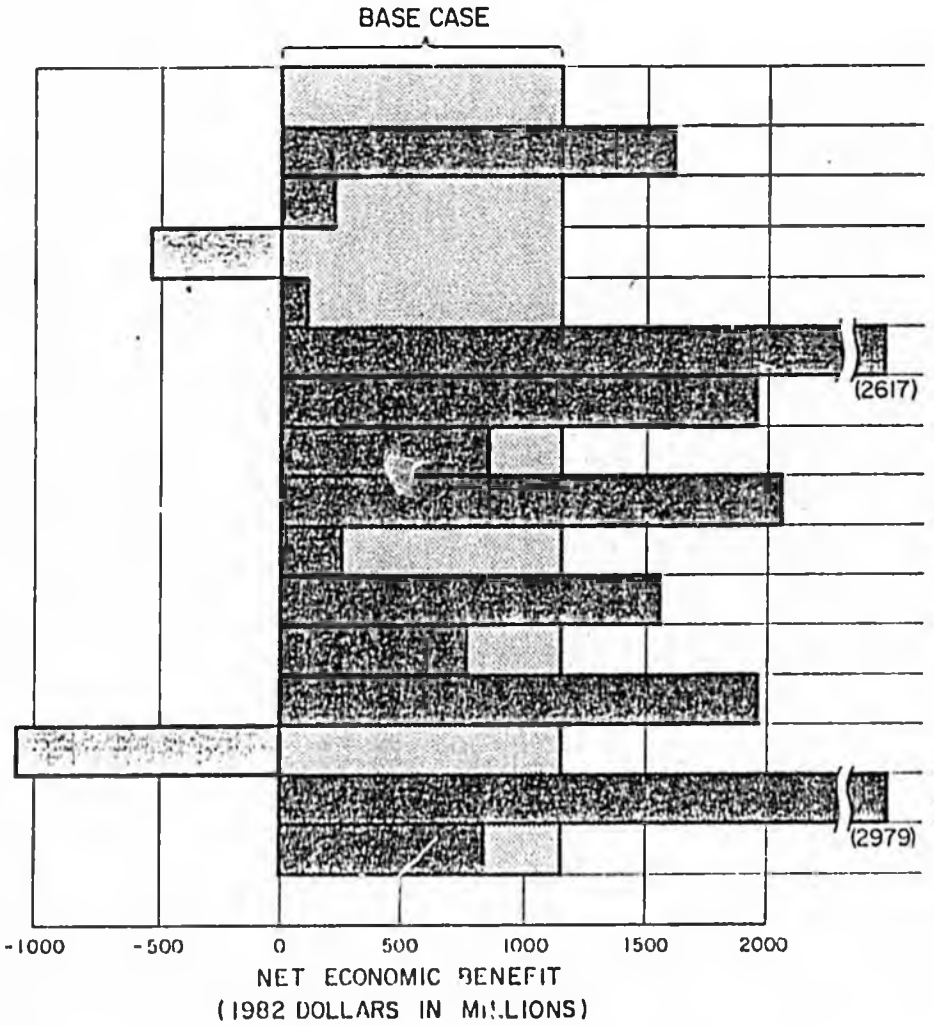
debt situation with what is perhaps the highest per capita debt for any state in the nation (Attachment G).

Again, if this measure is adopted there had better be some provision for a dispassioned educational effort in order to inform the public what the credit risks and opportunity costs are all about.

Moreover, the APA's own bond counsel has advised that if "a major portion of (Susitna's costs) were met from State G.O. Bonds, Alaska's present double A ratings would be endangered" (Acres: Task 11/January 1983, p.12). The bond counsel has also stated that the State can "only 'safely' issue about $565 million (nominal dollars, using 8% inflation) G.O. Bonds during the period fiscal 1983-1990."* Finally, the bond counsel recommends that "to the fullest extent possible" The APA should use revenue bonds secured by income derived from participating Railbelt Utilities pursuant to long term power sales contracts" (emphasis added).

* Using the December 1982/30th Percentile Department of Revenue forecasts.

ATTACHMENT A



ELEMENT TESTED	BASE CASE VALUE
HIGH LOAD FORECAST (11,400 GWH IN 2010)	7,800 GWH IN 2010
LOW LOAD FORECAST (6,300 GWH IN 2010)	7,800 GWH IN 2010
5 % REAL DISCOUNT RATE	3%
4 % REAL DISCOUNT RATE	3%
2 % REAL DISCOUNT RATE	3 %
HIGH CAPITAL COST FOR ALTERNATIVE (20 % ABOVE ESTIMATE)	BATTELLE ESTIMATE
LOW CAPITAL COST FOR ALTERNATIVE (10 % BELOW ESTIMATE)	BATTELLE ESTIMATE
LOW SUSITNA CAPITAL COSTS (83 % OF ESTIMATE)	PROJECT ESTIMATE
HIGH SUSITNA CAPITAL COSTS (117 % OF ESTIMATE)	PROJECT ESTIMATE
ZERO CAPITAL COST ESCALATION	1.8 % / ANNUM
HIGH CAPITAL COST ESCALATION (3.6 % / ANNUM)	1.8 % / ANNUM
HIGH BASE COAL PRICE ($ 2.08 / MM BTU)	$ 1.43 / MM BTU
ZERO FUEL PRICE ESCALATION	2.6 % TO 2000 1.2 % TO 2010
HIGH FUEL PRICE ESCALATION (5 % TO 2000, 2.2 % TO 2010	2.6 % TO 2000 1.2 % TO 2010
CHAKACHAMNA ALTERNATIVE	ALL THERMAL PLAN

PLATE 24 | **SENSITIVITY ANALYSIS**

ATTACHMENT B

TABLE 5.6: ISER 1980 RAILBELT REGION LOAD AND ENERGY FORECASTS USED FOR GENERATION PLANNING STUDIES FOR DEVELOPMENT SELECTION[5]

	LOAD CASE											
	Low Plus Load Management and Conservation (LES-GL Adjusted)[1]			Low (LES-GL)[2]			Medium (MES-GM)[3]			High (HES-GH)[4]		
Year	MW	GWh	Load Factor	MW	GWh	Load Factor	MW	GWh	Load Factor	MW	GWh	Load Factor
1980	510	2790	62.5	510	2790	62.4	510	2790	62.4	510	2790	62.4
1985	560	3090	62.8	580	3160	62.4	650	3570	62.6	695	3860	63.4
1990	620	3430	63.2	640	3505	62.4	735	4030	62.6	920	5090	63.1
1995	685	3810	63.5	795	4350	62.3	945	5170	62.5	1295	7120	62.8
2000	755	4240	63.8	950	5210	62.3	1175	6430	62.4	1670	9170	62.6
2005	835	4690	64.1	1045	5700	62.2	1380	7530	62.3	2285	12540	62.6
2010	920	5200	64.4	1140	6220	62.2	1635	8940	62.4	2900	15930	62.7

Notes:

(1) LES-GL: Low economic growth/low government expenditure with load management and conservation.
(2) LES-GL: Low economic growth/low government expenditure.
(3) MES-GM: Medium economic growth/moderate government expenditure.
(4) HES-GH: High economic growth/high government expenditure.
(5) Excludes reserve requirements. Energy figures are for net generation.

Source: Acres (1982) Vol. 1 Section 5.

ATTACHMENT C

Revised Moderate and Low Case Electricity Forecasts, Railbelt

	Revised Annual Energy[a] (GWh)		Old Annual Energy (GWh)	
	Moderate	Low	Moderate	Low
1980	2551	2551	2551	2551
1985	3000	2560	3136	3028
1990	3391	3001	4256	3853
1995	3884	3164	4875	4063
2000	4010	3106	5033	3988
2005	4319	3332	5421	4278
2010	4986	3844	6258	4936

	Revised Peak Demand[b] (MW)		Old Peak Demand (MW)	
	Moderate	.ow	Moderate	Low
1980	531	521	521	521
1985	615	525	643	621
1990	701	621	880	797
1995	791	652	993	837
2000	810	673	1017	815
2005	870	678	1092	870
2010	1003	780	1259	1001

(a) Revised downward based on low case annual consumption of 9.84 MWh per capita and moderate case annual consumption of 10.40 MWh per capita in the year 2000. See Appendix B, Tables B.3, B.4, B.12, and B.18. Other years consumption reduced proportionately. 1985 figures was adjusted upward judgmentally for moderate case; 1985-1995 adjusted upward for low case.

(b) Based on the ratio of peak demand to annual energy from Appendix B, Tables B.12 and B.18.

Source: Battelle NW (1982)

ATTACHMENT D

MODERATE DEMAND

PROJECTED ADDITIONAL CAPACITY NEEDS

FOR THE RAILBELT

(megawatts)

Year	Existing Installed Capacity [1]	Projected Peak Demand (w/ 30% RSRV) [2]	Required Additional Capacity
1985	1154 MW	690 MW	0 MW
1990	1242	911	0
1995	1095	1028	0
2000	853	1053	200
2005	610	1131	521
2010	577	1304	727

[1] Ebasco (1982): Assumes already planned additions of 158.4 MW of gas turbines in 1982 and Bradley Lake at 97 MW in 1988 with a capacity retirement schedule for existing plants from Acres (1981).

[2] Battelle (1982/revised): Moderate Growth Case with 30% reserve margin.

ATTACHMENT E

IMPACT OF SUSITNA SUBSIDY SCHEME
AS PROPOSED IN HB 121
ON AVAILABILITY OF STATE REVENUE

CONSTANT DOLLARS
(adjusted for inflation, in millions)

Fiscal Year	General Fund Unrestricted Revenue	Operating Budget (est.)	Surplus Revenue Available	Susitna Grant Subsidies (HB 121)
1982	3674	1600	2074	-
83	2990		1390	-
84	2329		729	230
85	2254		654	230
86	2314		714	230
87	2241		641	230
88	2341		741	230
89	2259		659	230
90	1989		389	230
91	1716		116	230
92	1558		-	230
93	1375		-	230
94	1260		-	-
95	1145		-	-
96	1024		-	-
97	989		-	-
98	959		-	-
99	957		-	-
2000	950		-	-

Note:

General Fund Unrestricted Revenue projection is net of legally required Permanent Fund contribution. Projection by Department of Revenue (February, 1983).

ATTACHMENT F

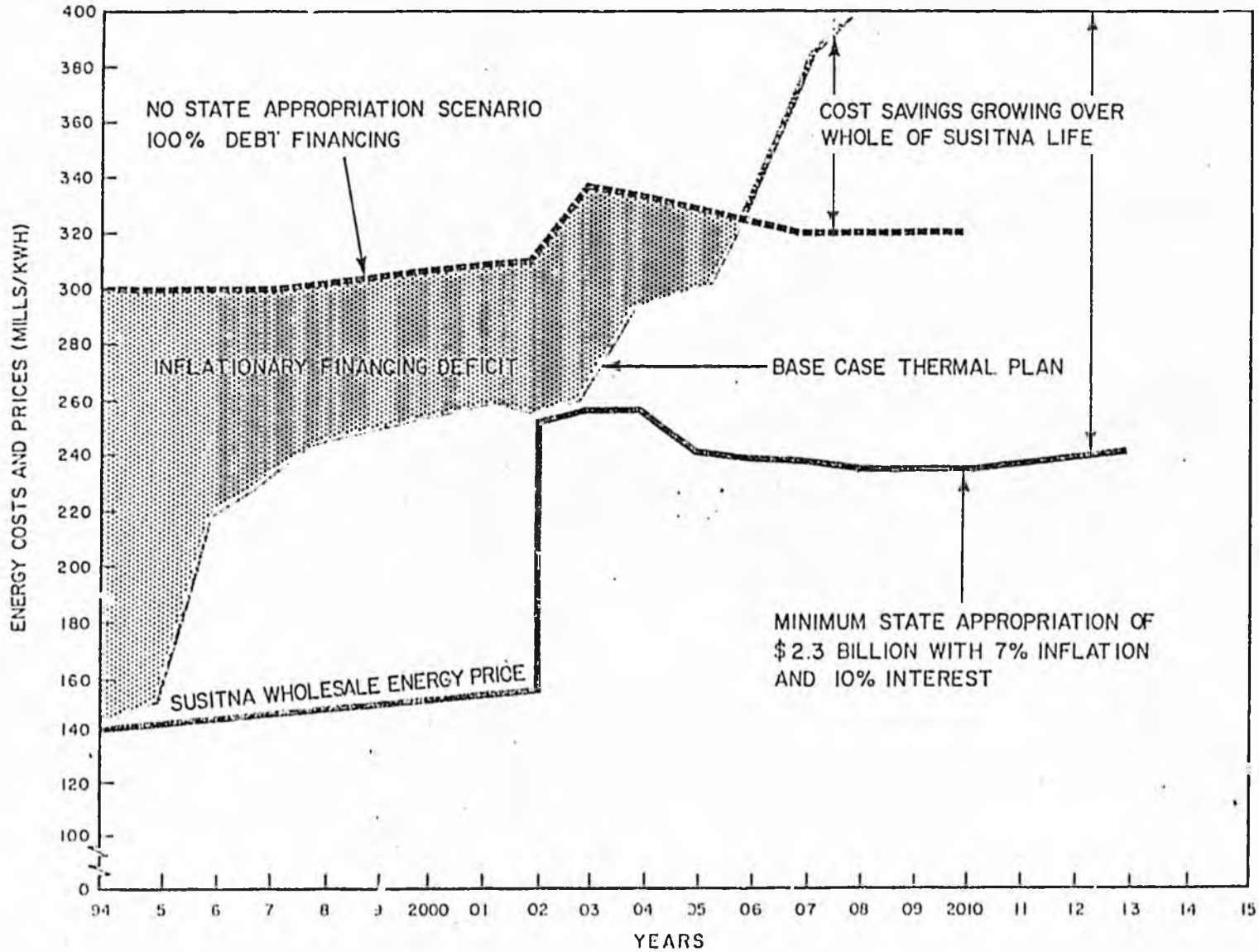


PLATE 26 | ANNUAL COST COMPARISON

ATTACHMENT G

SEATTLE BUSINESS JOURNAL February 7, 1983

STATE DEBT

State	Net Tax-Supported Debt (millions)	Per Capita
1. Alaska	$1,045	$2,610
2. Hawaii	1,424	1,476
3. Delaware	581	977
4. Connecticut	2,132	686
5. Maryland	2,851	676
6. Massachusetts	3,355	567
7. New York	9,300	557
8. West Virginia	991	508
9. Louisiana	2,116	503
10. Vermont	241	472
11. Washington	1,645	398
(National median)		203

Western States	Per-Capita Debt
Alaska	$2,610.43
Hawaii	1,476.49
Washington	398.36
New Mexico	202.67
Oregon	131.18
California	108.79
Utah	106.85
Montana	99.04
Idaho	21.90
Arizona	19.60
Wyoming	7.07
Colorado	0.28

(Information provided by Moody's Investors Service municipal department as of Feb. 26, 1982)

Alaska Environmental Lobby, Inc.
419 6th Street, Suite 328 Juneau, Alaska 99801 907-586-2345

17 February 1983

TO: Representative Mitch Abood
Chair, State Affairs Committee

FROM: Eric F. Myers, AEL Energy Specialist

I would like to offer my formal comments on the legislation you are now considering related to the proposed Susitna hydroelectric project. Some of the oral testimony I gave yesterday, particularly observations on the history and evolution of the so-called Energy Program for Alaska, are not reflected in these written comments to a great extent. You will find, however, that the specific concerns I raised about the proposals before you (HB 120,121, 122) are addressed in the attached issue paper. I hope that you will find these comments useful.

As I am sure you appreciate, the Susitna issue is enormously complex and multi-faceted. My comments — particularly those concerning the adequacy of the feasibility study — reflect an effort to summarize a great deal of data. If you have any questions about these comments, I would welcome the opportunity to meet with you or your staff to consider these issues in detail.

I have also attached two other reports which should be of use to the Committee in its consideration of this issue:

Alaska Energy Planning Studies, Policy Analysis Paper No. 82-13, Division of Policy Development and Planning (November 18,1982). This report prepared by the University of Alaska's Institute of Social and Economic Research, is a review of the three major energy studies (Acres; Battelle, Long Term Plan) and deals extensively with the Acres American feasibility study. The report is particularly useful in its analysis of the critical role played by key assumptions (eg., discount rates, fuel escalation rates, demand projections) in the Acres feasibility study which led to the questionable assumption that Susitna is the most attractive Railbelt power option. Again, it is particularly noteworthy that the Alaska Power Authority Board of Directors has not endorsed the Acres study conclusion.

State Spending and the Alaska Economy, by Gregg K. Erickson and Thomas O. Singer. An issue raised in the testimony yesterday concerned the recent surge in power demand currently being experienced by Railbelt utilities, relative to expected long term demand growth rates. Electricity demand is a function of population growth, employment, economic activity, disposable income, etc. The recent high growth rates (1982) for electricity can be understood in this context as a reflection of the massive State expenditures of the past few years. The Cash on

the Street analysis shows how the large State appropriations of the past — loan programs, capital projects, public works, etc. — have been working through the appropriations process and "on to the street" and generating the currently "boom" economy that we enjoy. As I am sure you are aware, this is particularly the case in Anchorage where there is a big building spree on at present. The significance of this analysis, with regard to electrical demand, is that in the near future (5-10 years) we can expect significant increases in electrical demand as a consequence of State spending trends. We can also expect those same short term trends to drop off dramatically with the down turn in revenues and spending. It would be especially unfortunate if the abberant demand growth rates we are experiencing presently were mistaken for anything but a temporary circumstance. A few years back the Pacific Northwest, as a result of a percieved need for massive additional capacity, embarked on the WPPSS ("woops") debacle. That region now faces what is recognized by observers such as Business Week to be "the biggest (default) in municipal bond market history." About $7,000,000,000 in bond repayments.

In reflecting on my testimony of yesterday, I would like to once again highlight what I see as the most critical issue underlying the Susitna debate. As I said yesterday, it is not whether you are "for" or "against" the Susitna project but, rather: "How can we provide responsibly for the reliable anticipated increases in Railbelt electrical demand?" The advocates of Susitna Power Now! presume to be able to predict with certainty the events of 50 to 100 years in the future. I do not share their confidence. And with upwards of $15 billion involved, gambling of such a magnitude should, I feel, be discouraged.

This is particularly true in light of the revenue picture. The Energy Program for Alaska, with its multi-billion dollar subsidy financing proposal for Susitna, is a legacy from the past when revenues were coming into the State treasury faster (almost) than we could spend them. The "problem" in those days was how to spend money creatively. Now we are being forced to reckon quite soberly with frugality. It is my hope that the House State Affairs Committee and the Legislature as a whole will embrace this responsibility and look very closely at the fiscal impacts of the proposed subsidy scheme. Are the people of Alaska willing to give up the Permanent Fund Dividend Program, cut back on education, do without sewer, water and road improvements, pay income taxes? These are the true costs of Susitna; the questions few are willing to talk about.

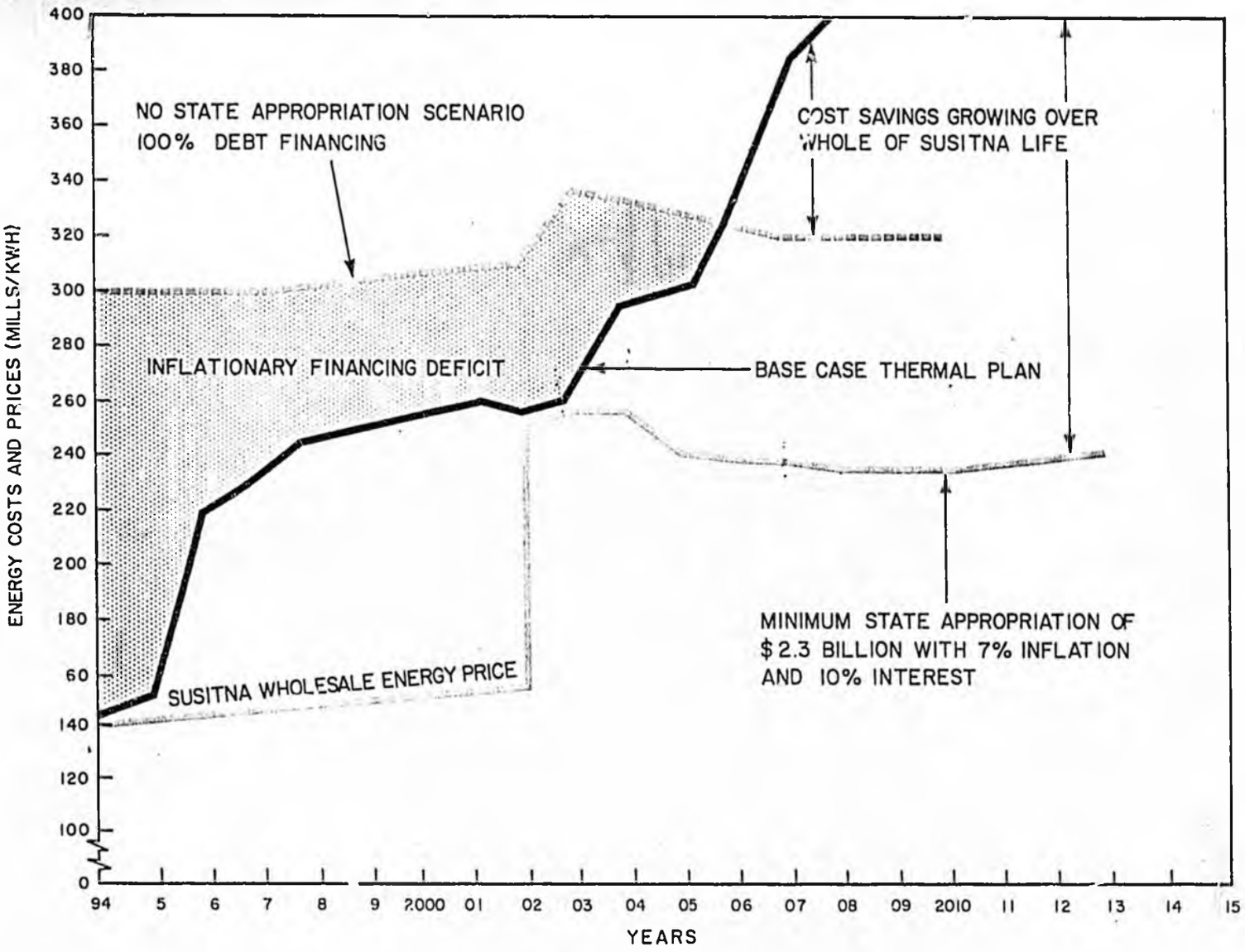


PLATE 26 | **ANNUAL COST COMPARISION**

Follow-up to Hutchin's "you don't understand..."

You understood exactly. Moreover, Hutchins' theory of "rolling in" rural projects is bullshit!

1) Anchorage people are not going to support a rural project that raises their rates (the effect of a rollin)

2) Rural projects are not capital intensive. The "energy program for Alaska" only applies, by its nature, to capital-intensive ones, not ones that use fuel.

Can his firm sign power contracts. If so sure of economics, etc, would they be willing to sign such an open power contract at this point?

Anc — Bob Penny - Anc
Mike Fenwick IBEW
Wayne Beckwith.
Tom Starr load projections

Fenwick: job market will be significant
people will come from all over the state
"capability of training"

Beckwith: gas:
Coal:

Starr — load growth +12% annually

Fai

Dave Lacy: unfair

Mike Kelly. GVEA Board supports it
.30/kwh

Betty Huffman. Bob Huffman

Jeff Wilson

Valdez — Barney Maring - Valdez Chamber of Commerce

Anc — Jim Stark
Investment in future of Alaska

Judy Zemike - AEC

Talkeetna — Larry Roberta Sheldon: not Susitna, Chakachamna

Jnu Ken Kasner: Nor Pacific Fisheries Assn Homer
protect ability fisheries

Anc Jeff Eustes - self
smaller projects as they are needed
Marketability test - not speculative
constitutional intent

Chris
attract outside capital
"Susitna blackmail"
"what do you do for rural Alaska?"

Jnu Frank Mullen. United Cook Inlet Fishermen
almost same as Kasner

DLG Gusty Tunugen. No to 120, 121, 122

Jnu Dave Hutchens Alaska Rural Electric Cooperative Assn
14 Alaska
① load growth 3½% / yr 7-12% ∴ 5%
② projected cost credible?
③ consumer benefit

double barrel bonding revenue + GO bond
④ what about rural areas?

housing
Fishing
Docks/Harbors
Airports

Anc Gilbert Susitna Valley
individual
Grant financing
against advisory vote

Chugach Electric Association
Talkeetna: Suzy Keller: [against]